

2021

Scientific Report

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01

Foreword



Scientific Director
IIB Sant Pau

**Jordi
Surrallés**

Looking back at this year 2021, I see changes, challenges and opportunities. Yes, we still dealt with the COVID-19 pandemic and, as a hospital research institute, it definitely impacted our activities. Even though, IIB Sant Pau people has been key to continue to successfully carry out our mission. Their enthusiasm, commitment and adaptability allowed us to transform all these challenges into opportunities, making 2021 an excellent year for the advancement of science in our institute.

In terms of scientific production, we have reached fantastic records, with 1,374 indexed publications, 58% of them in the first quartile journals with an overall mean impact factor of 7,05. Our researchers are leading 32% of these publications (of which 35% are led by women) and most of them are open access (63%).

More important, our science is not only being published and shared but also applied and delivered to patients. A fantastic example is the development and administration of the first CAR-T immunotherapy for Hodgkin and non-Hodgkin lymphoma T in Europe. Dr Briones and his team designed the CAR-T 30 and performed its pre-clinical development. In 2021 we have started the first phase I clinical trial with fantastic results. This scientific and clinical milestone has been possible thanks to the recent accreditation of the clean room to develop advanced therapies at IIB Sant Pau. Our institute, in collaboration with the Banc de Sang i Teixits de Catalunya, recently obtained the certificate of compliance with the Standards of Correct Manufacture of Advanced Therapy Medicines from the Spanish Agency of Medicines and Medical Devices (AEMPS) from the Ministry of Health, certificate that allows the production and quality control of cellular medicines type CAR-T. The accreditation and equipment at the clean room allow the IIB Sant Pau research groups to develop new advanced therapies, reinforcing and boosting translational research in Sant Pau thus offering innovative treatments and advanced therapies to the patients.

We had other important milestones this year related to our institute and its facilities. We have been re-accredited by the Institute of Health Carlos III (ISCIII) as an accredited health research institute. Furthermore, the institute also renewed the quality certification ISO 9001:2015 for its core facilities. The accreditation and certifications recognise the quality of the research groups but also of the institute and its services, core facilities and management support.

We have also inaugurated two new facilities that will bring our research further. On the one hand, we have a brand new Phase I Onco-haematology Trials Unit, integrated into the Drug Research Centre (CIM) within the institute. This new unit makes it possible to coordinate and carry out complex clinical trials with drugs in the early development phase, thus studying and offering new treatment opportunities for cancer patients. On the other hand, and with a more basic research approach, the joint Research Unit on Genomic Medicine UAB-IR Sant Pau was officially inaugurated on November 2021. This unit bridges academia, biomedical research and healthcare, to bring genomic research closer to medicine and clinical practice.

In terms of Innovation and Technology Transfer activity, four intellectual/industrial properties were licensed in 2021, and a new spin-off (Investatin Therapeutics) was created, being six the spin-offs of the institute. The Sant Pau Research Institute has 26 patent families corresponding to a portfolio of 125 titles in national phases.

Scientific excellence is our focus and we continue to work towards internationalisation, equity and openness, embracing the Responsible Research & Innovation (RRI) agenda. We have renewed our Internal Scientific Committee and the Scientific Advisory Board including women to make them equal in gender, as well as to respond to our main research areas of interest.

We have consolidated and incorporated new talent to our institute. At scientific level, and after an excellent evaluation, Israel Fernandez Cadenas consolidated his position as group leader at IIB Sant Pau. Also, at management level, we have reinforced the support and management team to boost those areas that are absolutely necessary to step forward: human resources, international projects, strategic innovation and communications, fundraising and public engagement. These new units will contribute to be present at international level and to gain reputation and visibility, so we can increase our capacity to attract funds, talent and projects.

Finally, I am grateful to our board of trustees, who supports us in this path towards sustainability and encourages us to advance in our mission. I am especially grateful to the Generalitat de Catalunya for trusting us and for increasing and consolidating their core fund as well as allocating special funding this year, through the Health Department and the Research and Universities Department.

We face 2022 with enthusiasm, projects and new ideas. The ongoing projects, reinforced management, new opportunities and strategic initiatives together with the new strategic plan of the Hospital de Sant Pau make me envision a year full of challenges as well. The best part is that I feel we are ready to successfully face them all, thanks to the outstanding people we have at IIB Sant Pau!

Jordi Surrallés

Scientific Director
IIB Sant Pau



02

Presentation



About IR Sant Pau

The Fundació Institut de Recerca Hospital de la Santa Creu i Sant Pau is a scientific foundation which mission is to improve health and quality of life of the population, through the production and dissemination of scientific knowledge, training of researchers to an international standard, and promoting health innovation and the incorporation of medical advances in clinical practice and healthcare policies.

Created in 1992, the institute was attached to the Autonomous University of Barcelona (UAB) in 2003, and since 2011 it is part of the Government of Catalonia's CERCA Programme.



About IIB Sant Pau

The IIB Sant Pau is an accredited health research institute by the Carlos III Health Institute (ISCIII). It was founded on 17 May 2009 as the culmination of efforts by the Institut de Recerca Hospital de la Santa Creu i Sant Pau and eight other related bodies to cooperate as part of a high-level research institute that would develop new techniques and processes aimed at improving the quality of life of the population. The institute promotes and strengthens collaborative translational research and bridges the gap between basic research and clinical practice, so as to ultimately improving patient care.



Internal Scientific Committee

President

Jordi Surrallés (IIB Sant Pau's Scientific Director)

Vicepresident

Antonio López Pousa (Ethics Committee's President)

Innovation, Quality and training

Miriam Ors Griera (Deputy Scientific Director. Innovation, Training and Quality)

Members by direct designation of the IIB Sant Pau's Director

Elisa Llurba. (Women and Perinatal Health Research)

Noemí Rotllan. (Ramon y Cajal Researcher)

Gemma Mas. (Nursing Care Research)

Silvia Mateu (Puigvert Foundation)

Members from each IIB Sant Pau's research areas

Lina Badimon (Cardiovascular Diseases Area)

José M Guerra (Cardiovasculars Diseases Area)

Jose Manuel Soria (Cardiovascular Diseases Area)

Javier Briones (Oncohematologic Diseases area)

Ramón Mangues (Oncohematologic Diseases area)

Agustí Barnadas (Oncohematologic Diseases area)

Alberto Lleó (Neurological Diseases, Neuroscience & Mental Health Area)

Maria J Portella (Neurological Diseases, Neuroscience & Mental Health Area)

Israel Fernández (Neurological Diseases, Neuroscience & Mental Health Area)

Pablo Alonso Coello (Epidemiology, Public Health and Primary Care Area)

Maica Rodriguez (Epidemiology, Public Health and Primary Care Area)

Carles Brotons (Epidemiology, Public Health and Primary Care Area)

Didac Mauricio (Translational Medicine Area)

Sílvia Vidal (Translational Medicine Area)

Roser Torra (Translational Medicine Area)

Secretary of the Internal Scientific Committee

Miriam Ors Griera

External Scientific Committee

Chair

Dr Jose Lopez-Barneo

Professor of Physiology

Instituto de Biomedicina de Sevilla (IBiS)

Hospital Universitario Virgen del Rocío/CSIC/Universidad de Sevilla

Secretary

Dr Jordi Surrallés
IIB Sant Pau Director

Members

Dr Ángel Maria Carracedo Álvarez
Instituto de Medicina Legal
Facultade de Medicina e Odontoloxía, Santiago de Compostela

Dr José Palacios
Jefe de Servicio de Anatomía Patológica
Hospital Ramón y Cajal, Madrid

Dr Mercedes Robledo
Hereditary Endocrine Cancer Group, Group Leader
Human Cancer Genetics Program, CNIO, Madrid

Dr Judith García
Barcelona Institute for Global Health – Campus MAR
ISGlobal, Barcelona

Dr Magdalena Sanz
Associate Professor, Department of Obstetrics and Gynecology
Fetal Surgery and Intervention, Baylor College of Medicine, Houston-Texas

Mr Manuel Arellano
Plataforma de organizaciones de pacientes, Madrid

Dr Gloria Gonzalez
Directora del Programa de Terapia Génica y Regulación de la Expresión Génica
CIMA-Navarra

IIB Sant Pau Steering Committee

President

Dr Adrià Comella
Fundació Gestió Sanitària Hospital de la Santa Creu i Sant Pau

Members

Dr Jordi Bachs
fundació Privada Hospital de la Santa Creu i Sant Pau

Dr Lluís Tort
Universitat Autònoma de Barcelona

Dr Lluís Gausa
Puigvert Foundation

Dr Joan Garcia
Banc de Sang i Teixits

Dr Xavier Bonfill
Iberoamerican Cochrane Centre

Dr Jaume Sellarés
Barcelona-Sardenya Primary Health Centre

Dr Carme Borrell
Public Health Agency of Barcelona

Dr Jordi Surrallés
Fundació Institut de Recerca Hospital Santa Creu i Sant Pau

Management Team

Scientific Director
Dr. Jordi Surrallés

Management Director
Reyes Grases

Deputy Scientific Director
Miriam Ors

Communications Manager
Laia Cendrós

Assistant to the Management Team
Eva Sanfeliu

Board of Trustees - Institut de Recerca de l'Hospital de la Santa Creu i Sant Pau

President

Mr Manel Balcells i Díaz

Appointed by the Fundació de Gestió Sanitària Hospital de la Santa Creu i Sant Pau

Mrs Gemma Craywinckel - Mr Adrià Comella

Mr Joan Carles Souto Andres

Appointed by the Fundació Privada Hospital de la Santa Creu i Sant Pau

Mr Jordi Sierra Gil

Mr Josep M^a Forcada i Casanovas

Appointed by the Generalitat de Catalunya

Mr Robert Fabregat i Fuentes - Mrs Aina Plaza Tesías

(Departament de Salut, Generalitat de Catalunya)

Mr Joan Gómez Pallarès (Departament de Recerca i Universitats, Generalitat de Catalunya)

Appointed by the Universitat Autònoma de Barcelona (UAB)

Mr Jordi Casademont i Pou

Mr Manuel Armengol i Carrasco

Appointed by the Institut de Recerca Hospital de la Santa Creu i Sant Pau, upon proposal from the Fundació Privada Hospital de la Santa Creu i Sant Pau.

Mr Antoni Esteve i Cruella

Mr Jaume Kulisevsky Bojarski

Secretary (Not trustee)

Mr Joaquim Jornet i Porta



03

Highlights



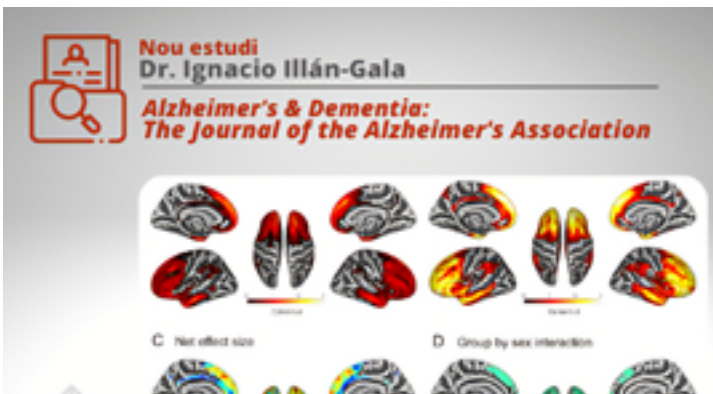
Dr. Montse Olivé appointed chair of the ERN Euro-NMD expert group

[Read article](#)



New study demonstrates that delayed Antibiotic prescription for children with respiratory infections is safe and effective

[Read article](#)



New study led by IIB Sant Pau researchers reveals sex differences in the behavioral variant of frontotemporal dementia.

[Read article](#)



Sant Pau joins the Barcelona Medical Photonics Network, an initiative to promote photonics R+D in health.

[Read article](#)



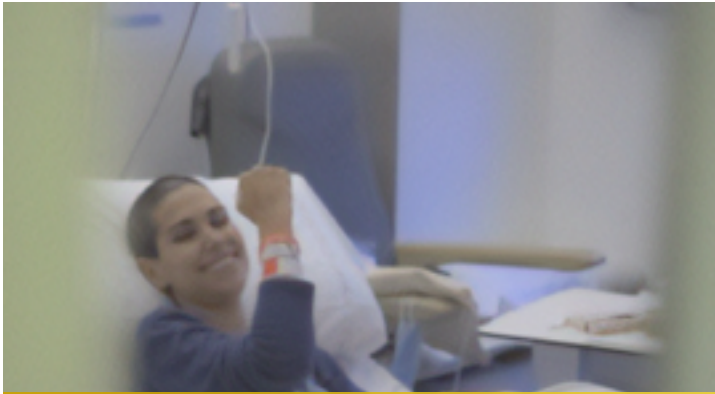
Sant Pau inaugurates a new Phase I clinical trials Unit in onco-haematology

[Read article](#)



Sant Pau develops and administers the first CAR-T of its own production for Hodgkin and non-Hodgkin lymphoma T in Europe

[Read article](#)



IIB Sant Pau, ESMUC and Oncolliga collaborate in a music therapy project for onco-haematology patients

[Read article](#)



Manel Balcells appointed new Chair of the IIB Sant Pau board of trustees

[Read article](#)



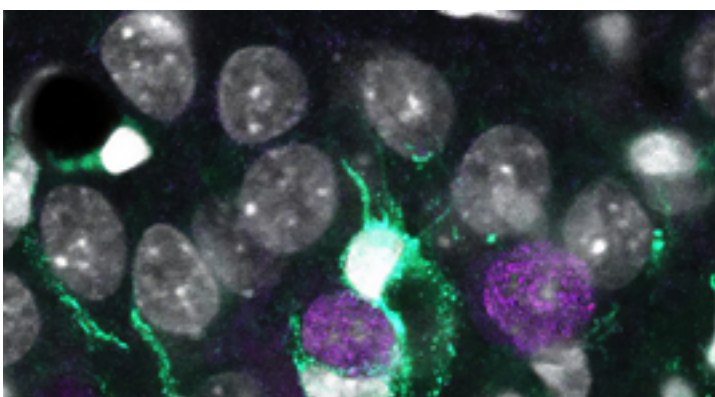
Robotic device that induces hallucinations allows scientists to identify the brain network responsible for hallucinations in Parkinson's disease

[Read article](#)



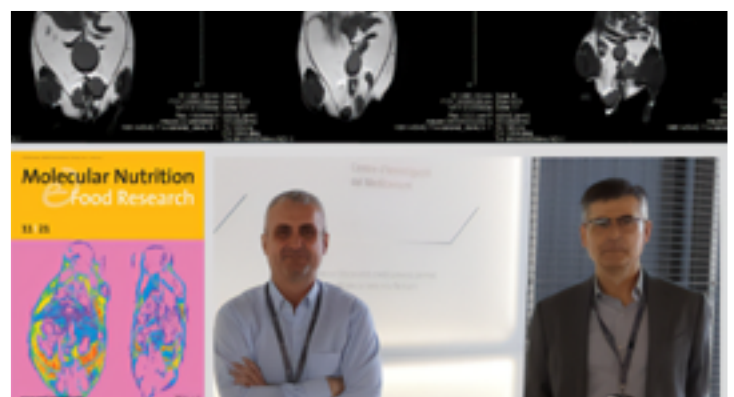
Professor Lina Badimon joins the Royal Academy of Medicine of Catalonia as a Numerary Academician

[Read article](#)



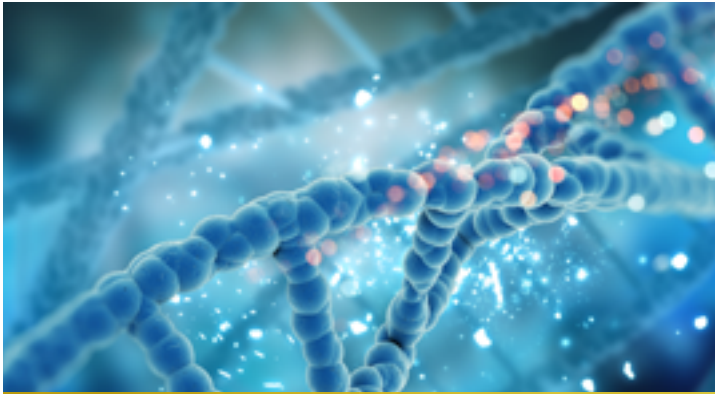
A map of brain gene expression helps understanding neuronal damage and loss in epilepsy

[Read article](#)



A form of vitamin B3 acts as fat burner and prevents weight gain and obesity

[Read article](#)



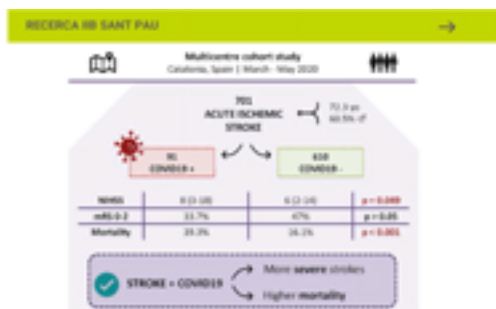
Large genòmic analysis highlights COVID-19 risk factors

[Read article](#)



New plasma biomarker to detect Alzheimer's disease in Down syndrome individuals

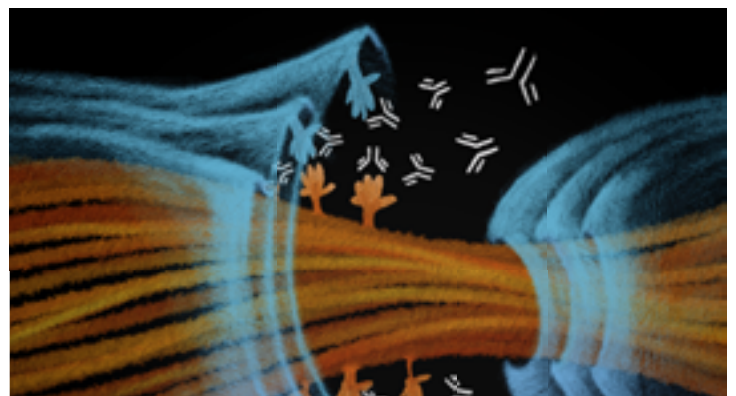
[Read article](#)



Els pacients amb ictus i COVID-19 tenen ictus més greus i amb més mortalitat

Patients with stroke and COVID-19 have more severe strokes and higher mortality

[Read article](#)



Sant Pau researchers advance in the knowledge of the most common chronic inflammatory neuropathy

[Read article](#)



IIB Sant Pau researchers identify a new pharmacological target to abdominal aortic aneurysm

[Read article](#)



The UAB – IR Sant Pau Joint Research Unit in Genomic Medicine begins its activity

[Read article](#)



04

Facts and figures

04.1

Publications

1,374



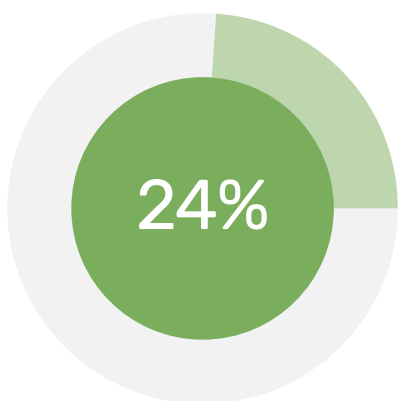
7.05
Average IF



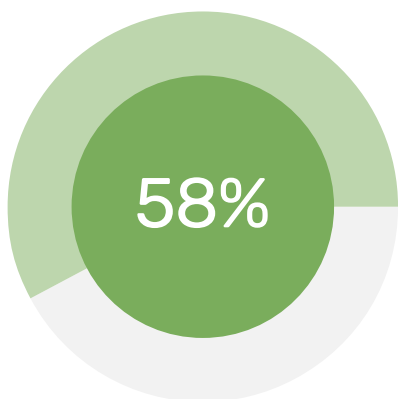
63%
Open Access



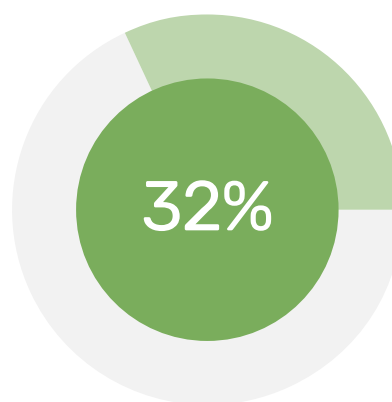
51%
International
Collaboration



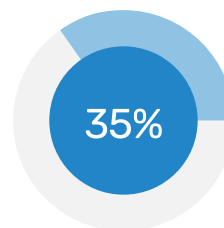
D1



Q1



Leadership



Women
Leadership

04.2

Clinical trials and clinical guidelines

673

Clinical Trials

51

Clinical Guidelines

04.3

Innovation and Tech transfer

**26**

Active Patents

**22**License
Agreements**4**

New Licenses

**224K€**Revenue from
Innovation and
TT activities**6**

Spin-offs

**1**

New Spin-off

04.4

Education

43

Doctoral Thesis

64

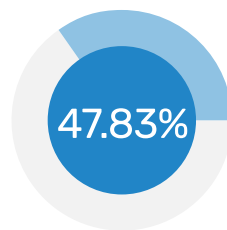
Courses

04.5

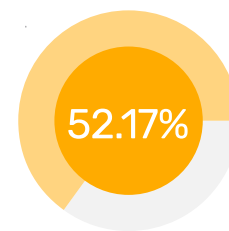
Funding

23.42

Income
M€



Public funds



Private funds

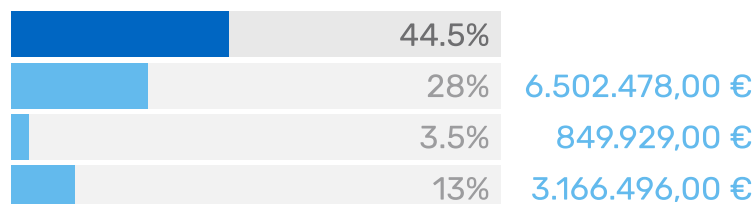
Core funding

- Generalitat de Catalunya
- Fundació Privada Hospital Santa Creu i Sant Pau



Non Competitive funding

- Clinical Trials
- Teaching
- Other



Competitive funding

- National and international grants and projects



Total 23.422.177,00 €

04.6

Granted Competitive Projects



59

Competitive national grants

5,564,193 €



29

Competitive international grants

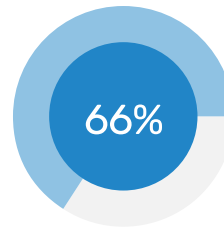
1,065,479 €

04.7

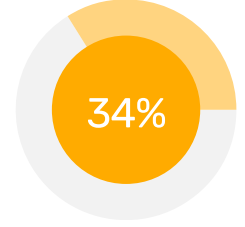
People



1,265

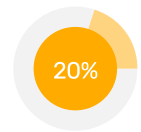
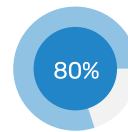


Female

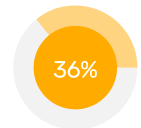
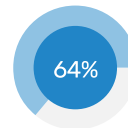


Male

1,157 Research staff

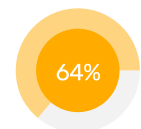
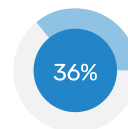


108 Administration and scientific support staff

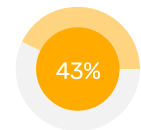
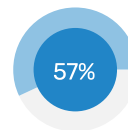


Categories

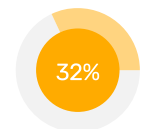
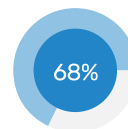
69 Group leaders



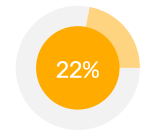
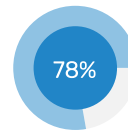
671 Researchers (R2, R3)



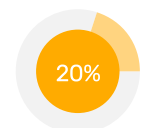
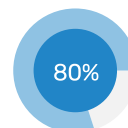
47 First stage researchers (R1)



370 Technicians



108 Management and core facilities



04.8

Science and society



21

Press releases



283

Print and online
media appearances



27

Activities



1,400

Participants



2,300

followers



2,969

followers



164

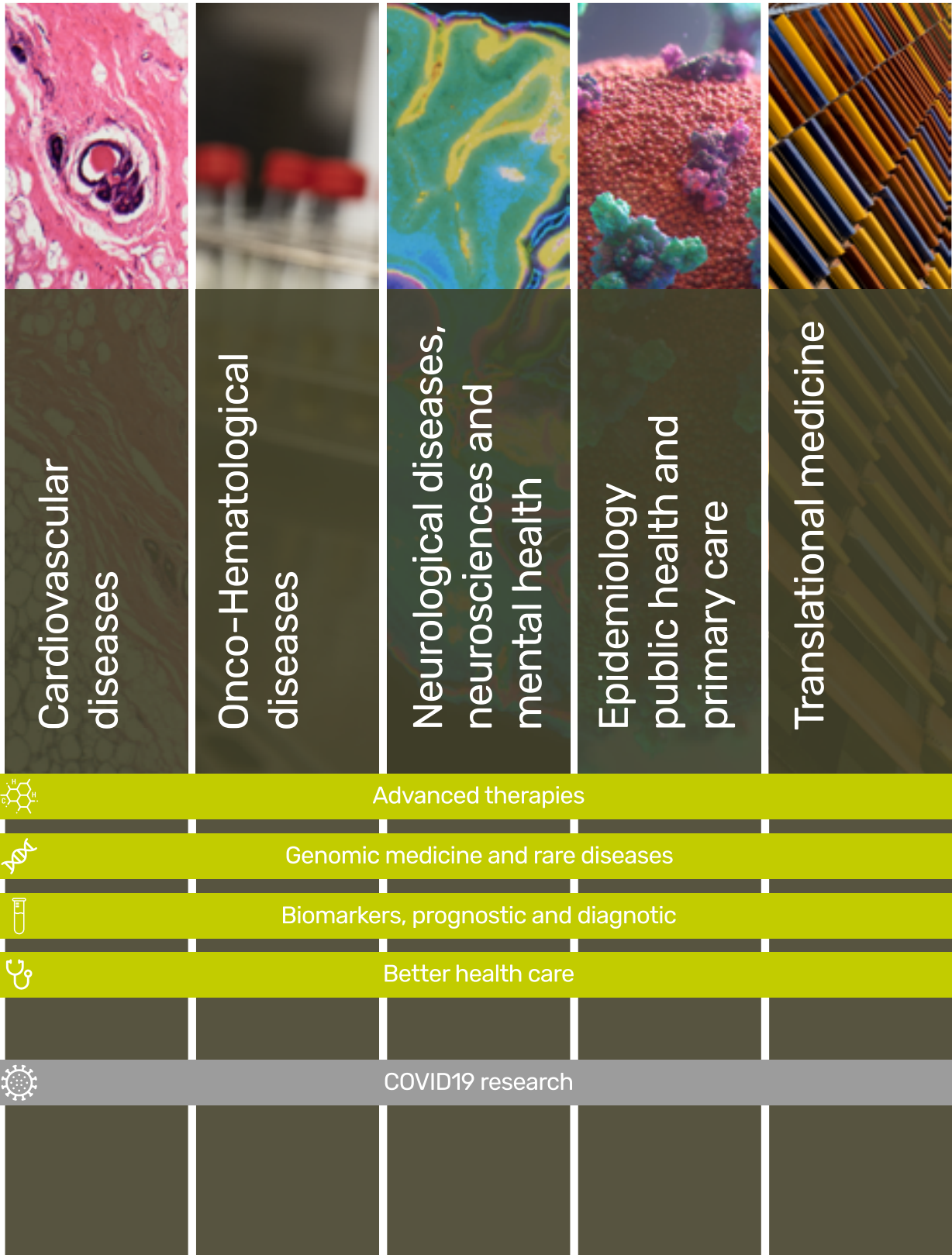
followers
(starting on Oct'21)



05

Strategic scientific research areas and transversal programmes

Strategic Areas



Transversal Areas



Area Director

**Lina
Badimon**

05.1

Strategic Areas

A.1 Cardiovascular diseases

The incorporation of new technologies that facilitate molecular profiling and gene regulation has led to innovative research into heart and other cardiovascular diseases including arrhythmias, aorta aneurism, vascular diseases, thrombosis, etc. The great diversity of groups in this area gives varied perspectives to on-going research, whether in developing or testing the effectiveness of new biomarkers (as in the investigation of the metabolic and genetic bases of cardiovascular diseases) or therapeutic applications in the short term. Before final translation to humans, many of the advances in this area can be validated in animal models including small and large mammals including pigs.

Research groups:

- [Clinical and Translational Cardiology \(José M. Guerra\)](#)
- [Genomics of Complex Diseases \(José Manuel Soria\)](#)
- [Thrombosis and Haemostasis \(Joan Carles Souto\)](#)
- [Pathophysiology of lipid-related disease \(Francisco Blanco Vaca\)](#)
- [Cardiovascular Biochemistry \(José Luis Sánchez Quesada\)](#)
- [Clinical Research in Transfusion Medicine \(Ramon Salinas\)](#)
- [Molecular Pathology and Therapeutic of Ischaemic and Atherothrombotic Diseases \(Lina Badimon\)](#)
- [Biomarkers for Cardiovascular Disease \(Teresa Padró\)](#)
- [Regulation of Cardiac Rhythm and Contraction \(Leif Hove-Madsen\)](#)
- [Lipids and Cardiovascular Pathology \(Vicenta Llorente Cortes\)](#)
- [Regulatory Mechanisms of Cardiovascular Remodelling \(Cristina Rodríguez Sinovas\)](#)



Area Director

**Javier
Briones**

A.2 Onco-hematological diseases

A broad range of translational cancer research is conducted in this area, particularly in sarcomas, head-and-neck, breast, ovarian, endometrial, colorectal and haematological cancers, among others. Research covers a wide range of fields, with disciplines that include from genetic research on cancer susceptibility syndromes to advanced therapies such as those based on targeted drug delivery with nanoparticles, preclinical development of new anticancer agents with disease-specific mouse models, immunotherapy with CAR-T cells, gene therapy, drug repurposing and predictive molecular markers. Next generation sequencing approaches are developed and applied to identify novel prognostic or response factors. A large number of clinical trials are performed within this area by our clinical researchers, including phase I, II and III trials with new anticancer drugs.

Research groups:

- [*Clinical Oncology \(Agustí Barnadas\)*](#)
- [*Oncogenesis and Antitumour Drugs \(Ramon Mangués\)*](#)
- [*Haematological Diagnosis \(Josep Nomdedéu\)*](#)
- [*Molecular Pathology of Gynaecologic Cancer \(Enrique Lerma\)*](#)
- [*Ear, Nose and Throat Cancers \(Miquel Quer\)*](#)
- [*Gynecologic and Peritoneal Oncology \(Maria Virtudes Céspedes\)*](#)
- [*Oncology/Haematology and Transplantation \(Jordi Sierra\)*](#)
- [*Cancer predisposition and DNA repair syndromes \(Jordi Surrallés\)*](#)
- [*Molecular bases of disease \(Pablo Fuentes Prior\)*](#)



Area Director

**Alberto
Lleó**

A.3 Neurological diseases, neurosciences and mental Health

This area covers research in neurological, neurodevelopmental and mental disorders. Among these are diseases such as stroke, neuromuscular conditions, neurodegenerative diseases, schizophrenia, depression or chronic pain. A large variety of neuroscience techniques are used in the area. Some groups work on the genetic bases of neurological diseases, the identification of biomarkers, brain imaging, neurosurgical methods, deep-brain stimulation or omics sciences, while other groups work with models of pain, in the biology of synapses or in neuropharmacology. Large population cohorts of patients with clinical follow-ups are analysed in this area and many clinical trials are performed.

Research groups:

- [Stroke Pharmacogenomics and Genetics \(Israel Fernández-Cadenas\)](#)
- [Genetic Diseases \(Maria Pia Gallano\)](#)
- [Cerebrovascular Diseases \(Joan Martí Fàbregas\)](#)
- [Neurosurgery \(Fernando Muñoz\)](#)
- [Neuromuscular Diseases \(M. Isabel Illa / Montserrat Olivé\)](#)
- [Parkinson Disease and Movement Disorders \(Jaime Kulisevsky\)](#)
- [Molecular Neuropharmacology \(Olga Pol\)](#)
- [Pharmacological Research in Humans \(Rosa Ma Antonijoan\)](#)
- [Mental Health \(Maria J. Portella\)](#)
- [Neurobiology of Dementia \(Alberto Lleó\)](#)
- [Neuroradiology \(M. Beatriz Gómez Ansón\)](#)
- [Addictive Behaviours \(Joan Trujols\)](#)
- [Molecular Physiology of the Synapse \(Àlex Bayés\)](#)
- [Genetics in Neurodegenerative Diseases \(Jordi Clarimon\)](#)



Area Director

**Pablo
Alonso
Coello**

A.4 Epidemiology, Public Health and primary care

Research in this area involves the study of the population health and its social, political and environmental determinants with special attention to inequalities and their consequences. It evaluates the effectiveness and health impact of public interventions and policies, as well as the promotion of evidence-based practical medicine in order to make health intervention more effective, appropriated and safe. Also important is the development and evaluation of methods or strategies to improve the generation, evaluation, communication and transfer of scientific evidence. This area finally studies the epidemiology of communicable diseases in the population of Barcelona, with special attention to the impact of the prevention and control strategies developed. The aim of this area is therefore to achieve wellness in public health through improving policies and medical management.

Research groups:

- [Clinical Epidemiology and Healthcare Services \(Pablo Ignacio Alonso Coello\)](#)
- [Evaluation of Public Health Policies and Programmes \(Xavier Continente\)](#)
- [Urban Health Inequalities \(Catherine Pérez\)](#)
- [Transmissible Diseases \(Cristina Rius\)](#)
- [Primary Care Research \(Carles Brotons\)](#)



Area Director

**Dídac
Mauricio**

A.5 Translational medicine

Sant Pau Hospital is a tertiary high complexity university hospital and, together with Fundació Puigvert, covers all specialities in medical care. This complexity leads to a high variety of biomedical translational research to improve patient's care in multiple fields including inflammatory or immunological processes and on factors linked to the innate immune system, osteoporosis, nephrology, surgery, ageing-related macular degeneration, microbiology and infectious diseases, diabetes, pituitary and other endocrine diseases, respiratory diseases or perinatal health research and clinical approaches based on human cells and tissues. The main focus of this research area is evidence-based translational medicine to improve patients' care.

Research groups:

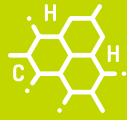
- [Women and Perinatal Health \(Elisa Llurba\)](#)
- [General and Digestive Surgery \(Antonio Moral\)](#)
- [Inflammatory Diseases \(Sílvia Vidal\)](#)
- [Nephrology \(Lluís Guirado\)](#)
- [Endocrinology, Diabetes and Nutrition \(Dídac Mauricio\)](#)
- [Pituitary Gland Disorders \(Susan Webb\)](#)
- [Digestive Diseases \(Ma Àngels Escorsell\)](#)
- [Microbiology and Infectious Diseases \(Ferran Navarro\)](#)
- [Multi-organ Damage \(Jordi Casademont\)](#)
- [Chronic Respiratory Diseases \(GREC\) \(Vicente Plaza\)](#)
- [Research Group in HIV and AIDS \(Pere Domingo\)](#)
- [Regenerative Medicine and Tissue Bioengineering \(Ricardo Pedro Casaroli\)](#)

AG. Associated groups

- [Emerging Processes in Prevalent Diseases \(Mireia Puig Campmany\)](#)
- [Radiophysics and Radioprotection \(Pablo Carrasco de Fez\)](#)
- [Pediatrics \(Susana Boronat\)](#)
- [Ophthalmology \(José Antonio Buil\)](#)
- [Intensive Medicine \(Jordi Mancebo\)](#)
- [Nuclear Medicine \(Ignasi Carrió\)](#)
- [Pharmacy \(M. Antònia Mangués\)](#)
- [Dermatology \(Luis Puig\)](#)
- [Anaesthesiology \(M. Victòria Moral\)](#)
- [Plastic Surgery \(J. Jaume Masià\)](#)
- [Palliative Care \(Antonio Pascual\)](#)
- [Andrology \(Eduard Ruiz\)](#)
- [Urology \(Juan Palou\)](#)
- [Radiation Oncology \(Gemma Sancho\)](#)
- [Locomotor System Research \(Xavier Crusi\)](#)
- [Pain and Neurosciences \(Elena Català\)](#)
- [Nursing Care Research \(Gemma Mas\)](#)
- [Reproductive Health \(Joaquim Calaf\)](#)
- [Cardiac Surgery \(José Montiel\)](#)

05.2

Transversal programmes



Advanced Therapies

Immunotherapy, gene and cell therapy, target drug delivery with nanoparticles, synthetic lethality or drug repurposing are examples of research on advanced therapies that can be applied to a number of oncological, cardiovascular or neurological diseases among others. Research in this programme will lead to new treatments and therapeutic strategies to improve patients' lives.



Genomic Medicine and Rare Diseases

Technological and bioinformatics advances in the field of genomics led to a strong impact not only on the diagnosis of rare genetic diseases but also on determining risk factors, prognosis and treatment of a growing number of highly prevalent pathologies. In this programme we face the era of personalized precision medicine and address the challenge of diagnosing genetic disorders sooner and better.



Biomarkers, Prognostic and Diagnostic

Research on disease biomarkers are essential in high complexity medical care as it allows to adjust the diagnosis and predict the prognosis and drug response. Biomarkers are also essential for the proper follow-up of clinical trials with new drugs. The research done in this program will help define what is the best journey for our patients, from diagnosis and clinical follow-up to treatment.



Better Health Care

We are an Institute with healthcare professionals linked to all medical specialties and nursing. The translational research of this program aims to respond to the clinical challenges of patients in the form of healthcare improvements. This is evident in improvements in diagnosis, medical or surgical procedures or care circuits always focused to the benefit of the patients.



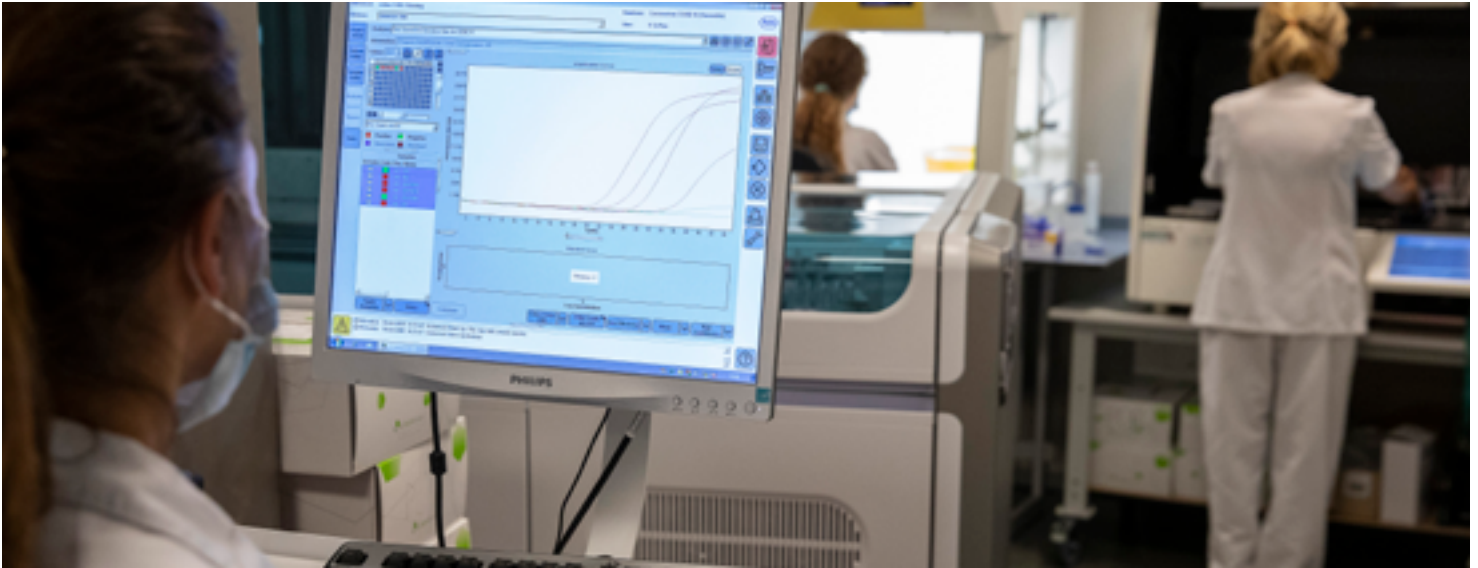
COVID-19 Research

The outbreak of the SARS-CoV-2 virus and the consequent pandemic has driven many research projects on COVID-19, including the effects on pregnancy and childbirth, the genetic or individual factors that determine its severity, the physiological mechanisms of infection and immune response, or clinical trials with new drugs. This program adds knowledge for a common goal: understand to fight the disease.



06

Core facilities and scientific services



Coordinator

**Jordi
Virgili**

Contact:
jvirgili@santpau.cat

Excellence in biomedical research requires the use of sophisticated and costly technical equipment.

Which in turn requires the training of highly specialized staff. In order to enhance returns on investment and the efficient use of available resources, IIB Sant Pau established state-of-the-art core facilities (PSCT).

In brief, the IIB Sant Pau core facilities were established to:

- Facilitate access to high-level techniques and technologies that may not be available to individual groups.
- Provide services at a reduced cost and optimize human and material resources.
- Support researchers with optimized workflows and methods.
- Offer technical and methodological guidance and support.

Their strengths are customer focus and rapid delivery; highly competitive rates and excellent quality; multidisciplinary team with many years of experience, technology state-of-the-art and direct client/expert contact.



Coordinator

**Sandra
Camino**

Contact:

transcriptomica@santpau.cat

06.1

Genomics and Transcriptomics

The Genomics and Transcriptomics platform is a core facility focused on giving advice, offering specific services in genomics or transcriptomics techniques, and making specific equipment available to researchers and the scientific community.

Services

- Quantitation and quality control of nucleic acid samples (Qubit 3.0, Nanodrop 2000, and Bioanalyzer 2100)
- Sample processing for Microarrays studies (Gene expression, miRNA profiles, Cytogenetics, GWAS)
- Real-time PCR projects (Gene expression, miRNA detection, allelic discrimination, CNV, absolute quantification....)
- Next-Generation Sequencing: exome sequencing, targeted RNA or DNA sequencing (Ampli-Seq technology), small RNA sequencing, de novo sequencing, ChIP-Seq, 16S sequencing, metagenomics...
- Sanger Sequencing: DNA sequencing, mutation and polymorphism analysis, DNA methylation studies, microorganisms identification...
- Fragment analysis: cell line authentication, copy number (MLPA), LOH, genotyping studies, microsatellites instability, DNA repeat expansion studies....
- Omics Data analysis

Some of the equipment used to carry out these techniques can be accessible for researchers after specific user training.

The Genomics and Transcriptomics platform offers a quality service guaranteed for the ISO 9001: 2015 certification. GT platform is a Quality Accredited facility since 2009.

Equipment

- Affymetrix GS 3000 System array platform (upgrade 7G).
- 7900HT Fast Real-Time PCR system (96-well, 384-well, and TLDA blocs) (AB-ThermoFisher Sci)
- Bioanalyzer 2100 (Agilent Tech).
- Nanodrop 2000 (ThermoFisher Sci).
- Qubit 3.0 (ThermoFisher Sci)
- Infinite M200 PRO (Tecan) microplate reader: spectrophotometer, fluorimeter, luminometer.
- 3130xl Genetic Analyzer capillary electrophoresis sequencer (ThermoFisher Sci).
- Ion GeneStudio S5 Next-Generation Sequencing System, with Ion Chef System (ThermoFisher Sci).

Grants

- "Affymetrix Microarrays System".
Co-funding: FEDER.
- "DNA genetic analyzer and protein arrays platform for the Genomics and Proteomics area of the Technical Laboratory for scientific and technical support". IF07/3675-1.
Co-funding: FEDER.



Technical staff
Elena Serrano
Maísa García
Sandra Camino

Contact:
 eserrano@santpau.cat
 mgarciaar@santpau.cat
 scamino@santpau.cat

06.2

Bioinformatics

The Bioinformatics Unit supports the design of high-throughput experiments and performs biostatistical and bioinformatic analysis, mainly of genomics and transcriptomics data; immunohistochemistry image data; and proteomics data.

Equipment

- Workstations
- Specific software (licensed and free)



Coordinator

Marta Soler

Staff

Lia Ros

Contact:
citometria@santpau.cat

06.3

Flow Cytometry

The flow cytometry platform provides users with the latest generation equipment for cytometric analysis and separation of cell populations. Unit staff support users in experimental design, data acquisition, and analysis of results. Furthermore, unit staff performs periodic training of the users to facilitate their non-assisted use of the equipment in the platform.

The flow cytometry platform is certified by the ISO 9001:2015, and offers sample analysis, from staining to delivery of results, as well as the possibility of fine-tuning new techniques at the request of both internal and external users.

Services

The flow cytometry platform has a wide range of applications in flow cytometry and cell sorting and is open to innovation with new techniques at the request of researchers.

Conventional cytometry

- Characterization of cell populations by multicolour immunophenotyping.
- Essays of cell viability and proliferation in animal and bacterial cells.
- Essays of cell cycle and apoptosis.
- Gene expression (analysis of fluorescent proteins) and quantification of transfection efficiency.
- Magnetic column cell enrichment for the detection of minority populations.

Cell sorter

- Up to 4 cell subpopulations can be obtained simultaneously in a biosafety cabin.
- Automated magnetic cell separation of up to two populations.

High Throughput Screening (HTS)

- Analysis of gene expression and immunophenotype profiles, detection of DNA, RNA and protein in a single plaque.
- Possibility to include up to 50 analytes in the same plaque.

Equipment

Analyzer cytometer

- FACSCalibur (BD). 2 lasers: 4 fluorescence parameters.
- FACSCanto II (BD). 3 lasers: 8 fluorescence parameters.
- MACSQuant 10 (Miltenyi Biotec). 3 lasers: 8 fluorescence parameters. Equipped with a magnetic enrichment column.
- MACSQuant VYB (Miltenyi Biotec). 3 lasers: 8 fluorescence parameters. It is equipped with a yellow-green laser (561nm) and it specializes in bacteria and fluorescent proteins (GFP, mCherry, dTomato...).
- MACSQuant 16 (Miltenyi Biotec). 3 lasers: 14 fluorescence parameters. Specialized in nanocytometry.

Cell sorting

- FACSAria (BD) inside biosafety cabin. 3 lasers: 9 fluorescence parameters. Collection in cytometry tubes (up to 4 populations), plaque, or slides. Single-cell option.
- AutoMACS (Miltenyi Biotec). Automated magnetic separation.

Multiplex Analysis

- MAGPIX (Luminex). Analysis of up to 50 analytes per plaque.

Off-line analysis programs

- FACSDiva and Cell Quest Pro.
- Flow Logic- software for cytometric analysis (Miltenyi).
- Belysa Immunoassay Curve-Fitting Software (Luminex- Millipore).

Grants

- "Flow cytometry cell sorter: analysis system and high throughput cell sorting". IF06/3678-1. Co-funding: FEDER.
- "Contrato de suministro por adquisición de dos citómetros de flujo de 3 láseres para la Fundación Privada Institut de Recerca de la Santa Creu i Sant Pau". NEGSPiR 20/25. Co-funding: FEDER.



Coordinator

**Esther
Peña
Sendra**

Technical staff

**J. Oriol
Juan-Babot**

Contact:
microscopia@santpau.cat

06.4

Microscopy

The Confocal Microscopy platform is a core facility focused on biomedical research. The main function is to advise on the experimental design, choose the equipment that best suits the needs and train the user in it, acquire, quantify, and analyze images.

The Confocal Microscopy platform is certified by the ISO 9001:2015.

Services

- Advice on the preparation and/or approach to studies.
- Training.
- Immunofluorescence from 2 to 5 fluorochromes.
- Reconstruction of 3D and 4D images.
- Co-location studies.
- Inter and intra-interactions (FRET and FLIM).
- Conventional or brightfield fluorescence microscopy of living, fixed cells, and tissues.
- Time lapse.
- Pathological studies of different tissues, stained by conventional immunohistochemistry (freezing or paraffin) and quantification of the images.

Equipment

- Leica SP5 multispectral confocal AOBs system with high-resolution scanning, high-speed tandem digitalization, FLIM/FCS modules and time-lapse incubation modules.
- Leica SP2 AOBs multispectral confocal AOBs system with high-resolution scanning, high-speed tandem digitalization, and time-lapse incubation modules.
- Zeiss AXIOVERT 200M inverted fluorescence microscope with temperature and CO₂ control, incubation cabinet that allows working with live cells both in fluorescence and in bright field. Equipped with fluorescence filters: DAPI, FITC, Rhodamine. Equipped with polarizers systems that allow capturing images of polarized light with all objectives.
5X/0.15 Plan-Neofluar Ph1 – Sí DIC II Ph1
10X/0.30 Plan-Neofluar Ph1 – Sí DIC II Ph1
20X/0.50 Plan-Neofluar Ph2 – Sí DIC II Ph2
40X/0.75 Plan-Neofluar Ph2 – Sí DIC II Ph2
63X/1.4 Oil Plan-Apochromat Ph3 (Oil)
- Olympus BX51 fluorescence microscope with double head. Equipped with fluorescence filters: DAPI, FITC, TRITC, TXRED. With the objectives:
2x Plan N 0.06 ∞/-/FN22
4x Plan N 0.10 ∞/-/FN22
10x Plan N/0.25 ∞/-/FN22
20x Plan N 0.40BD ∞/0.17/FN 22 UIS 2
40x Plan N 0.65 FN22
100x UPlan FLN 1.3 oil-UIS2 ∞/0.17/FN26.5

- Nikon Eclipse 80i microscope. Equipped with the fluorescence filters: FITC, G-1B (546), FITC-CY3. With the objectives:
Plan Fluor 4X/0.13 ∞ /- nd17.1
Plan Fluor 10x/0.3 PH1 DLL ∞ /- Wd16
Plan Fluor 20x/0.5 PH1 DLL ∞ /0.17 Wd2.1
Plan Fluor 40X/0.75 PH2DLL ∞ /0.17WD0.72
Plan Apo VC 60x/1.4oil ∞ /0.17WD0.13
- Stand for macrophotography with lighting
- Stereomicroscope LEICA MZ 9.5

Grants

- "Zeiss digital time-lapse microscope". IF01/3664. Co-funding: FEDER.
- "Confocal microscopy and accessories". IF08/3643. Co-funding: FEDER.



06.5

Biobank and Immunohistochemistry

The Biobank and Immunohistochemical Platform is a support platform for biomedical research whose main function is the processing of biological samples according to quality criteria.

The Biobank IIB Sant Pau, as part of the Biobank and Immunohistochemical Platform, is a non-profit public establishment, authorized by the Directorate General for Planning and Research in Health, of the Department of Health of the Generalitat de Catalunya and is registered in the National Registry of Biobanks of the Carlos III Health Institute (number B.0000722) in accordance with RD1716/2011, of November 18, which establishes the basic requirements for authorization and operation of biobanks for biomedical research purposes and of the treatment of biological samples of human origin, and the operation and organization of the National Registry of Biobanks for biomedical research is regulated. Likewise, the Biobanc IIB Sant Pau is part of the current National Platform of Biobanks (PT20/00196), this being one of the ISCIII Platforms to Support R&D&i in Biomedicine and Health Sciences of the Strategic Action in Health 2017-2020, whose PI is Dr. Elena Serrano Carballal.

Its mission is to obtain, process, store, manage and make available to the scientific community human biological samples and associated data, in accordance with agreed standard working procedures, as well as maintaining the traceability of the sample and its associated data, in order to promote quality biomedical research, respecting the rights of donors.

Coordinator and
Biobank Scientific
Director

**Elena
Serrano**

Contact:
biobanc@santpau.cat

Technical staff
Biobank

**Sabina Cisa
Wieczorek**

**Iris Rodríguez
Rodríguez**

Tumour bank

**J. Oriol
Juan-Babot**

Immunohistochemistry
**Iris Rodríguez
Rodríguez**

**M. Àngels
Velasco Murcia**

Image
**J. Oriol
Juan-Babot**

**Iris Rodríguez
Rodríguez**

The objective of the Biobank IIB Sant Pau is to increase the accessibility of human biological samples to applicant researchers so that they can use them in their research projects, as long as they meet the ethical and legal requirements required by current legislation.

The Biobank IIB Sant Pau acts, therefore, as a link between sample donors, healthcare personnel and the scientific community for the harmonization of the rights, duties and interests of each of the groups in order to facilitate the advancement of quality biomedical research.

On the other hand, the Immunohistochemistry laboratories of the Biobank and Immunohistochemistry Platform offer biological sample processing services, both of human origin and animal models, for analysis using histological techniques, from sample processing, cutting and staining to digitalization of the preparations, histological analysis and delivery of results. The Platform offers the possibility of implementing new histological methods and stains, according to the demand and needs of our users, both internal and external. In addition, user training is carried out so that they can use the platform's equipment in a self-service mode.

The Biobank and Immunohistochemical Platform is certified under the ISO 9001:2015 standard for all the services offered by it.

Services

In addition to the catalogs of human biological samples, the Biobank and Immunohistochemical Platform offers a wide range of services:

BIOBANK

- Management of requests for biological material for research purposes
- Ethical-legal advice on the creation of new collections
- Scientific-technical advice on the treatment of biological samples
- Processing of human biological samples: peripheral blood, bone marrow, urine, frozen tissue, etc.
- Conservation and custody of human biological samples
- Cryopreservation of viable cells
- Management of sample collections and associated data
- Nucleic acid extraction from different types of biological samples

IMMUNOHISTOCHEMISTRY

- Tissue decalcification
- Tissue processing for paraffin embedding and O.C.T.
- Section of paraffin blocks and O.C.T.
- Antigen retrieval
- Automatic, single and double immunostaining
- Stains: hematoxylin-eosin, giemsa, oil red, trichrome, PAS, Wright's stain, alcian blue, safranin, sirius red, etc...
- Preparation of tissue microarrays (TMA)
- Fluorescent in situ hybridization (FISH) on tissue
- Digitization of histological preparations, under bright field, fluorescence and FISH conditions
- Qualitative and quantitative histological analysis

The Platform offers the possibility of implementing new histological methods and stains, according to the demand and needs of our users, both internal and external.

Equipment

- 15 Ultralow freezers -80°C NUAIRE NU-9668E with double-emergency system alarm. 24h monitoring
- Liquid nitrogen tank CHART MVE 1211 with automatic filling
- Vapour nitrogen tank CBS V-5000 EHAB with automatic filling

Biosafety BSL-2 Laboratory

- Biosafety cabinet IIA NUAIRE
- Refrigerated centrifuge HERAEUS MEGAFUGE 40R
- Refrigerated centrifuge KENDRO LABOFUGE 400R
- Refrigerated centrifuge EPPENDORF 5415R
- Cell counter BIORAD TC-20
- Nucleic acid extractor QIACUBE

Immunohistochemistry new IR-HSCSP building

- Tissue processor SAKURA TISSUE TEK VIP 5 JR
- Microwave Tissue processor KOS
- Paraffin Embedding Module SAKURA TISSUE TEK TEC5
- Cold plate for Paraffin Modules LEICA ARCADIA C
- Rotary Microtome MICROM HM355S.
- Paraffin section flotation bath SELECTA TERMOFIN.
- Drying oven TERMARKS B8000
- Cryostat LEICA CM1950
- Immunohistochemistry automatic stainer AGILENT AUTOSTAINER AS48
- Automatic Stainer for histologic staining SAKURA TISSUE TEK PRISMA
- Semiautomatic tissue array GALILEO CK3500.
- Fume hood NUAIRE NU-S813-400E
- Fume hood NUAIRE NU-164-424E
- Scanner Panoramic Scan II (3DHistech)

Immunohistochemistry Lab Pavilion 11

- Paraffin Embedding Module LEICA EG1150H: assisted and non-assisted
- Cold plate for Paraffin Modules LEICA EG1150C: assisted and non-assisted
- Rotary Microtome LEICA JUNG RM2055: assisted and non-assisted
- Paraffin section flotation bath LEICA HI1210: assisted and non-assisted.
- Drying oven MEMMERT BE 300
- Cryostat LEICA JUNG CM3050S: assisted and non-assisted
- Fume gard LABORSYSTEM
- Scanner Panoramic MIDI BF.
- Workstation for qualitative and quantitative histological analysis

Grants

- "Plataformas ISCIII. Biobanco IIB Sant Pau. Instituto de Investigación del Hospital de la Santa Cruz y San Pablo". Plataformas ISCIII de apoyo a la I+D+I en Biomedicina y Ciencias de la Salud 2020. PT20/00196. Co-funding FEDER.
- "Network of Tumor Banks of Catalonia's Tumor Bank Sant Pau Node Maintenance". ICO Agreement.
- "Plataformas ISCIII. Biobanco IIB Sant Pau. Instituto de Investigación del Hospital de la Santa Cruz y San Pablo". Plataformas ISCIII de apoyo a la Investigación en Ciencias y tecnologías de la Salud 2013. PT13/0010/0034. Co-funding FEDER.



Coordinator

Matilde Parreño

Contact:
mparreno@santpau.cat

06.6

Clean Room

The objective of the clean room platform is the development and manufacture of Advanced Therapy Medicinal Products (ATMPs). All operations are carried out under the Good Manufacturing Practice (GMP).

Equipment: > BSL-2 cabinets, inverted microscope, TC automated cell counter, refrigerated centrifuge, microfuge, hypoxia incubators, fridge and -20 °C combi.

The IIB Sant Pau Clean Room is accredited to develop advanced therapies at IIB Sant Pau. The Research Institute of the Hospital de la Santa Creu i Sant Pau – IIB Sant Pau, in collaboration with the Banc de Sang i Teixits de Catalunya, obtained the certificate of compliance with the Standards of Good Manufacturing Practice of Advanced Therapy Medicines from the Spanish Agency of Medicines and Medical Devices (AEMPS) from the Ministry of Health, certificate that allows the production and quality control of cellular medicines type CAR-T.



Coordinator

Maïsa García Arguinzonis

Contact:
mgarciaar@santpau.cat

06.7

Proteomics

The Proteomics Unit bridges the scientific challenges of our researchers and the analysis platform.

The unit offers support and advice to design experiments and studies, according to the researchers needs. It helps and support researchers in sampling and sample preparation; analysis and and data interpretation of the resulting data from mass spectrometry techniques; and in silico analysis to confirm or verify results.



Supervisor

**Javier
Crespo**

Contact:
j Crespo@santpau.cat

06.8

Radioactive Installation

The Radioactivity Unit provides groups with specific research laboratories in which to work with radioactive isotopes in liquid form.

These areas are fully equipped and adapted for the handling of radioactive material and apply optimum measures for the safety and radioprotection of staff and the environment.

This area has been authorized by the nuclear safety authority and its staff supervise compliance with the corresponding laws, guidelines and regulations.

Services include support for:

- In vitro labelling of proteins, lipoproteins and liposomes.
- Cellular proliferation and toxicity.
- Nucleic acid labelling.
- Immunoassay techniques.
- Determination of enzymatic activities using radiolabelled substrates.
- Analysis and separation of labelled molecules.
- Cellular cholesterol efflux.
- In vivo metabolism.

Facilities

The Radioactivity Unit has the following facilities:

- 1 room for radioactive material storage.
- 7 equipped laboratories, one of them refrigerated.
- 1 room for gamma- and beta- counters.
- 1 room for radioactive waste storage.
- 1 room for controlled disposal of radioactive waste.
- Radioactive liquid waste containers for controlled radioactive waste disposal.
- Shielding accessories for radiation safety (table top shields, shielded containers, protective equipment, etc).
- Portable radiation and environmental contamination detectors.
- 1 ventilated rack for in vivo studies.
- 2 chemical safety cabinets for gas extraction.
- 1 vertical laminar air flow cabinet for cell cultures.
- 1 CO₂ incubator for cell cultures.



Coordinator

**Estefania
Segalés**

Technical staff

**Margarita
Domingo**

Contact:

esegales@santpau.cat

06.9

Cellular Culture Service

Currently, in vitro culture techniques are essential for the research carried out by many scientific groups. The cell culture service offers an infrastructure with different facilities that reach a total area of more than 400m², located on the 1st and 2nd floors of the main building, plus a laboratory on pav.11 of the old site. These are laboratories where research groups and those who may require it, can carry out the experimental part of cell cultures of their research projects.

Description

The service consists of different facilities where users can work with primary cultures obtained from human and experimental animal tissues, continuous cell lines and Level I and II Genetically Modified Organisms (GMOs). In each of the facilities, users have the adequate and basic equipment necessary to obtain and maintain cell cultures: laminar flow cabinets and biological safety cabinets (a total of 25), CO₂ incubators (28), ovens, centrifuges, water baths, inverted microscopes, balances, vacuum traps, cell counters, refrigerators, freezers (-20 and -80°C), hybridization ovens and autoclaves.

Equipment such as: special biosafety cabinets to work with cytostatic products and/or nanoparticles, fluorescence and image capture microscopes, binocular microscopes with lighting and display screen, particle counters, UV stations and nucleofection equipment are located in these facilities.

In addition, the service has hypoxia stations and a laboratory restricted to the use of radioactivity in cultures, a laboratory to carry out bacterial cultures and a laboratory where biological samples can be processed (not related to obtaining cultures) that require handling under biosafety conditions.

The staff of the service is dedicated to keep the laboratory in optimal working conditions. They take care of preventive maintenance, equipment control, cleaning and disinfection, daily supervision of the correct functioning of instruments (cabinets and incubators), management and processing of waste, autoclave sterilization, internal work in the laboratory, calibration of equipment and controls. More important, they advise and train users for the correct use of laboratories and support them with any question or request regarding equipment or working conditions, as well as authorizations for access and use of biological material.

The person in charge of the service forms part of the service users' commission, the Biosafety Committee and the IR Quality Committee at the same time, a fact that allows it to integrate various fundamental aspects in order to carry out the tasks of supervising the service. She is trained in PRL, in the implementation of the ISO Standard and also has the auditor accreditation for the same standard. The previous experience of years in basic research allows her to integrate the interest of users with the management of laboratories in her dedication.

All the management of the service facilities is subject to the ISO 9001:2015 Standard. Authorization is available to work with GMOs in part of the facilities.



Coordinator

Laura Casaní

Manager of Animal Research Facilities

Sergi Florit

Technical staff

Fanny Cevallos

Ángel Juncosa

Lorena Masiá

Eleonor Masiá

Contact:

estabulari@santpau.cat

06.10

Animal Experimental Service (SEA)

The Animal Experimentation Service is the area dedicated to the house and care of experimental animals, and to work with experimental procedures that use them. The SEA has the ISO 9001: 2015 certification and guarantees compliance with the legal and ethical laws related to the use of animals for experimentation and for other scientific purposes. It is officially registered as a breeding center, supplier and user of experimental animals (B9900067 and REGA ES080190036528), it also has the authorization to house and work with Genetically Modified Organisms (A/ES/08/21 and A/ES/08/I-14) . The staff of the SEA is also officially trained and accredited: Welfare and Animal Health Specialist, Advisor on Animal Welfare, Technicians and Caregivers.

Translational research needs a responsible use of experimental animals and the reproducibility of results. The use of animals of high genetic and healthy quality and their use, maintenance and well-being in appropriate facilities are mandatory to obtain these results. The SEA offers its services to maintain the animals in the right conditions and also advises and gives specialized support to the researchers in the design and realization of the experimental procedures and techniques.

The SEA consists of 2 separate buildings:

- Conventional Facility, one floor area of 650m², designed according to the requirements of Decret 214/1997 and R D 53/2013; It has the necessary facilities to house up to 40 pigs, 114 rabbits, 350 rats and 2500 mice in conventional conditions and 90 ratios and 2200 mice in SPF or Special Pathogen-Free conditions (individually ventilates cages in a positive pressure room).

The SEA facility has work halls for rodents and rabbits and 4 experimental operating theaters for pigs. It also has advanced medical equipment for small animals: bioluminescence (Hamamatsu), high frequency ultrasound (Vevo2100), intravital microscope, flow measurement equipment and probes, ECG monitor, NIP equipment, mechanical ventilators , equipment of anesthesia with sebo / isoflurane, surgery microscopes,... For the large animals the SEA has: multiparameter monitors, defibrillators, anesthesia equipment with sebo / isoflurane, mechanical ventilators, RX (Philips and Siemens) equipment, equipment Trans-echocardiography and transesophageal echocardiography (Philips iE33), intravascular echocardiography (Siemens Acuson), real-time 3D imaging equipment (CartoXP), radiofrequency ablation equipment, 12-lead ECG.

The operating theaters can be used to teach microsurgery courses, experimental surgery, medical equipment presentations.

- The Biomodule-SPF is a barrier area of 30m² that can house up to 400 immunodeprived mice. The entrance to the installation is through an air shower for people or a SAS of peroxide for materials. Work with animals is under biosafety hood, it has a preclinical in vivo image system for fluorescence and / or bioluminescence (IVIS Spectrum) and inhalatory anesthesia equipment.



06.11

Ethics Committee for Animal Research (CEEA)

The Ethics Committee for Animal Research of the Research Institute of the HSCSP is an independent body that according to the current legislation on laboratory research animals (European Directive 2010/63/EU, Spanish RD 53/2013 and Catalan Decret 214/1997) serves as an expert and advisory committee in the area of animal experimentation, with members drawn from various disciplines – basic research, veterinary medicine, animal welfare and, human medicine. No animal research can be carried out in the Animal Facilities of the IRHSCSP without the ECAR approval.

The working guiding principles of this Committee are good science and good animal welfare, based on the 3R's Principles: replacement, refinement and reduction.

The functions of ethics committee for animal research are the following:

- Report favorably on the implementation of the experimental projects after verifying the suitability of the procedure in relation to the objectives of the study, the possibility to achieve valid results with the minimum number of animals, the consideration of alternative methods to animal use and the suitability of the selected species.
- Ensure that animals do not suffer unnecessarily and that they are given, when needed, analgesics, anesthetics or other methods to eliminate pain, suffering or distress.
- Supervise that humanitarian euthanasic methods are used.
- Ensure that personnel involved in the procedure is qualified to perform the assigned tasks.
- Review already assessed procedures or suspend those procedures already initiated that do not comply with the requisites established by the protocol.

President

Laura Casaní

Secretary

Sergi Florit

Vocals

Sandra Camino

Jose M. Guerra

Esther Jorge

Esther Peña

Cristina Rodriguez

Elisabet Sánchez

Gemma Vilahur

Contact:

ceasantpau@santpau.cat



Coordinator

**Maribel
Baldellou**

Contact:
mbaldellou@santpau.cat

06.12

General Lab Facilities

The purpose of this core facility is to provide and maintain the basic equipment requirements and fulfil the needs of adapted spaces for the internal use of researchers and their teams.

It consists of almost 600 square metres of adapted spaces and 300 units of equipment available to all users upon request or reservation.

The management of this core facility includes the following:

- Maintenance and space organization of rooms for deep freezers and cryopreservation tanks (12), and cool rooms at 4°C or at -20°C (8).
- Management of general lab equipment available to all internal users:
 - Water treatment equipment: 21 units
 - Security cabinets: 22 units
 - Cleaning and sterilization for general users: 11
 - Gas and biosecurity cabinets: 28
- Maintenance and control of almost 250 basic lab instruments are available to IR users and can be grouped as follows:
 - Centrifuges, from desktop to ultracentrifuges
 - Precision scales
 - PH-meters
 - Stoves, thermic baths, thermic blocs
 - Ultrasound bath
 - Electrophoresis equipment
 - Spectrophotometers
 - Chromatographs
 - Optic microscopes
 - Other more specialized equipment
- It also provides logistic support and problem resolution advice to researchers and their teams.



07

Appendix

07.1

Clinical Guidelines

Agache I, Rocha C, Pereira A, Song Y, Alonso-Coello P, Solà I, Beltran J, Posso M, Akdis CA, Akdis M, Brockow K, Chivato T, Del Giacco S, Eiwegger T, Eyerich K, Giménez-Arnau A, Gutermuth J, Guttman-Yassky E, Maurer M, Ogg G, Ong P, O'Mahony L, Schwarze J, Werfel T, Canelo-Aybar C, Palomares O, Jutel M. Efficacy and safety of treatment with omalizumab for chronic spontaneous urticaria: A systematic review for the EAACI Biologicals Guidelines. *Allergy*. 2021;76(1):59-70. DOI: 10.1111/all.14547. Epub 2020 Sep 7. PMID: 32767573.

Agache I, Song Y, Alonso-Coello P, Vogel Y, Rocha C, Solà I, Santero M, Akdis CA, Akdis M, Canonica GW, Chivato T, Del Giacco S, Eiwegger T, Fokkens W, Georgalas C, Gevaert P, Hopkins C, Klimek L, Lund V, Naclerio R, O'Mahony L, Palkonen S, Pfaar O, Schwarze J, Soyka MB, Wang Y, Zhang L, Canelo-Aybar C, Palomares O, Jutel M. Efficacy and safety of treatment with biologicals for severe chronic rhinosinusitis with nasal polyps: A systematic review for the EAACI guidelines. *Allergy*. 2021;76(8):2337-2353. DOI: 10.1111/all.14809. Epub 2021 Mar 24. PMID: 33683704.

Agache I, Song Y, Posso M, Alonso-Coello P, Rocha C, Solà I, Beltran J, Akdis CA, Akdis M, Brockow K, Chivato T, Del Giacco S, Eiwegger T, Eyerich K, Giménez-Arnau A, Gutermuth J, Guttman-Yassky E, Maurer M, Ogg G, Ong PY, O'Mahony L, Schwarze J, Werfel T, Canelo-Aybar C, Palomares O, Jutel M. Efficacy and safety of dupilumab for moderate-to-severe atopic dermatitis: A systematic review for the EAACI biologicals guidelines. *Allergy*. 2021;76(1):45-58. DOI: 10.1111/all.14510. Epub 2020 Oct 4. PMID: 32691892.

Belvís R, Irimia P, Seijo-Fernández F, Paz J, García-March G, Santos-Lasaosa S, Latorre G, González-Oria C, Rodríguez R, Pozo-Rosich P, Láinez JM. Neuromodulation in headache and craniofacial neuralgia: guidelines from the Spanish Society of Neurology and the Spanish Society of Neurosurgery. *Neurologia (Engl Ed)*. 2021;36(1):61-79. English, Spanish. DOI: 10.1016/j.nrl.2020.04.022. Epub 2020 Jul 25. PMID: 32718873.

Burri H, Starck C, Auricchio A, Biffi M, Burri M, D'Avila A, Deharo JC, Glikson M, Israel C, Lau CP, Leclercq C, Love CJ, Nielsen JC, Vernooij K; Reviewers:; Dagres N, Boveda S, Butter C, Marijon E, Braunschweig F, Mairesse GH, Gleva M, Defaye P, Zanon F, Lopez-Cabanillas N, Guerra JM, Vassilikos VP, Martins Oliveira M. EHRA expert consensus statement and practical guide on optimal implantation technique for conventional pacemakers and implantable cardioverter-defibrillators: endorsed by the Heart Rhythm Society (HRS), the Asia Pacific Heart Rhythm Society (APHRS), and the Latin-American Heart Rhythm Society (LAHRS). *Europace*. 2021;23(7):983-1008. DOI: 10.1093/europace/euaa367. PMID: 33878762.

Chahla J, Kunze KN, LaPrade RF, Getgood A, Cohen M, Gelber P, Barenus B, Pujol N, Leyes M, Akoto R, Fritsch B, Margheritini F,

Rips L, Kautzner J, Duthon V, Togninalli D, Giacomo Z, Graveleau N, Zaffagnini S, Engbretsen L, Lind M, Maestu R, Von Bormann R, Brown C, Villascusa S, Monllau JC, Ferrer G, Menetrey J, Hantes M, Parker D, Lording T, et al. The posteromedial corner of the knee: an international expert consensus statement on diagnosis, classification, treatment, and rehabilitation. *KNEE SURGERY SPORTS TRAUMATOLOGY ARTHROSCOPY*. 2021;29(9):2976-2986. DOI: 10.1007/s00167-020-06336-3. Epub 2020 Oct 26. PMID: 33104867.

Crespo-Lessmann A, Plaza V; Consensus Group. Multidisciplinary consensus on sputum induction biosafety during the COVID-19 pandemic. *Allergy*. 2021;76(8):2407-2419. DOI: 10.1111/all.14697. Epub 2021 Jan 19. PMID: 33314245.

de Juan Ferré A, Álvarez Álvarez R, Casado Herráez A, Cruz Jurado J, Estival González A, Martín-Broto J, Martínez Marín V, Moreno Vega A, Sebio García A, Valverde Morales C. SEOM Clinical Guideline of management of soft-tissue sarcoma (2020). *Clinical & Translational Oncology*. 2021;23(5):922-930. DOI: 10.1007/s12094-020-02534-0. Epub 2021 Jan 6. PMID: 33405052.

de la Rosa-Carrillo D, López-Campos JL, Blanco Aparicio M, Villar-Álvarez F. Recomendaciones SEPAR y nuevos retos sobre la vacuna contra la COVID-19 en las enfermedades respiratorias [SEPAR recommendations and new challenges on COVID-19 vaccine in respiratory diseases]. *Vacunas*. 2021 Sep-Dec;22(3):131-134. Spanish. DOI: 10.1016/j.vacun.2021.05.001. Epub 2021 May 19. PMID: 34031633.

Del Toro López MD, Arias Díaz J, Balibrea JM, Benito N, Canut Blasco A, Esteve E, Horcajada JP, Ruiz Mesa JD, Manuel Vázquez A, Muñoz Casares C, Del Pozo JL, Pujol M, Riera M, Jimeno J, Rubio Pérez I, Ruiz-Tovar Polo J, Serrablo A, Soriano A, Badia JM; Grupo de Estudio de PA de la Sociedad Española de Enfermedades Infecciosas y Microbiología Clínica (SEIMC) y Asociación Española de Cirujanos (AEC). Executive summary of the Consensus Document of the Spanish Society of Infectious Diseases and Clinical Microbiology (SEIMC) and of the Spanish Association of Surgeons (AEC) in antibiotic prophylaxis in surgery. *CIRUGIA ESPANOLA (Engl Ed)*. 2021;99(1):11-26. English, Spanish. DOI: 10.1016/j.ciresp.2020.03.022. Epub 2020 Jul 28. PMID: 32736791.

Del Toro López MD, Arias Díaz J, Balibrea JM, Benito N, Canut Blasco A, Esteve E, Horcajada JP, Ruiz Mesa JD, Vázquez AM, Muñoz Casares C, Del Pozo JL, Pujol M, Riera M, Jimeno J, Rubio Pérez I, Ruiz-Tovar Polo J, Serrablo A, Soriano A, Badia JM; Grupo de Estudio de PA de la Sociedad Española de Enfermedades Infecciosas y Microbiología Clínica (SEIMC) y Asociación Española de Cirujanos (AEC). Executive summary of the Consensus Document of the Spanish Society of Infectious Diseases and Clinical Microbiology (SEIMC) and of the Spanish

Association of Surgeons (AEC) in antibiotic prophylaxis in surgery. *ENFERMEDADES INFECCIOSAS Y MICROBIOLOGIA CLINICA (Engl Ed)*. 2021;39(1):29–40. English, Spanish. DOI: 10.1016/j.eimc.2020.02.017. Epub 2020 Jul 21. PMID: 32709452.

Díez-Manglano J, Sánchez Muñoz LÁ, García Fenoll R, Freire E, Isasi de Isasmendi Pérez S, Carneiro AH, Torres Bonafonte O; en nombre del Comité Directivo de la Guía de Práctica Clínica. Spanish and Portuguese Societies of Internal Medicine consensus guideline about best practice in end-of-life care. *Revista Clínica Espanola*. 2021;221(1):33–44. DOI: 10.1016/j.rceng.2020.04.009. Epub 2020 Nov 24. PMID: 33998477.

Dubois B, Villain N, Frisoni GB, Rabinovici GD, Sabbagh M, Cappa S, Bejanin A, Bombois S, Epelbaum S, Teichmann M, Habert MO, Nordberg A, Blennow K, Galasko D, Stern Y, Rowe CC, Salloway S, Schneider LS, Cummings JL, Feldman HH. Clinical diagnosis of Alzheimer's disease: recommendations of the International Working Group. *Lancet Neurology*. 2021;20(6):484–496. DOI: 10.1016/S1474-4422(21)00066-1. Epub 2021 Apr 29. PMID: 33933186.

Eden C, Buonomo OC, Busch J, Gilabert-Estelles J, Medrano R, Nosotti M, Renaud S, Walker I, Williams N, Carlini M. An international multidisciplinary peer-driven consensus on the optimal use of hemostatic powders in surgical practice. *Updates in Surgery*. 2021;73(4):1267–1273. DOI: 10.1007/s13304-021-01136-x. Epub 2021 Jul 28. PMID: 34322783.

Epstein JI, Amin MB, Fine SW, Algaba F, Aron M, Baydar DE, Beltran AL, Brimo F, Chevillie JC, Colecchia M, Comperat E, da Cunha IW, Delprado W, DeMarzo AM, Giannico GA, Gordetsky JB, Guo CC, Hansel DE, Hirsch MS, Huang J, Humphrey PA, Jimenez RE, Khani F, Kong Q, Kryvenko ON, Kunju LP, Lal P, Latour M, Lotan T, Maclean F, et al. The 2019 Genitourinary Pathology Society (GUPS) White Paper on Contemporary Grading of Prostate Cancer. *ARCHIVES OF PATHOLOGY & LABORATORY MEDICINE*. 2021;145(4):461–493. DOI:10.5858/arpa.2020-0015-RA. PMID: 32589068.

Fleseriu M, Auchus R, Bancos I, Ben-Shlomo A, Bertherat J, Biermasz NR, Boguszewski CL, Bronstein MD, Buchfelder M, Carmichael JD, Casanueva FF, Castinetti F, Chanson P, Findling J, Gadelha M, Geer EB, Giustina A, Grossman A, Gurnell M, Ho K, Ioachimescu AG, Kaiser UB, Karavitaki N, Katznelson L, Kelly DF, Lacroix A, et al. [Valassi E, Webb SM]. Consensus on diagnosis and management of Cushing's disease: a guideline update. *Lancet Diabetes Endocrinology*. 2021;9(12):847–875. DOI: 10.1016/S2213-8587(21)00235-7. Epub 2021 Oct 20. PMID: 34687601.

García Botella A, Gómez Bravo MA, Di Martino M, Gastaca M, Martín-Pérez E, Sánchez Cabús S, Sánchez Pérez B, López Ben S, Rodríguez Sanjuán JC, López-Andújar R, Barrera M; Grupo colaborativo Cirugía-AEC-COVID-19; Grupo colaborativo Cirugía-AEC-COVID-19, et al. Recommendations on intervention for hepatobiliary oncological surgery during the COVID-19 pandemic. *CIRUGIA ESPANOLA (Engl Ed)*. 2021;99(3):174–182.

English, Spanish. DOI: 10.1016/j.ciresp.2020.10.010. Epub 2020 Dec 16. PMID: 33341242.

García-Ramos R, Santos-García D, Alonso-Cánovas A, Álvarez-Sauco M, Ares B, Ávila A, Caballol N, Carrillo F, Escamilla Sevilla F, Freire E, Gómez Esteban JC, Legarda I, López Manzanares L, López Valdés E, Martínez-Torres I, Mata M, Pareés I, Pascual-Sedano B, Mir P, Martínez Castrillo JC. Management of Parkinson's disease and other movement disorders in woman of childbearing age: Part 1. *Neurología (Engl Ed)*. 2021;36(2):149–158. English, Spanish. DOI: 10.1016/j.nrl.2020.05.010. Epub 2020 Jul 24. PMID: 32718872.

Giorgi Rossi P, Lebeau A, Canelo-Aybar C, Saz-Parkinson Z, Quinn C, Langendam M, MCGarrigle H, Warman S, Rigau D, Alonso-Coello P, Broeders M, Graewingholt A, Posso M, Duffy S, Schünemann HJ; ECIBC Contributor Group. Recommendations from the European Commission Initiative on Breast Cancer for multigene testing to guide the use of adjuvant chemotherapy in patients with early breast cancer, hormone receptor positive, HER-2 negative. *BRITISH JOURNAL OF CANCER*. 2021;124(9):1503–1512. DOI: 10.1038/s41416-020-01247-z. Epub 2021 Feb 18. PMID: 33597715.

González-Oria C, Belvís R, Cuadrado ML, Díaz-Insa S, Guerrero-Peral AL, Huerta M, Irimia P, Láinez JM, Latorre G, Leira R, Oterino A, Pascual J, Porta-Etessam J, Pozo-Rosich P, Sánchez Del Río M, Santos-Lasaosa S. Document of revision and updating of medication overuse headache (MOH). *Neurología (Engl Ed)*. 2021;36(3):229–240. English, Spanish. DOI: 10.1016/j.nrl.2020.04.029. Epub 2020 Sep 9. PMID: 32917437.

Granell-Gil M, Murcia-Anaya M, Sevilla S, Martínez-Plumed R, Biosca-Pérez E, Cózar-Bernal F, Garutti I, Gallart L, Ubierna-Ferreras B, Sukia-Zilbeti I, Gálvez-Muñoz C, Delgado-Roel M, Mínguez L, Bermejo S, Valencia O, Real M, Unzueta C, Ferrando C, Sánchez F, González S, Ruiz-Villén C, Lluch A, Hernández A, Hernández-Beslmeisl J, Vives M, Vicente R. Clinical guide to perioperative management for videothoracoscopy lung resection (Section of Cardiac, Vascular and Thoracic Anesthesia, SEDAR; Spanish Society of Thoracic Surgery, SECT; Spanish Society of Physiotherapy). *Revista Española de Anestesiología y Reanimación (Engl Ed)*. 2021;S0034-9356(21)00129-8. English, Spanish. DOI: 10.1016/j.redar.2021.03.005. Epub ahead of print. PMID: 34330548.

Gronchi A, Miah AB, Dei Tos AP, Abecassis N, Bajpai J, Bauer S, Biagini R, Bielack S, Blay JY, Bolle S, Bonvalot S, Boukovinas I, Bovee JVMG, Boye K, Brennan B, Brodowicz T, Buonadonna A, De Álava E, Del Muro XG, Dufresne A, Eriksson M, Fagioli F, Fedenko A, Ferraresi V, Ferrari A, Frezza AM, Gasperoni S, Gelderblom H, Gouin F, et al.; ESMO Guidelines Committee, EURACAN and GENTURIS [Lopez-Pousa A]. Soft tissue and visceral sarcomas: ESMO-EURACAN-GENTURIS Clinical Practice Guidelines for diagnosis, treatment and follow-up. *Annals of Oncology*. 2021;32(11):1348–1365. DOI: 10.1016/j.annonc.2021.07.006. Epub 2021 Jul 22. PMID: 34303806.

Hendrix JA, Amon A, Abbeduto L, Agiovlasis S, Alsaied T, Anderson HA, Bain LJ, Baumer N, Bhattacharyya A, Bogunovic D, Botteron KN, Capone G, Chandan P, Chase I, Chicoine B, Cieuta-Walti C, DeRuisseau LR, Durand S, Esbensen A, Fortea J, Giménez S, Granholm AC, Hahn LJ, Head E, Hillerstrom H, Jacola LM, Janicki MP, Jasien JM, Kamer AR, et al. Opportunities, barriers, and recommendations in down syndrome research. *Transl Sci Rare Dis*. 2021;5(3-4):99-129. DOI: 10.3233/trd-200090. Epub 2021 Apr 15. PMID: 34268067.

Kharfan-Dabaja MA, Kumar A, Ayala E, Aljurf M, Nishihori T, Marsh R, Burroughs LM, Majhail N, Al-Homsi AS, Al-Kadhimi ZS, Bar M, Bertaina A, Boelens JJ, Champlin R, Chaudhury S, DeFilipp Z, Dholaria B, El-Jawahri A, Fanning S, Fraint E, Gergis U, Giral S, Hamilton BK, Hashmi SK, Horn B, Inamoto Y, Jacobsohn DA, Jain T, et al. [Sierra J]. Standardizing Definitions of Hematopoietic Recovery, Graft Rejection, Graft Failure, Poor Graft Function, and Donor Chimerism in Allogeneic Hematopoietic Cell Transplantation: A Report on Behalf of the American Society for Transplantation and Cellular Therapy. *Transplantation And Cellular Therapy*. 2021;27(8):642-649. DOI: 10.1016/j.jctct.2021.04.007. PMID: 34304802.

Lázaro Martínez JL, Almaraz MC, Álvarez Hermida Á, Blanes Mompó I, Escudero Rodríguez JR, García Morales EA, March García JR, Rivera San Martín G, Rodríguez Sáenz de Buruaga V, Rosendo Fernández JM, Rubio García JA, Mauricio D. Consensus document on actions to prevent and to improve the management of diabetic foot in Spain. *Endocrinología Diabetes y Nutrición (Engl Ed)*. 2021;68(7):509-513. DOI: 10.1016/j.endien.2020.08.016. Epub 2021 Nov 19. PMID: 34863416.

Los-Arcos I, Iacoboni G, Aguilar-Guisado M, Alsina-Manrique L, Díaz de Heredia C, Fortuny-Guasch C, García-Cadenas I, García-Vidal C, González-Vicent M, Hernani R, Kwon M, Machado M, Martínez-Gómez X, Maldonado VO, Pla CP, Piñana JL, Pomar V, Reguera-Ortega JL, Salavert M, Soler-Palacín P, Vázquez-López L, Barba P, Ruiz-Camps I. Recommendations for screening, monitoring, prevention, and prophylaxis of infections in adult and pediatric patients receiving CAR T-cell therapy: a position paper. *Infection*. 2021;49(2):215-231. DOI: 10.1007/s15010-020-01521-5. Epub 2020 Sep 26. PMID: 32979154.

Luger A, Broersen LHA, Biermasz NR, Biller BMK, Buchfelder M, Chanson P, Jorgensen JOL, Kelestimir F, Llahana S, Maiter D, Mintziari G, Petraglia F, Verkauskiene R, Webb SM, Dekkers OM. ESE Clinical Practice Guideline on functioning and nonfunctioning pituitary adenomas in pregnancy. *EUROPEAN JOURNAL OF ENDOCRINOLOGY*. 2021;185(3):G1-G33. DOI: 10.1530/EJE-21-0462. PMID: 34425558.

Lyman GH, Carrier M, Ay C, Di Nisio M, Hicks LK, Khorana AA, Leavitt AD, Lee AYY, Macbeth F, Morgan RL, Noble S, Sexton EA, Stenehjem D, Wiercioch W, Kahale LA, Alonso-Coello P. American Society of Hematology 2021 guidelines for management of venous thromboembolism: prevention and treatment in patients with cancer. *Blood Advances*. 2021;5(4):927-974. DOI: 10.1182/

bloodadvances.2020003442. Erratum in: *Blood Advances*. 2021;5(7):1953. PMID: 33570602.

Majem M, Manzano JL, Marquez-Rodas I, Mujika K, Muñoz-Couselo E, Pérez-Ruiz E, de la Cruz-Merino L, Espinosa E, Gonzalez-Cao M, Berrocal A. SEOM clinical guideline for the management of cutaneous melanoma (2020). *Clinical & Translational Oncology*. 2021;23(5):948-960. DOI: 10.1007/s12094-020-02539-9. Epub 2021 Mar 2. PMID: 33651321.

Massey PR, Schmults CD, Li SJ, Arron ST, Asgari MM, Bouwes Bavinck JN, Billingsley E, Blalock TW, Blasdale K, Carroll BT, Carucci JA, Chong AH, Christensen SR, Chung CL, DeSimone JA, Ducroux E, Escutia-Muñoz B, Ferrándiz-Pulido C, Fox MC, Genders RE, Geusau A, Gjersvik P, Hanlon AM, Olasz Harken EB, Hofbauer GFL, et al. [Ruiz-Salas V]. Consensus-Based Recommendations on the Prevention of Squamous Cell Carcinoma in Solid Organ Transplant Recipients: A Delphi Consensus Statement. *JAMA Dermatology*. 2021;157(10):1219-1226. DOI: 10.1001/jamadermatol.2021.3180. PMID: 34468690.

Narayanaswami P, Sanders DB, Wolfe G, Benatar M, Cea G, Evoli A, Gilhus NE, Illa I, Kuntz NL, Massey J, Melms A, Murai H, Nicolle M, Palace J, Richman D, Verschuuren J. International Consensus Guidance for Management of Myasthenia Gravis: 2020 Update. *Neurology*. 2021;96(3):114-122. DOI: 10.1212/WNL.0000000000011124. Epub 2020 Nov 3. PMID: 33144515.

Pajares MA, Margarit JA, García-Camacho C, García-Suarez J, Mateo E, Castaño M, López Forte C, López Menéndez J, Gómez M, Soto MJ, Veiras S, Martín E, Castaño B, López Palanca S, Gabaldón T, Acosta J, Fernández Cruz J, Fernández López AR, García M, Hernández Acuña C, Moreno J, Osseyran F, Vives M, Pradas C, Aguilar EM, et al. [Galán J]. Guidelines for enhanced recovery after cardiac surgery. Consensus document of Spanish Societies of Anesthesia (SEDAR), Cardiovascular Surgery (SECCE) and Perfusionists (AEP). *Revista Española de Anestesiología y Reanimación (Engl Ed)*. 2021;68(4):183-231. English, Spanish. DOI: 10.1016/j.redar.2020.11.005. Epub 2021 Feb 2. PMID: 33541733.

Pascual Fuster V, Pérez Pérez A, Carretero Gómez J, Caixàs Pedragós A, Gómez-Huelgas R, Pérez-Martínez P. Executive summary: Updates to the dietary treatment of prediabetes and type 2 diabetes mellitus. *Clinica e Investigación en Arteriosclerosis*. 2021;33(2):73-84. English, Spanish. DOI: 10.1016/j.arteri.2020.11.005. Epub 2021 Feb 18. PMID: 33612315.

Pascual Fuster V, Pérez Pérez A, Carretero Gómez J, Caixàs Pedragós A, Gómez-Huelgas R, Pérez-Martínez P. Executive summary: Updates to the dietary treatment of prediabetes and type 2 diabetes mellitus. *Endocrinología Diabetes y Nutrición (Engl Ed)*. 2021;68(4):277-287. English, Spanish. DOI: 10.1016/j.endinu.2020.10.009. Epub 2021 Feb 13. PMID: 33593709.

Petranović Ovcariček P, Giovanella L, Carrió I, Hindié E, Huellner MW, Luster M, Piccardo A, Weber T, Talbot JN, Verburg FA. The EANM practice guidelines for parathyroid imaging. *EUROPEAN JOURNAL OF NUCLEAR MEDICINE AND MOLECULAR IMAGING*.

2021;48(9):2801-2822. DOI: 10.1007/s00259-021-05334-y. Epub 2021 Apr 10. PMID: 33839893.

Piazza C, Paderno A, Sjogren EV, Bradley PJ, Eckel HE, Mäkitie A, Matar N, Paleri V, Peretti G, Puxeddu R, Quer M, Remacle M, Vander Poorten V, Vilaseca I, Simo R. Salvage carbon dioxide transoral laser microsurgery for laryngeal cancer after (chemo)radiotherapy: a European Laryngological Society consensus statement. *EUROPEAN ARCHIVES OF OTO-RHINO-LARYNGOLOGY*. 2021;278(11):4373-4381. DOI: 10.1007/s00405-021-06957-5. Epub 2021 Jul 5. PMID: 34226992.

Plaza V, Arnedillo A, Blanco-Aparicio M, Ignacio JM, Urrutia I. Consensus on the treatment of allergic asthma with sublingual house dust mite immunotherapy in the field of pneumology. *Expert Review of Respiratory Medicine*. 2021;15(10):1245-1249. DOI: 10.1080/17476348.2021.1942846. Epub 2021 Aug 18. PMID: 34128758.

Redondo A, Guerra E, Manso L, Martin-Lorente C, Martinez-Garcia J, Perez-Fidalgo JA, Varela MQ, Rubio MJ, Barretina-Ginesta MP, Gonzalez-Martin A. SEOM clinical guideline in ovarian cancer (2020). *Clinical & Translational Oncology*. 2021;23(5):961-968. DOI: 10.1007/s12094-020-02545-x. Epub 2021 Jan 30. PMID: 33515422.

Redondo A, Oaknin A, Rubio MJ, Barretina-Ginesta MP, de Juan A, Manso L, Romero I, Martin-Lorente C, Poveda A, Gonzalez-Martin A. Management of advanced ovarian cancer in Spain: an expert Delphi consensus. *Journal of Ovarian Research*. 2021;14(1):72. DOI: 10.1186/s13048-021-00816-x. PMID: 34039386.

Reincke M, Albani A, Assie G, Bancos I, Brue T, Buchfelder M, Chabre O, Ceccato F, Daniele A, Detomas M, Di Dalmazi G, Elenkova A, Findling J, Grossman AB, Gomez-Sanchez CE, Heaney AP, Honegger J, Karavitaki N, Lacroix A, Laws ER, Losa M, Murakami M, Newell-Price J, Pecori Giraldo F, Pérez-Rivas LG, Pivonello R, Rainey WE, et al. [Valassi E]. Corticotroph tumor progression after bilateral adrenalectomy (Nelson's syndrome): systematic review and expert consensus recommendations. *EUROPEAN JOURNAL OF ENDOCRINOLOGY*. 2021;184(3):P1-P16. DOI: 10.1530/EJE-20-1088. PMID: 33444221.

Rubio-Briones J, Algaba F, Gallardo E, Marcos-Rodríguez JA, Climent MÁ, On Behalf Of The Sogug Multidisciplinary Working Group [Maroto JP]. Recent Advances in the Management of Patients with Non-Muscle-Invasive Bladder Cancer Using a Multidisciplinary Approach: Practical Recommendations from the Spanish Oncology Genitourinary (SOGUG) Working Group. *Cancers (Basel)*. 2021;13(19):4762. DOI: 10.3390/cancers13194762. PMID: 34638247.

Somani B, Liatsikos E, Motttrie A, Gözen AS, Breda A, Knoll T, Bianchi G, Sarica K, Bedke J, Rassweiler J. Outcomes of EAU-endorsed Live Surgical Events over a 5-year Period (2015-2020) and Updated Guidelines from the EAU Live Surgery Committee. *EUROPEAN UROLOGY*. 2021;80(5):592-600. DOI: 10.1016/j.eururo.2021.04.037. Epub 2021 May 19. PMID: 34020827.

Stacchiotti S, Miah AB, Frezza AM, Messiou C, Morosi C, Caraceni A, Antonescu CR, Bajpai J, Baldini E, Bauer S, Biagini R, Bielack S, Blay JY, Bonvalot S, Boukovinas I, Bovee JVMG, Boye K, Brodowicz T, Callegaro D, De Alava E, Deoras-Sutliff M, Dufresne A, Eriksson M, Errani C, Fedenko A, Ferraresi V, Ferrari A, Fletcher CDM, et al. [Lopez Pousa A]. Epithelioid hemangioendothelioma, an ultra-rare cancer: a consensus paper from the community of experts. *ESMO Open*. 2021;6(3):100170. DOI: 10.1016/j.esmoop.2021.100170. Epub 2021 Jun 2. PMID: 34090171.

Strauss SJ, Frezza AM, Abecassis N, Bajpai J, Bauer S, Biagini R, Bielack S, Blay JY, Bolle S, Bonvalot S, Boukovinas I, Bovee JVMG, Boye K, Brennan B, Brodowicz T, Buonadonna A, de Álava E, Dei Tos AP, Garcia Del Muro X, Dufresne A, Eriksson M, Fagioli F, Fedenko A, Ferraresi V, Ferrari A, Gaspar N, Gasperoni S, Gelderblom H, Gouin F, et al.; ESMO Guidelines Committee, EURACAN, GENTURIS and ERN PaedCan [López Pousa A]. Bone sarcomas: ESMO-EURACAN-GENTURIS-ERN PaedCan Clinical Practice Guideline for diagnosis, treatment and follow-up. *Annals of Oncology*. 2021;32(12):1520-1536. DOI: 10.1016/j.annonc.2021.08.1995. Epub 2021 Sep 6. PMID: 34500044.

Tian M, Watanabe Y, Kang KW, Murakami K, Chiti A, Carrio I, Civelek AC, Feng J, Zhu Y, Zhou R, Wu S, Zhu J, Ding Y, Zhang K, Zhang H; Molecular Imaging-based Precision Medicine Task Group of A3 (China-Japan-Korea) Foresight Program. International consensus on the use of [18F]-FDG PET/CT in pediatric patients affected by epilepsy. *EUROPEAN JOURNAL OF NUCLEAR MEDICINE AND MOLECULAR IMAGING*. 2021;48(12):3827-3834. DOI: 10.1007/s00259-021-05524-8. Epub 2021 Aug 28. PMID: 34453559.

Valero AL, Trigueros JA, Plaza V. Multidisciplinary consensus on inhaled therapy in asthma. *Expert Review of Respiratory Medicine*. 2021;15(3):425-434. DOI: 10.1080/17476348.2021.1841639. Epub 2020 Nov 10. PMID: 33170733.

Van den Bergh PYK, van Doorn PA, Hadden RDM, Avau B, Vankrunkelsven P, Allen JA, Attarian S, Blomkwist-Markens PH, Cornblath DR, Eftimov F, Goedee HS, Harbo T, Kuwabara S, Lewis RA, Lunn MP, Nobile-Orazio E, Querol L, Rajabally YA, Sommer C, Topaloglu HA. European Academy of Neurology/Peripheral Nerve Society guideline on diagnosis and treatment of chronic inflammatory demyelinating polyradiculoneuropathy: Report of a joint Task Force-Second revision. *EUROPEAN JOURNAL OF NEUROLOGY*. 2021;28(11):3556-3583. DOI: 10.1111/ene.14959. Epub 2021 Jul 30. Erratum in: *EUROPEAN JOURNAL OF NEUROLOGY*. 2022;29(4):1288. PMID: 34327760.

Zapardiel I, Alvarez J, Barahona M, Barri P, Boldo A, Bresco P, Gasca I, Jaunarena I, Kucukmetin A, Mancebo G, Otero B, Roldan F, Rovira R, Suarez E, Tejerizo A, Torrent A, Gorostidi M. Utility of Intraoperative Fluorescence Imaging in Gynecologic Surgery: Systematic Review and Consensus Statement. *ANNALS OF SURGICAL ONCOLOGY*. 2021;28(6):3266-3278. DOI: 10.1245/s10434-020-09222-x. Epub 2020 Oct 23. PMID: 33095359.

Zarragoikoetxea I, Pajares A, Moreno I, Porta J, Koller T, Cegarra V, Gonzalez AI, Eiras M, Sandoval E, Aurelio Sarralde J, Quintana-Villamandos B, Vicente Guillén R. SEDAR/SECCE ECMO management consensus document. *Revista Española de*

Anestesiología y Reanimación (Engl Ed). 2021;68(8):443–471. DOI: 10.1016/j.redare.2020.12.002. Epub 2021 Sep 14. PMID: 34535426.

07.2

Doctoral Thesis

Title	PhD Candidate	Thesis Director	Link
Enfermedad tiroidea y gestación: Evolución y resultados del embarazo según el sexo fetal y el estado tiroideo	LIU, JIAMING	CORCOY PLA, ROSA	http://hdl.handle.net/10803/671178
Estudio observacional, descriptivo y retrospectivo de una cohorte de 102 casos consecutivos de sarcoma sinovial tratados en la Unidad de Cirugía Ortopédica Oncológica del Servicio de Cirugía Ortopédica y Traumatología del Hospital de Sant Pau entre los años 1983 y 2016 (35 años)	GRACIA ALEGRIA, ISIDRE	LAMAS GOMEZ, CLAUDIA MARIA	http://hdl.handle.net/10803/672581
Autoanticuerpos en las neuropatías inmunomediadas y correlaciones clinicopatológicas	PASCUAL GOÑI, ELBA	QUEROL GUTIERREZ, LUIS ANTONIO; ILLA SENDRA, M. ISABEL	http://hdl.handle.net/10803/673221
Variables que incideixen en la morbiditat dels pacients trasplantats de progenitors hematopoètics que ingressen a la Unitat de Cures Intensives Pediàtriques	BRIO SANAGUSTIN, SONIA	BADELL SERRA, ISABEL; FRAGA RODRIGUEZ, GLORIA M.	http://hdl.handle.net/10803/673303
Influencia de la albúmina en el desarrollo de la lesión renal aguda asociada a la cirugía cardiaca bajo circulación extracorpórea	MIRALLES BAGAN, JORDI	BETBESE ROIG, ANTONI J.; GARCIA ALVAREZ, MARIA MERCEDES; PANIAGUA IGLESIAS, PILAR; LEON VINTRO, XAVIER	http://hdl.handle.net/10803/673368
Aplicación de las técnicas de revisión sistemática a cuestiones clínicas de prevalencia, pronóstico, diagnóstico e intervención	ROQUE FIGULS, MARTA CRISTINA	BONFILL COSP, XAVIER; ZAMORA ROMERO, JAVIER	http://hdl.handle.net/10803/671589

Title	PhD Candidate	Thesis Director	Link
Evidencias en exactitud de pruebas diagnósticas en la enfermedad de Alzheimer y otras demencias	MARTINEZ FUENTES, GABRIEL JOSE	BONFILL COSP, XAVIER; ZAMORA ROMERO, JAVIER	http://hdl.handle.net/10803/673343
Barcelona Salut als Barris : millorant la salut en poblacions desfavorides mitjançant intervencions en salut comunitària	DABAN AGUILAR, FERRAN	PASARIN RUA, MARIA ISABEL; BORRELL THIO, CARME	http://hdl.handle.net/10803/671535
Flexibilitat laboral i salut. Aprofundint en les desigualtats de gènere i el rol dels contextos	CORTES FRANCH, IMMACULADA	ARTAZCOZ LAZCANO, LUCIA; FERRER FORES, MARIA MONTSERRAT	http://hdl.handle.net/10803/673206
Eficacia de la electroestimulación perineal de superficie versus la electroestimulación intracavitaria en el tratamiento de la incontinencia urinaria secundaria a prostatectomía radical: ensayo clínico aleatorizado	PANE ALEMANY, REGINA	SANCHEZ RUIZ, EMILIA; RAMIREZ GARCIA, INES; PUIG REIXACH, M.TERESA	http://hdl.handle.net/10803/671973
Migrant Health Evidence: a critical analysis of systematic reviews and guidelines	AGBATA, ERIC NWACHUKWU C.	ALONSO COELLO, PABLO IGNACIO; AREVALO RODRIGUEZ, INGRID; POTTIE, KEVIN; BONFILL COSP, XAVIER	http://hdl.handle.net/10803/671978
Manejo eficiente del asma aguda y crónica en pediatría	RODRIGUEZ MARTINEZ, CARLOS ENRIQUE	URRUTIA CUCHI, GERARD; CASTRO RODRIGUEZ, JOSE ANTONIO; BONFILL COSP, XAVIER	http://hdl.handle.net/10803/672045
Estudi dels factors prenatals predictius d'anomalies del neurodesenvolupament en cardiopaties congènites	RIBERA CASELLAS, IRENE	CARRERAS MORATONAS, ELENA; EIXARCH ROCA, ELISENDA; LLURBA OLIVE, ELISA; CABERO ROURA, LLUIS	http://hdl.handle.net/10803/672005
Impact of serum progesterone on reproductive outcomes in frozen embryo transfer cycles	GAGGIOTTI-MARRE, SOFIA	MARTINEZ SAN ANDRES, FRANCISCA; COROLEU LLETGET, BUENAVENTURA LLURBA OLIVE, ELISA	http://hdl.handle.net/10803/672553
Avances en el conocimiento de la etiología y las consecuencias de la infección de prótesis articular	MUR ARIZON, ISABEL	DE BENITO HERNANDEZ, MARIA NATIVIDAD; GURGUI FERRER, MERCEDES	http://hdl.handle.net/10803/673659
Beneficio clínico de los fármacos antineoplásicos aprobados por las agencias reguladoras	MOLTO VALIENTE, CONSOLACIO	BARNADAS MOLINS, AGUSTI; TIBAU MARTORELL, ARIADNA; NOMDEDEU GUINOT, JOSEF FR.	http://hdl.handle.net/10803/673750

Title	PhD Candidate	Thesis Director	Link
Correlación de la tomografía de alta resolución con la audiometría en la otosclerosis	VIZA PUIGGRÓS, IGNACIO	QUER AGUSTI, MIQUEL; GRANELL MORENO, ESTHER; ORUS DOTU, CESAR	http://hdl.handle.net/10803/673681
Correlatos anatómo-funcionales de las alucinaciones menores y su impacto sobre la cognición en la enfermedad de parkinson	BEJR-KASEM MARCO, HELENA	PAGONABARRAGA MORA, JAVIER; KULISEVSKY BOJARSKI, JAIME	http://hdl.handle.net/10803/671996
Correlatos neuronales y neuropsicológicos de las alteraciones cognitivas y conductuales en las fases prodrómica e inicial de la enfermedad de Huntington	MARTINEZ HORTA, SAUL INDRA	KULISEVSKY BOJARSKI, JAIME; PAGONABARRAGA MORA, JAVIER	http://hdl.handle.net/10803/671898
Effectiveness of acupuncture as a nonpharmacological intervention in the treatment of chronic obstructive pulmonary disease	FERNÁNDEZ JANÉ, CARLES	URRUTIA CUCHI, GERARD; SITJA RABERT, MERCE	http://hdl.handle.net/10803/671612
El receptor nuclear NOR-1 en el remodelado cardiovascular: análisis de mecanismos fisiopatológicos y validación de nuevos modelos animales de utilidad preclínica	CAÑES ESTEVE, LAIA	MARTINEZ GONZALEZ, JOSE; RODRIGUEZ SINOVAS, CRISTINA; VAZQUEZ CARRERA, MANEL	http://hdl.handle.net/10803/673943
Estimación del riesgo cardiovascular en población española adulta y control de los factores de riesgo en pacientes con enfermedad cardiovascular establecida	FERNANDEZ VALVERDE, DIANA ELISABETH	CABRE VILA, JUAN JOSE; BROTONS CUIXART, CARLES	http://hdl.handle.net/10803/673091
Estimulación cerebral profunda en esquizofrenia resistente	ROLDAN BEJARANO, ALEJANDRA	CORRIPIO COLLADO, ILUMINADA; PORTELLA MOLL, MARIA; ALVAREZ MARTINEZ, ENRIC	http://hdl.handle.net/10803/672029
Estudio comparativo entre la membrana amniótica y la membrana de plasma rico en factores de crecimiento (PRGF) en la cirugía del pterigion primario	DEL CAMPO CARRASCO, ZORAIDA	CASTILLA CESPEDES, MIGUEL; BUIL CALVO, JOSE ANTONIO; GRIS CASTELLON, OSCAR	http://hdl.handle.net/10803/671702
Estudio de biomarcadores con utilidad clínica en neuropatías autoinmunes	MARTIN AGUILAR, LORENA	QUEROL GUTIERREZ, LUIS ANTONIO; ILLA SENDRA, M. ISABEL	http://hdl.handle.net/10803/673231

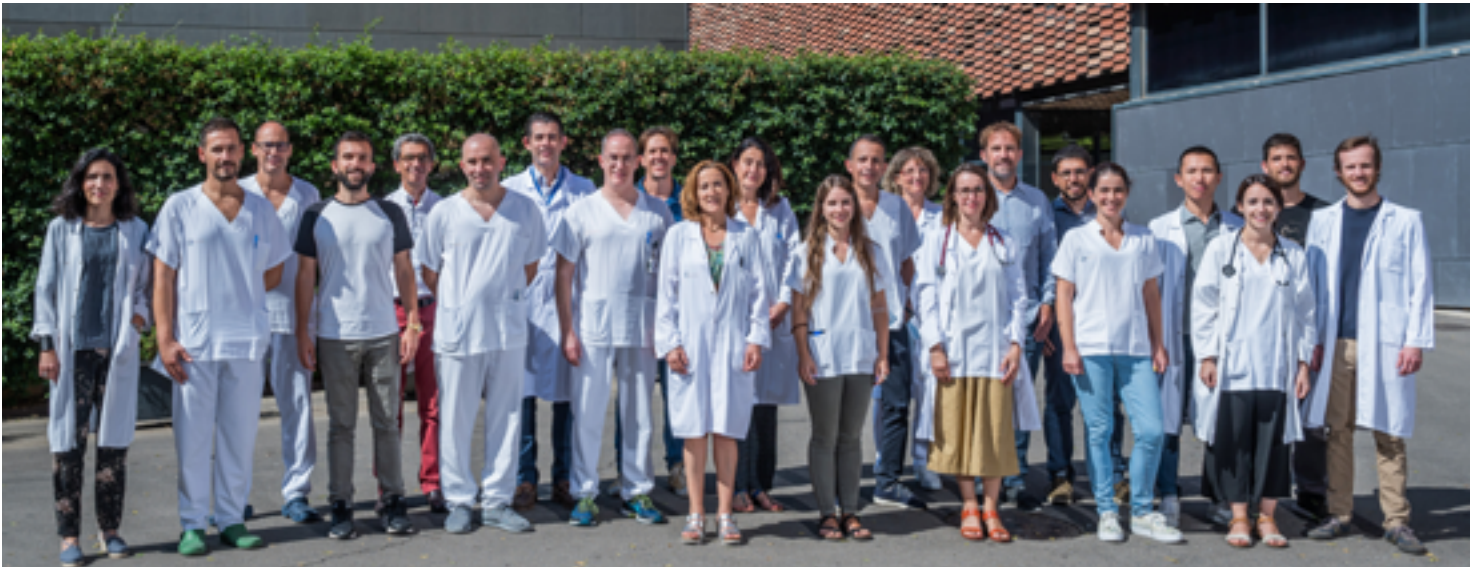
Title	PhD Candidate	Thesis Director	Link
Evaluación de la efectividad de una intervención de Prevención de la Obesidad Infantil en Barcelona (POIBA)	SANCHEZ MARTINEZ, FRANCESCA	ARIZA CARDENAL, CARLES; LOPEZ MEDINA, MARIA JOSE	http://hdl.handle.net/10803/672668
Evaluación de un programa para reducir la pobreza energética en Barcelona: "Energía, la justa"	CARRERE BALCELLS, JULIO	NOVOA PARDO, ANA; BENACH, JOAN	http://hdl.handle.net/10803/671773
Evaluación del rendimiento de la biopsia con fusión cognitiva en el diagnóstico del Cáncer de Próstata	VILLAMIZAR AVENDAÑO, JUAN MANUEL	PALOU REDORTA, JUAN	http://hdl.handle.net/10803/673202
Factores de riesgo de la aparición de fístulas faringocutáneas tras una laringectomía total	CASASAYAS PLASS, MARIA	LEON VINTRO, XAVIER; GOMEZ ANSON, BEATRIZ MARIA; GARCIA LORENZO, JACINTO	http://hdl.handle.net/10803/673210
Generación de modelos murinos de adenocarcinoma pancreático con mayor eficiencia metastásica para el estudio de agentes antitumorales	DE LA FUENTE HERNANDEZ, NOA	ARTIGAS RAVENTOS, VICENS; CESPEDES NAVARRO, MARIA VIRTUDES	http://hdl.handle.net/10803/673338
Efectes adversos immuno-relacionats i associació amb l'eficàcia de la immunoteràpia en pacients amb càncer de pulmó de cèl·lula no petita	RIUDAVETS MELIA, MARIONA	MAJEM TARRUELLA, MARGARITA; NOMDEDEU GUINOT, JOSEP FR.	http://hdl.handle.net/10803/673751
Impacto de SNPs (Single Nucleotide Polymorphisms) sobre la homeostasis del calcio intracelular y la actividad eléctrica en miocitos auriculares humanos	JIMENEZ SABADO, VERONICA	HOVE-MADSEN, LEIF; MONT GIRBAU, LLUIS	http://hdl.handle.net/10803/674086
Implementación de un sistema de gestión de la calidad en las terapias continuas de depuración extrarenal (TCDE)	MURILLO ESCODA, JOAQUIM	GONZALEZ DE MOLINA ORTIZ, FRANCISCO JAVIER; BETBESE ROIG, ANTONI J.	http://hdl.handle.net/10803/671632
Importancia de los Enterovirus en la Sepsis Neonatal	MOLINER CALDERON, ELISENDA	FUIGERAS ALOY, JOSE; GINOVART GALIANA, GEMMA; RABELLA GARCIA, NURIA; MUR SIERRA, ANTONIO	http://hdl.handle.net/10803/673836
Malaltia arterial subclínica en població prediabètica en l'estudi de cohorts prospectiu de Mollerussa	VILANOVA FILLAT, MARIA BELEN	MAURICIO PUENTE, DIEGO; FRANCH NADAL, JOSEP; VERDAGUER AUTONELL, JOAN	http://hdl.handle.net/10803/673103

Title	PhD Candidate	Thesis Director	Link
Phylogenetic Studies of Glutamate Receptors and their Auxiliary Subunits Update their Classifications and Uncover their Diverse Metazoan Evolutionary Histories	RAMOS VICENTE, DAVID	BAYES PUIG, ALEJANDRO; GIRALDO, JESUS	http://hdl.handle.net/10803/673959
Proyecto PASHOS: Plataforma Avanzada para el Estudio del Síndrome de Apnea Hipopnea Obstructiva del Sueño (SAHS). Estudio multicéntrico de validación de un modelo de cribaje de SAHS en atención primaria	PEÑACOBIA TORIBIO, PATRICIA	MAYOS PEREZ, MERCEDES; PLAZA MORAL, VICENTE	http://hdl.handle.net/10803/673262
Risk factors for hyperglycemia in pregnancy, and vitamin D as a prevention strategy in the DALI study	MENDOZA MATHISON, LILIAN CRISTINA	CORCOY PLA, ROSA; DE LEIVA HIDALGO, ALBERTO	http://hdl.handle.net/10803/673323
Secondhand smoke exposure in outdoor settings in Europe	HENDERSON MERCADER, ELISABET-MAE	LOPEZ MEDINA, MARIA JOSE; CONTINENTE GARCIA, XAVIER	http://hdl.handle.net/10803/672882
El microambiente tumoral: Su influencia pronóstica y predictiva en el cáncer de mama HER2- negativo	ARQUEROS NUÑEZ, CRISTINA	BARNADAS MOLINS, AGUSTI; SALAZAR BLANCO, JULIANA; ESTORCH CABRERA, MONTSERRAT	http://hdl.handle.net/10803/673958
Variación del tratamiento quirúrgico del cáncer de mama tras la introducción de la resonancia magnética en la estadificación preoperatoria	ABELLAN LUCAS, MIRIAM	MORAL DUARTE, ANTONIO; RIUS CORNADO, XAVIER	http://hdl.handle.net/10803/673204
Impacte del Diagnòstic d'una Cardiopatia Congènita en la Família	SALVADOR LLUESMA, MIREIA	VILAREGUT PUIGDESENS, ANNA; LLLURBA OLIVE, ELISA	http://hdl.handle.net/10803/673342
Anàlisi de patrons funcional i estructurals en la regulació del calci en les cèl·lules cardíques	NOLLA COLOMER, CARME	BENITEZ IGLESIAS, RAUL; HOVE-MADSEN, LEIF	https://doctorat.upc.edu/es/tesis/deposito-y-evaluacion/tesis-publicadas/tesis-publicadas-por-ano

07.3

Research Groups

A.1. Cardiovascular diseases



Clinical and Translational Cardiology

Coordinator

Guerra Ramos, José M. FGS
jguerra@santpau.cat

Members

Alonso Martín, Concepción	FGS	Jiménez Sábado, Verónica	CIBERCV
Amorós Figueras, Gerard	CIBERCV	Jimenez Xarrie, Elena	IR
Anglí Ferrándiz, Laia	IR	Jorge Vizuete, Esther	IR
Arzamendi Aizpurua, Dabit	FGS	Li Li, Chi Hion	FGS
Asmarats Serra, Lluís	FGS	Mirabet Pérez, Sonia	FGS
Barros Membrilla, Antonio José	FGS	Moliner Abos, Carles	FGS
Campos García, Bieito	FGS	Moreno Weidmann, Zoraida	FGS
Cinca Cuscollola, Juan	UAB	Moustafa, Abdel Hakim	FGS
De Antonio Ferrer, Marta	FGS	Serra Peñaranda, Antoni	FGS
Descalzo Buey, Martín Luís	FGS	Sionis, Alessandro	FGS
Fernandez Martinez, Ana	IR	Vilades Medel, David	FGS
García-Moll Marimon, Xavier	FGS	Viñolas Prat, Xavier	FGS
Herráez Nieto, Sílvia	IR	Zegri Reiriz, Isabel	FGS

Main lines of research

- Electrophysiology and arrhythmias, clinical and experimental.
- Heart failure.
- Ischemic heart disease.
- Valvular heart disease.
- Cardiac imaging.
- Percutaneous valve repair.
- Bioengineering

Scientific challenges

Electrophysiology

- New experimental models of atrial fibrosis.
- Description of the mechanisms and clinical significance of electrocardiographic changes in patients with acute myocardial infarction, using translational research in pig heart models.
- Develop animal models for the study of left bundle branch block.
- Develop clinical applications of myocardial impedance

Heart failure

- Develop new risk scores for ambulatory heart failure patients predicting death and rehospitalizations.
- Research on new biomarkers in patients with heart dilatation and heart failure (including the Spanish registry Redinscor II (RIC) (1500 patients) and Redinscor III (ongoing)). Our group is the national coordinator for Redinscor II and Co-coordinator for Redinscor III.
- Develop new markers for early detection of cardiac graft rejection in transplanted patients.
- Develop palliative care programs for patients with advanced heart failure.

Ischemic heart disease

- Prognosis in patients with left circumflex coronary occlusion.
- Multidisciplinary treatment of cardiac sudden death.
- Treat complex atherosclerotic coronary artery lesions using interventional techniques.

Valvular heart disease

- Implement new percutaneous techniques for the treatment of mitral valve regurgitation and degenerative aortic stenosis.
- Implement novel devices for the treatment of prosthetic valve leak.

Cardiac imaging

- Implement new imaging software analysis to detect structural abnormalities of the myocardium (fibrosis, necrosis).
- Implement new percutaneous techniques for the treatment of mitral regurgitation in patients with heart failure or myocardial infarction.

Collaborations

Collaborations with other IIB Sant Pau research groups

- Vicenta Llorente Cortés – Lipids and Cardiovascular Pathology
- Leif Hove Madsen – Regulation of cardiac rhythm and contraction
- Lina Badimon Maestro – Molecular pathology and therapeutic of ischaemic and atherothrombotic diseases
- Pablo Ignacio Alonso Coello – Clinical Epidemiology and Healthcare Service
- José Montiel Serrano – Cardiac surgery
- José Luis Sánchez Quesada – Cardiovascular biochemistry
- Jordi Surrallés Calonge – Genome instability and DNA repair syndromes
- María Jesús Portella Moll – Clinical psychiatry
- Carlos Guarner Aguilar – Digestive diseases
- Francisco Blanco Vaca – Metabolic basis of cardiovascular risk
- Elisa Llurba – Women and perinatal health research
- Antoni Capdevila – Radiodiagnostics HSCSP
- Rafael Serra – Anaesthesiology HSCSP

External collaborations

CB16/11/00276 - CIBER Enfermedades Cardiovasculares (CIBERCV), Registro Redinscor III

- Lisardo Boscá Gomar. Instituto de Investigaciones Biomédicas Alberto Sols (Madrid)
- Juan F. Delgado Jiménez. Hospital 12 de Octubre (Madrid)
- Javier Díez Martínez. Centro de Investigación Médica Aplicada de Navarra
- José Ramón González-Juanatey. Hospital Clínico de Santiago de Compostela
- Julián Pérez Villacastín. Hospital Clínico San Carlos (Madrid)
- Luis Martínez Dolz. Hospital La Fe (Valencia)
- Antoni Bayés Genís. Hospital Germans Trias i Pujol de Badalona
- Pablo García Pavía. Hospital Puerta de Hierro (Madrid)
- Manuel Martínez Sellés. Hospital Gregorio Marañón (Madrid)
- Julio Nuñez Villota. Hospital Clínico de Valencia
- Domingo Pascual Figal. Hospital Virgen de la Arrixaca (Murcia)
- Alfredo Bardají Ruiz. Hospital Universitari Joan XXIII (Tarragona)
- Fernando Worner Diz. Hospital Universitari Arnau de Vilanova (Lleida)
- Antonio Ordoñez Fernández. Hospital Virgen del Rocío (Sevilla)
- Pedro Luis Sánchez Fernández. Hospital Universitario de Salamanca
- María Generosa Crespo Leiro. Hospital Universitario de A Coruña

ELEM Biotech

- Blanca Rodríguez. University of Oxford (United Kingdom)
- David Filgueiras Rama. Centro Nacional de Investigaciones Cardiovasculares, CNIC - IISCI (Madrid)
- Cristóbal Langdon. Hospital Clínic i Provincial de Barcelona

- Paul Iazzo. University of Minnesota (USA)
- Oscar Camara. Universitat Pompeu Fabra, Barcelona

CompBioMed Project

- Paul Best. CBK SciCon, Somerset (United Kingdom)
- Philippe Bijlenga. Geneva University Hospitals (Switzerland)
- Mike Bodkin. EvoTec, Hamburg (Germany)
- Brendan Bouffler. Amazon AWS, Seattle (USA)
- Enrico Gianluca Caiani. Politecnico di Milano (Italy)
- David Filgueiras. The Centro Nacional de Investigaciones Cardiovasculares Carlos III (CNIC)
- Malcolm Finlay. NHS and UCL, London (United Kingdom)
- Neil Chue Hong. Software Sustainability Institute, Edinburgh (United Kingdom)
- Mahmood Mirza. Neuravi Ireland
- Ana Paula Narata. Tours Hospital (France)
- Mark Palmer. Medtronic
- Frits Prinzen. Maastricht University (Netherlands)
- Brad Sherborne. MERCK, US
- Sarah Skerratt. Vertex Pharmaceuticals, Stanford University, Oxford (United Kingdom)
- Derek Sweeney. CadFem Ireland
- Kenji Takeda. Microsoft Azure

TEAM

- Eulogio García. Hospital Clínico San Carlos (Madrid)
- Carlos Macaya Miguel. Hospital Clínico San Carlos (Madrid)
- Andrés Iníguez Romo. Complejo Hospitalario de Vigo

Euro CTO Club (chronic total occlusions (CTOs):

formed by 60 members, spread among all European countries

Registro Nacional de Trasplante Cardíaco:

- Clínica Universitaria de Navarra
- Hospital Universitario Puerta de Hierro (Madrid)
- Hospital Universitario Marqués de Valdecilla (Cantabria)
- Hospital Universitario Reina Sofía (Córdoba)
- Hospital Universitario y Politécnico La Fe (Valencia)
- Hospital General Universitario Gregorio Marañón (Madrid)
- Fundación Jiménez Díaz (Madrid)
- Hospital Universitario Virgen del Rocío (Sevilla)
- Hospital Universitario 12 de Octubre (Madrid)
- Hospital Universitario A Coruña
- Hospital Universitario de Bellvitge
- Hospital Central de Asturias
- Hospital Clínic i Provincial de Barcelona
- Hospital Universitario Virgen de la Arrixaca (Murcia)
- Hospital Universitario Miguel Servet (Zaragoza)
- Hospital Clínico Universitario de Valladolid

RETAC Group - European Network for the Treatment of Arrhythmias in Cardiology:

- Philippe Lagrange. Clinique Saint Pierre, Perpignan (France)
- Benoît Guy-Moyat. Hospital Universitaire de Limoges (France)
- Franck Halimi. C.M.C. Parly II, Le Chesnay (France)
- Luc de Roy. Clinique Universitaire de Saint Godinne

(Yvoir-Belgium)

- Serge Boveda. Clinique Pasteur (Toulouse-France)
- Julio Martí. Hospital del Mar (Barcelona)
- Pascal Defaye. Hospital Universitaire de Grenoble (France)
- Antonio Curnis. Spedali Civili, Brescia (Italy)
- Marc Zimmermann. Hôpital de la Tour, Geneve (Switzerland)

RITMOCORE - Arrhythmias monitoring and comprehensive care:

- Liverpool Heart and Chest Hospital NHS (United Kingdom)

GREAT: Global Research on Acute Conditions Team:

- International Network between 308 experts operating in the management of acute clinical conditions in the field of Emergency Medicine.

EURO SHOCK:

- University of Glasgow, KU Leuven, University of East Anglia, Deutsches Herzzentrum Muenchen, A.O. Ospedale Papa Giovanni XXIII, Chalice Medical Ltd, Ludwig-Maximilians - University of Munich, University of Tromso, Institut d'Investigacions Biomèdiques August Pi i Sunyer, Paula Stradina Liniska Universitates, Accelopment AG, Universiteit Antwerpen, Cardiovascular European Research Centre (CERC).

Other collaborators:

- Xavier Rosell. Departament d'Enginyeria Electrònica, Universitat Politècnica de Catalunya – UPC. Barcelona
- Ana García Álvarez. Hospital Clínic i Provincial de Barcelona
- Valentí Fuster Carulla. Centro Nacional de Investigaciones Cardiovasculares Carlos III – CNIC. Madrid
- Borja Ibañez. Laboratorio Traslacional Imagen y Terapia Cardiovascular, CNIC – IISCI. Madrid
- Deborah Gil. Barcelona Supercomputing Center (Centro Nacional de supercomputación-CVC – UAB). Barcelona
- Reda Ibrahim. Montreal Heart Institute Adult Congenital Heart Center, Montreal. Canada
- Luca Gerardo-Giorda. Institute for Mathematical Methods in Medicine and Data Based Modeling. Johannes Kepler University, Linz. Austria
- Wilfried Mullens. Hospital Ziekenhuis Oost-Limburg, Genk. Bélgica
- Julio Núñez. Hospital Clínico Universitario de Valencia
- Javier Segovia Cubero, Marta Jiménez-Blanco Bravo. Hospital Universitario Puerta de Hierro. Madrid
- Oscar Cámara. Universitat Pompeu Fabra - Master de Bioingenieria / Barcelona MedTec. Barcelona
- Karim Lekadir. UB - Grupo Research en inteligencia artificial aplicada al reconocimiento de imagenes de CRM
- Gianluca Pontone. Centro Cardiologico Monzino. Milano
- Josep Comín-Colet. Instituto de Investigación Biomédica de Bellvitge (IDIBELL). Barcelona
- Francisco Ciruela Alférez. Neuropharmacology and pain Group. Institut d'Investigació Biomèdica de Bellvitge (IDIBELL). Barcelona
- Tomás García-Sánchez. Biomedical Electronics Research

- Group DTIC. Universitat Pompeu Fabra. Barcelona
- Pablo Martínez Legazpi. Fundacion Investigacion Biomedica Hospital Gregorio Marañon. Madrid
- Antonio Berruezo Sanchez. Clínica Teknon. Barcelona
- Maria Abad. Cellular Plasticity and Cancer Group. Institut d'Oncologia de Vall d'Hebron (VHIO). Barcelona
- Raúl Benitez. Grupo de Control Automàtic de la Universitat Politècnica de Catalunya. Barcelona.
- Wayne Chen. Department of Physiology and Pharmacology. University of Calgary, Alberta. Canada
- Diego Franco. Grupo de Desarrollo Cardiovascular de la Universidad de Jaén.
- Grupo de Trabajo de Síndrome Cardiorrenal. Asociación de Insuficiencia Cardiaca. Sociedad Española de Cardiología.
- Registro multicéntrico con el dispositivo mitraclip (Hospital Universitario Salamanca, Hospital Clinic Barcelona, Clínico San Carlos, Hospital Clinic, Álvaro Cunqueiro).
- Registro Multicéntrico Orejuela (Hospital Clinic Barcelona, CHU Quebec)
- Registro TAVI Naviero (Clínico San Carlos)

Active grants

- JUAN MARIA CINCA CUSCULLOLA. Desarrollo de un modelo preclínico para la caracterización electrofisiológica y estructural del infarto de miocardio auricular.. PI17/00069. Instituto de Salud Carlos III. Duration 2018-2021. 66.000,00 €.
- JOSE MARIA GUERRA RAMOS. Caracterización Genética del Síndrome del QT Largo Asociado a Fármacos.. PI17/00980. Instituto de Salud Carlos III. Duration 2018-2022. 122.000,00 €
- JUAN MARIA CINCA CUSCULLOLA. Grup de Recerca Clínica i Translacional en Cardiologia - RCTCAR.. 2017 SGR 984. Agència de Gestió d'Ajuts Universitaris i de Recerca. Duration 2017-2021. 35.185,92 €.
- JOSE MARIA GUERRA RAMOS. Estudio traslacional para caracterizar las alteraciones estructurales y moleculares subyacentes a la reversibilidad de la miocardiopatía inducida por taquicardia.. PI20/01702. Instituto de Salud Carlos III. Duration 2021-2023. 155.000,00 €.
- CRISTIAN MORENO LOZANO. Adaptación y validación al contexto de urgencias de la nursing intensive care-satisfaction scale.. PR-430/2020 . Fundació Infermeria i Societat. Duration 2021-2023. 4.000,00 €.
- LAURA RODRIGUEZ SOTELO. Papel pronóstico del número de líneas B mediante ecografía pulmonar en pacientes con infarto agudo de miocardio con elevación del segmento ST.. SEC 2020-3. Societat Espanyola de Cardiologia. Duration 2020-2021. 22.500,00 €
- XAVIER VIÑOLAS PRAT. H2020-SCI-2016-CNET: RITMOCORE - Arrhythmias monitoring and comprehensive care. Horizon

2020. European Commission. Agencia de Qualitat I Avaluació Sanitaries (AQuAS) – Hospital Sant Pau. 2016-2022.

903.875,00€

- XAVIER VIÑOLAS PRAT. TIQUE - 965356 - Innovative care services, enhanced with technology, to deliver Quick rEsponses for individuals with advanced heart failure and complex care needs through integrated care. Horizon 2020. European Commission. 2020 - 2026. 4548678,70 €

- JOSE MARIA GUERRA RAMOS - Juan M^a CINCA. BIOSENSE WEBSTER. Collaboration Agreement. 2018-2022. 59.079,90€

- VÍCTOR GARCÍA HERNANDO. Beca 2020 Asociación Ritmo Cardíaco (Sociedad Española Cardiología) y Johnson & Johnson - Fellowship Electrofisiología Cardíaca; JOHNSON&JOHNSON - Asociación del Ritmo Cardíaco - SEC, 2020-2021, 30.000,00 €

- JOSE MARIA GUERRA RAMOS. ATTUNE MEDICAL. Collaboration Agreement. 2018-2022. 45.597,50€

- JOSE MARIA GUERRA RAMOS - ABDEL HAKIM MOUSTAFA. EDWARDS LIFESCIENCES. Patient Specific 3D Model for Minimally Invasive Mitral Surgery Training. 2021. 95.832,00€
Note: Total amount granted to PI. It does not include indirect costs

Grants awarded in 2021

- DAVID VILADES MEDEL, Anàlisi de les interaccions proteiques amb el receptor LRP1 com a font de nous biomarcadors d'aterosclerosi coronària en pacients sotmesos a una tomografia computeritzada cardíaca., ACADEMIA 2021, Acadèmia de Ciències Mèdiques, 2021 - 2022, 30.000,00 €.
- JOSE MARIA GUERRA RAMOS. Estudio prospectivo, aleatorizado, multicéntrico, abierto, guiado por eventos, para evaluar la no inferioridad de una estrategia personalizada de precisión para la prevención de la muerte súbita en pacientes con miocardiopatía dilatada no isquémica - ESTUDIO CIBER-SPANISH I. PMP21/00064.PI COORD: Javier Diez Martínez. CIBER - Instituto de Salud Carlos III. Duration 2022-2025, 1.561.411,50 €
- ÈLIA BOSCH RUÉ. Ajuts Margarita Salas 2021. Universitat Autònoma de Barcelona - Convocatoria de Recualificación del Sistema Universitario español. Jose Guerra Ramos - IIB Sant Pau. 2022-2024

- SÒNIA MIRABET PÉREZ. Safety and immunogenicity of the SARS-CoV-2 ARNm vaccine in recipients of solid organ transplants: a multicentre study. Project 353/C/2021. Fundació La Marató TV3. 2021-2023, 230.545,00 €

Note: Total amount granted to PI. It does not include indirect costs

Awards

- PREMIO DE LA SOCIEDAD ESPAÑOLA DE CARDIOLOGÍA AL MEJOR ARTÍCULO PUBLICADO EN REC: CardioClinics: Pronóstico al año en pacientes con insuficiencia cardiaca en España. Registro ESC-EORP-HFA Heart Failure Long-Term. Crespo-Leiro, Eduardo Barge-Caballero, Javier Segovia-Cubero, José González-Costello, Antoni Bayés-Genís, Silvia López-Fernández, Sonia Mirabet-Pérez, Marisa Sanz- Julve, Carla Fernández-Vivancos, José María Pérez-Ruiz, José Manuel García-Pinilla, Alfonso Varela-Román, Luis Almenar-Bonet, Antonio Lara-Padrón, Luis de la Fuente-Galán, Francisco Torres-Calvo, Juan Carlos Arias-Castaño, Francisco Ridocci-Soriano, Javier Andrés-Navales, Domingo A. Pascual-Figal, David Bierge-Valero, Francisco Epelde, Juan Carlos Gallego-Page, Ana M. Sahuquillo-Martínez, Beatriz Díaz-Molina, Regina Dalmau González-Gallarza, Juan Quiles-Granadoa, Aldo Pietro Maggionia, Lars H. Lund, Cécile Laroche y Juan Delgado-Jiménez. REC CardioClinics. 2020;55:207-216.
- PREMIO DE LA ASOCIACIÓN DE CARDIOPATÍA ISQUÉMICA Y CUIDADOS AGUDOS CARDIOVASCULARES A LA MEJOR PUBLICACIÓN EN REC: Tendencias en el tratamiento del shock cardiogénico e impacto pronóstico del tipo de centros tratantes. José C. Sánchez-Salado, Virginia Burgos, Albert Ariza-Solé, Alessandro Sionis, Angela Canteli, José L. Bernal, Cristina Fernández, Cristina Castrillo, Marta Ruiz-Lera, Esteban López-de-Sá, Rosa María Lidón, Fernando Worner, Manuel Martínez-Sellés, Javier Segovia, Ana Viana-Tejedor, Victòria Lorente, Oriol Alegre, Isaac Llaó, José González-Costello, Nicolás Manito, Ángel Cequier, Héctor Bueno y Javier Elola. Rev Esp Cardiol. 2020;73:546-553.
- III EDICIÓN PREMIOS OAT ADHERENCIA. Mejor Proyecto Adherencia Farmacia Hospitalaria. Servicio de Farmacia del Hospital de la Santa Creu i Sant Pau en colaboración con el Programa de Trasplante Cardíaco. Servicio de Cardiología. Servicio de Cirugía Cardíaca. CIBER-CV. 29 octubre, 2021

Doctoral theses

- VERÓNICA JIMÉNEZ SÁBADO, Impacto de SNPs (Single nucleotide polymorphisms) sobre la homeostasis del calcio intracelular y la actividad eléctrica en miocitos auriculares humanos. Excellent Cum Laude, Universitat de Barcelona, Dr. Leif Hove-Madsen, 19/07/2021

Patents

- Amorós Figueras, Gerard; Bragós Bardia, Ramón; Cinca Cuscullola, Juan; García Sánchez, Tomàs; Jorge Vizuete, Esther; Rosell Ferrer, Francesc Xavier; Sánchez Terrones, Benjamín. , DEVICES TO ASSESS INFARCTED MYOCARDIAL TISSUE BY

MEASURING ELECTRICAL IMPEDANCE DURING THE CARDIAC CYCLE. , EP3435858, Type: International, 27/02/2020

Scientific production

- Agricola E, Asmarats L, Maisano F, Cavalcante JL, Liu SZ, Milla F, Meduri C, Rodes J, Vannan M, Pibarot P. Imaging for Tricuspid Valve Repair and Replacement. *JACC-Cardiovascular Imaging*. 2021; 14(1). DOI:10.1016/j.jcmg.2020.01.031. PMID:32828782. IF:14,805 (Q1/D1).
- Agudelo V, Millan X, Li CH, Moustafa AH, Asmarats L, Serra A, Arzamendi D. Prevalence, mechanisms and impact of residual patency and device-related thrombosis following left atrial appendage occlusion: a computed tomography analysis. *EuroIntervention*. 2021; 17(11). DOI:10.4244/EIJ-D-21-00320. PMID:34219668. IF:6,534 (Q1/D2).
- Alfonso F, Cuesta J, Del Blanco BG, Bosa F, de Prado AP, Masotti M, Trillo R, Rumoroso JR, Moreno R, Cequier A, Gutierrez H, Touchard AG, Lopez JR, Zueco J, Serra A, Velazquez M, Moris C, Bastante T, Garcia M, Rivero F, Fernandez C. Scoring balloon predilation before bioresorbable vascular scaffold implantation in patients with in-stent restenosis: the RIBS VI 'scoring' study. *CORONARY ARTERY DISEASE*. 2021; 32(2). DOI:10.1097/MCA.0000000000000904. PMID:32558692. IF:1,439 (Q4/D10).
- Alperi A, Mohammadi S, Campelo F, Munoz E, Nombela L, Faroux L, Veiga G, Serra V, Fischer Q, Pascual I, Asmarats L, Gutierrez E, Regueiro A, Vilalta V, Ribeiro HB, Matta A, Munoz A, Armijo G, Metz D, Hernandez JMDT, Rodenas E, Urena M, Moris C, Arzamendi D, Perez P, Fernandez E, Campanha DC, Mesnier J, Voisine P, et al. Transcatheter Versus Surgical Aortic Valve Replacement in Patients With Complex Coronary Artery Disease. *JACC-Cardiovascular Interventions*. 2021; 14(22). DOI:10.1016/j.jcin.2021.08.073. PMID:34794656. IF:11,195 (Q1/D1).
- Alvarez J, Garcia A, Vives M, Ferrero A, Martinez M, Vazquez R, Gonzalez JR, Rivera M, Segovia J, Pascual D, Bover R, Bascompte R, Delgado J, Sepulveda AG, Bardaji A, Perez F, Zamorano JL, Crespo M, Sanchez PL, Ordóñez J, Cinca J. A 3-Biomarker 2-Point-Based Risk Stratification Strategy in Acute Heart Failure. *Frontiers in Physiology*. 2021; 12:708890. DOI:10.3389/fphys.2021.708890. PMID:34744758. IF:4,566 (Q1/D2).
- Araiza D, Montalto C, Martinez P, Cabello A, Gopar R, Alabrese R, Almaghraby A, Catoya S, Chacon M, Kaufmann CC, Corbi M, Deharo P, El M, Elgohari A, Guerra F, Jarakovic M, Martinez E, Moderato L, Montero S, Morejon P, Omar AM, Jorge P, Przybylo P, Selim E, Sinan UY, Stratinaki M, Tica O, Trepá M, Uribarri A, et al. [Sionis A]. Impact of the COVID-19 pandemic on hospitalizations for acute coronary syndromes: a multinational study. *QJM-AN INTERNATIONAL JOURNAL OF MEDICINE*. 2021; 114(9). DOI:10.1093/qjmed/hcab013. PMID:33486512. IF:3,210 (Q2/D4).

- Arbelo E, Aktaa S, Bollmann A, D'Avila A, Drossart I, Dwight J, Hills MT, Hindricks G, Kusumoto FM, Lane DA, Lau DH, Lettino M, Lip GYH, Lobban T, Pak HN, Potpara T, Saenz LC, Van IC, Varosy P, Gale CP, Dagres N, Boveda S, Deneke T, Defaye P, Conte G, Lenarczyk R, Providencia R, Guerra JM, Takahashi Y, Pisani C, Nava S, et al. Quality indicators for the care and outcomes of adults with atrial fibrillation. *EUROPACE*. 2021; 23(4). DOI:10.1093/europace/euaa253. PMID:32860039. IF:5,214 (Q2/D3).
- Arbelo E, Angera I, Trucco E, Rivas N, Guerra JM, Bisbal F, Jauregui M, Valles E, Martin G, Sbraga F, Tolosana JM, Linhart M, Francisco J, Montiel J, Pereferrer D, Menendez D, Jimenez J, Elamrani A, Borrás R, Dallaglio PD, Benito E, Santos A, Rodriguez E, Sarrias A, Gonzalez CE, Marti J, Cabrera S, Mont L. Reduction in new cardiac electronic device implantations in Catalonia during COVID-19. *EUROPACE*. 2021; 23(3). DOI:10.1093/europace/euab011. PMID:33595062. IF:5,214 (Q2/D3).
- Artaza JG, Santos SM, Larranaga JM, Osa A, Sutil M, Ortiz MR, Corros C, Vidal B, Palomero VM, Maneiro N, Barbeito CM, Lopez R, Li CH, Diego SR, Lambert JL, Velasquez F, Crespo MG, Almenar L, Mirabet S, Mingo AM, Cubero JS. Validation of the usefulness of 2-dimensional strain parameters to exclude acute rejection after heart transplantation: a multicenter study. *REVISTA ESPANOLA DE CARDIOLOGIA*. 2021; 74(4)DOI:10.1016/j.recesp.2020.01.033. PMID:32205100. IF:4,753 (Q2/D4).
- Benito T, Carrasco F, Estevez R, Pascual I, Arzamendi D, Garrote C, Nombela L, Pan M, Serrador A, Freixa X, Alvarez A, Antolin R, Andraka L, Cruz I, Lopez JR, Gil JLD, Urbano C, Cervera DS, Sanchis J, Bosa F, Ruiz V, Molina E, Becerra VM, Gualis J, Avanzas P, Li CH, Baz JA, Jimenez P, Mesa D, Amat IJ, Regueiro A, Trillo R, Franco A, Alonso JH, Fernandez F. Clinical and echocardiographic outcomes of transcatheter mitral valve repair in atrial functional mitral regurgitation. *INTERNATIONAL JOURNAL OF CARDIOLOGY*. 2021; 345. DOI:10.1016/j.ijcard.2021.09.056. PMID:34610357. IF:4,164 (Q2/D4).
- Briongos S, Garcia A, Rubio J, Segura JM, Rodriguez A, Peinado R, Alzueta J, Martinez JB, Vinolas X, de la Concha JF, Anguera I, Martin M, Cerda L, Perez L. Long-Term Outcomes Among a Nationwide Cohort of Patients Using an Implantable Cardioverter-Defibrillator: UMBRELLA Study Final Results. *Journal of the American Heart Association*. 2021; 10(1):e018108. DOI:10.1161/JAHA.120.018108. PMID:33356406. IF:5,501 (Q1/D3).
- Brugaletta S, Gomez J, Ortega L, Jimenez V, Jimenez M, Jimenez P, Diletti R, Mainar V, Campo G, Silvestro A, Maristany J, Flores X, Oyarzabal L, De Miguel A, Iniguez A, Serra A, Nombela L, Ielasi A, Tsepili M, Lenzen M, Gonzalo N, Bordes P, Tebaldi M, Biscaglia S, Rodriguez JJ, Al S, Arevalos V, Romaguera R, Gomez JA, Serruys PW, Sabate M. 10-Year Follow-Up of Patients With Everolimus-Eluting Versus Bare-Metal Stents After ST-Segment Elevation Myocardial Infarction. *JOURNAL OF THE AMERICAN COLLEGE OF CARDIOLOGY*. 2021; 77(9). DOI:10.1016/j.jacc.2020.12.059. PMID:33663733. IF:24,094 (Q1/D1).
- Burri H, Starck C, Auricchio A, Biffi M, Burri M, D'Avila A, Deharo JC, Glikson M, Israel C, Lau CP, Leclercq C, Love CJ, Nielsen JC, Vernoooy K, Dagres N, Boveda S, Butter C, Marijon E, Braunschweig F, Mairesse GH, Gleva M, Defaye P, Zanon F, Lopez N, Guerra JM, Vassilikos VP, Oliveira MM. EHRA expert consensus statement and practical guide on optimal implantation technique for conventional pacemakers and implantable cardioverter-defibrillators: endorsed by the Heart Rhythm Society (HRS), the Asia Pacific Heart Rhythm Society (APHRS), and the Latin-American Heart Rhythm Society (LAHRS). *EUROPACE*. 2021; 23(7). DOI:10.1093/europace/euaa367. PMID:33878762. IF:5,214 (Q2/D3).
- Campello VM, Gkontra P, Izquierdo C, Martin C, Sojoudi A, Full PM, Maier K, Zhang Y, He ZQ, Ma J, Parreno M, Albiol A, Kong FW, Shadden SC, Acero JC, Sundaresan V, Saber M, Elattar M, Li HW, Menze B, Khader F, Haarburger C, Scannell CM, Veta M, Carscadden A, Punithakumar K, Liu X, Tsaftaris SA, et al. [Vilades D, Descalzo ML]. Multi-Centre, Multi-Vendor and Multi-Disease Cardiac Segmentation: The M&Ms Challenge. *IEEE TRANSACTIONS ON MEDICAL IMAGING*. 2021; 40(12). DOI:10.1109/TMI.2021.3090082. PMID:34138702. IF:10,048 (Q1/D1).
- Canyelles M, Garcia A, Junza A, Yanes O, Puig N, Ordonez J, Sionis A, Sans J, Alquezar A, Santos D, Rotllan N, Julve J, Tondo M, Escola JC, Blanco F. The Capacity of APOB-Depleted Plasma in Inducing ATP-Binding Cassette A1/G1-Mediated Macrophage Cholesterol Efflux-But Not Gut Microbial-Derived Metabolites-Is Independently Associated with Mortality in Patients with ST-Segment Elevation Myocardial Infarction. *Biomedicines*. 2021; 9(10):1336. DOI:10.3390/biomedicines9101336. PMID:34680453.
- Czerwinska K, Montero S, Baneras J, Wood A, Zeid A, De Rosa S, Guerra F, Tica O, Serrano F, Bohm A, Ahrens I, Gierlotka M, Masip J, Bonnefoy E, Lettino M, Kirchhof P, Sionis A. Current status and needs for changes in critical care training: the voice of the young cardiologists. *European Heart Journal-Acute Cardiovascular Care*. 2021; 10(1). DOI:10.1093/ehjacc/zuua027. PMID:33580774. IF:4,696 (Q2/D4).
- Dauw J, Lelonek M, Zegri I, Paredes CP, Zara C, George V, Cobo M, Knappe D, Shchekochikhin D, Lekhakul A, Klincheva M, Freja S, Miro O, Barker D, Borbely A, Nasr S, Doghmi N, de la Espriella R, Singh JS, Bovolo V, Fialho I, Ross NT, van den Heuvel M, Benkouar R, Findeisen H, Alhaddad IA, Al Balbissi K, Barge G, Ghazi AM, et al. Rationale and Design of the Efficacy of a Standardized Diuretic Protocol in Acute Heart Failure Study. *ESC Heart Failure*. 2021; 8(6). DOI:10.1002/ehf2.13666. PMID:34708555. IF:4,411 (Q2/D4).
- Domingo M, Lupon J, Girerd N, Conangla L, De Antonio M, Moliner P, Santiago E, Codina P, Cedieli G, Spitaleri G, Gonzalez B, Diaz V, Rivas C, Velayos P, Nunez J, Bayes A. Lung ultrasound in outpatients with heart failure: the wet-to-dry HF study. *ESC Heart Failure*. 2021; 8(6). DOI:10.1002/ehf2.13660. PMID:34725962. IF:4,411 (Q2/D4).

- El Amrani A, Vinolas X, Arias MA, Bazan V, Valdovinos P, Alegret JM. Pharmacological Cardioversion after Pre-Treatment with Antiarrhythmic Drugs Prior to Electrical Cardioversion in Persistent Atrial Fibrillation: Impact on Maintenance of Sinus Rhythm. *Journal of Clinical Medicine*. 2021; 10(5):1029. DOI:10.3390/jcm10051029. PMID:33802253. IF:4,241 (Q1/D3).
- Escate R, Padro T, Suades R, Camino S, Muniz O, Diaz JL, Sionis A, Mata P, Badimon L. High miR-133a levels in the circulation anticipates presentation of clinical events in familial hypercholesterolaemia patients. *CARDIOVASCULAR RESEARCH*. 2021; 117(1). DOI:10.1093/cvr/cvaa039. PMID:32061123. IF:10,787 (Q1/D1).
- Estevez R, Shuvy M, Taramasso M, Benito T, Denti P, Arzamendi D, Adamo M, Freixa X, Villablanca P, Krivoshei L, Fam N, Spargias K, Czarnecki A, Haberman D, Agmon Y, Sudarsky D, Pascual I, Ninios V, Scianna S, Moaraf I, Schiavi D, Chrissoheris M, Beerl R, Kerner A, Fernandez E, Di M, Regueiro A, Poles L, Iniguez A, Fernandez F, Maisano F. Use of MitraClip for mitral valve repair in patients with acute mitral regurgitation following acute myocardial infarction: Effect of cardiogenic shock on outcomes (IREMMI Registry). *CATHETERIZATION AND CARDIOVASCULAR INTERVENTIONS*. 2021; 97(6). DOI:10.1002/ccd.29552. PMID:33600072. IF:2,692 (Q3/D6).
- Faroux L, Cruz I, Arzamendi D, Freixa X, Nombela L, Peral V, Caneiro B, Mangieri A, Trejo B, Asmarats L, Regueiro A, McInerney A, Gonzalez AM, Estevez R, Laricchia A, O'Hara G, Rodes J. Incidence, predictors, and clinical impact of bleeding recurrence in patients with prior gastrointestinal bleeding undergoing LAAC. *PACE-PACING AND CLINICAL ELECTROPHYSIOLOGY*. 2021; 44(7). DOI:10.1111/pace.14293. PMID:34110038. IF:1,976 (Q3/D8).
- Faroux L, Cruz I, Arzamendi D, Freixa X, Nombela L, Peral V, Caneiro B, Mangieri A, Trejo B, Asmarats L, Regueiro A, McInerney A, Mas C, Estevez R, Laricchia A, O'Hara G, Rodes J. Short-term direct oral anticoagulation or dual antiplatelet therapy following left atrial appendage closure in patients with relative contraindications to chronic anticoagulation therapy. *INTERNATIONAL JOURNAL OF CARDIOLOGY*. 2021; 333. DOI:10.1016/j.ijcard.2021.02.054. PMID:33647365. IF:4,164 (Q2/D4).
- Faroux L, Cruz I, Arzamendi D, Freixa X, Nombela L, Peral V, Caneiro B, Mangieri A, Trejo B, Asmarats L, Regueiro A, McInerney A, Mas C, Estevez R, Laricchia A, O'Hara G, Rodés J. Effect of Glomerular Filtration Rates on Outcomes Following Percutaneous Left Atrial Appendage Closure. *AMERICAN JOURNAL OF CARDIOLOGY*. 2021; 145. DOI:10.1016/j.amjcard.2020.12.081. PMID:33508268. IF:2,778 (Q3/D6).
- Faroux L, Lhermusier T, Vincent F, Nombela L, Tchetché D, Barbanti M, Abdel M, Windecker S, Auffret V, Campanha DC, Fischer Q, Munoz E, Trillo R, Jorgensen T, Serra V, Toggweiler S, Tarantini G, Saia F, Durand E, Donaint P, Gutierrez E, Wijeyesundera HC, Veiga G, Patti G, D'Ascenzo F, Moreno R, Hengstenberg C, et al. [Asmarats L]. ST-Segment Elevation Myocardial Infarction Following Transcatheter Aortic Valve Replacement. *JOURNAL OF THE AMERICAN COLLEGE OF CARDIOLOGY*. 2021; 77(17). DOI:10.1016/j.jacc.2021.03.014. PMID:33926655. IF:24,094 (Q1/D1).
- Fernandez MS, Marin F, Rafols C, Arribas F, Barrios V, Cosin J, Sanchez MA, Vilades D, LEKUONA I. Thromboembolic and bleeding events with rivaroxaban in clinical practice in Spain: impact of inappropriate doses (the EMIR study). *Journal of Comparative Effectiveness Research*. 2021; 10(7). DOI:10.2217/cer-2020-0286. PMID:33787316. IF:1,744 (Q4/D9).
- Ferre M, Ligeró C, Vidal R, Martínez A, Vinolas X, Alegret JM. Improvement in Atrial Fibrillation-Related Symptoms After Cardioversion: Role of NYHA Functional Class and Maintenance of Sinus Rhythm. *Clinical Interventions in Aging*. 2021; 16. DOI:10.2147/CIA.S305619. PMID:33953552. IF:4,458 (Q2/D4).
- Freixa X, Estevez R, Carrasco F, Millan X, Amat I, Regueiro A, Nombela L, Pascual I, Cid B, Lopez JR, Hernandez RA, Cruz I, Andraka L, Goicolea J, Ruiz V, Diez JL, Berenguer A, Baz JA, Pan MU, Benito T, Briales J, Li CH, Sanchis L, Serrador A, Jimenez P, Avanzas P, Salido L, Fernandez F, Hernandez JM, Arzamendi D. Percutaneous Mitral Valve Repair: Outcome Improvement with Operator Experience and a Second-Generation Device. *Journal of Clinical Medicine*. 2021; 10(4):734. DOI:10.3390/jcm10040734. PMID:33673247. IF:4,241 (Q1/D3).
- Freixa X, Tzikas A, Aminian A, Flores E, De Backer O, Korsholm K, Ben M, Gonzalez R, Agudelo V, Gilhofer T, Simon F, Samaras A, Regueiro A, Sondergaard L, Cruz I, Arzamendi D, Saw J, Ibrahim R, Nielsen JE. Left atrial appendage occlusion in chicken-wing anatomies: Imaging assessment, procedural, and clinical outcomes of the "sandwich technique". *CATHETERIZATION AND CARDIOVASCULAR INTERVENTIONS*. 2021; 97(7). DOI:10.1002/ccd.29546. PMID:33580751. IF:2,692 (Q3/D6).
- Garcia MD, Gonzalez F, Lopez R, Barge E, Bueno MG, Martinez M, Arizon JM, Sousa DR, Gonzalez J, Mirabet S, Perez F, Molina BD, Rabago G, Ocampo AP, Galan LD, Garrido I, Delgado JF. Influence of Gender in Advanced Heart Failure Therapies and Outcome Following Transplantation. *Frontiers in Cardiovascular Medicine*. 2021; 8:630113. DOI:10.3389/fcvm.2021.630113. PMID:33718453. IF:6,050 (Q1/D3).
- Garcia R, Waldmann V, Vanduyndhoven P, Nesti M, Figueiredo MJD, Narayanan K, Conte G, Guerra JM, Boveda S, Duncker D. Worldwide sedation strategies for atrial fibrillation ablation: current status and evolution over the last decade. *EUROPACE*. 2021; 23(12). DOI:10.1093/europace/euab154. PMID:34308973. IF:5,214 (Q2/D3).
- Gerstein HC, Sattar N, Rosenstock J, Ramasundarahettige C, Pratley R, Lopes RD, Lam CSP, Khurmi NS, Heenan L, Del Prato

S, Dyal L, Branch K, Sionis A, AMPLITUDE I. Cardiovascular and Renal Outcomes with Efglenatide in Type 2 Diabetes. *NEW ENGLAND JOURNAL OF MEDICINE*. 2021; 385(10). DOI:10.1056/NEJMoa2108269. PMID:34215025. IF:91,245 (Q1/D1).

• Godoy H, Duroux R, Jacobson KA, Soler C, Colino H, Jimenez V, Montiel J, Hove L, Ciruela F. Adenosine A(2A) Receptors Are Upregulated in Peripheral Blood Mononuclear Cells from Atrial Fibrillation Patients. *INTERNATIONAL JOURNAL OF MOLECULAR SCIENCES*. 2021; 22(7):3467. DOI:10.3390/ijms22073467. PMID:33801676. IF:5,923 (Q1/D3).

• Gomis M, Perez SM, Minguell ER, Loidi VB, Lopez LL, Abarca SR, Tugas EG, Mas N, Bafalluy M. Mobile Health to Improve Adherence and Patient Experience in Heart Transplantation Recipients: The mHeart Trial. *Healthcare*. 2021; 9(4):463. DOI:10.3390/healthcare9040463. PMID:33919899. IF:2,645 (Q2/D5).

• Haberman D, Estevez R, Benito T, Denti P, Arzamendi D, Adamo M, Freixa X, Nombela L, Villablanca P, Krivoshei L, Fam N, Spargias K, Czarnecki A, Pascual I, Praz F, Sudarsky D, Kerner A, Ninios V, Gennari M, Beerl R, Perl L, Danenberg H, Poles L, Shimoni S, Goland S, Caneiro B, Scianna S, Moaraf I, Schiavi D, Scardino C, Corpataux N, et al. Safety and Feasibility of MitraClip Implantation in Patients with Acute Mitral Regurgitation after Recent Myocardial Infarction and Severe Left Ventricle Dysfunction. *Journal of Clinical Medicine*. 2021; 10(9):1819. DOI:10.3390/jcm10091819. PMID:33921996. IF:4,241 (Q1/D3).

• Hongisto M, Lassus J, Tarvasmaki T, Sionis A, San Rosello J, Tolppanen H, Kataja A, Jantti T, Sabell T, Lindholm MG, Banaszewski M, Cardoso JS, Parissis J, Di S, Carubelli V, Jurkko R, Masip J, Harjola VP, CardShock IN. Mortality risk prediction in elderly patients with cardiogenic shock: results from the CardShock study. *ESC Heart Failure*. 2021; 8(2). DOI:10.1002/ehf2.13224. PMID:33522124. IF:4,411 (Q2/D4).

• Jantti T, Tarvasmaki T, Harjola VP, Pulkki K, Turkia H, Sabell T, Tolppanen H, Jurkko R, Hongisto M, Kataja A, Sionis A, Silva J, Banaszewski M, DiSomma S, Mebazaa A, Haapio M, Lassus J, CardShock I. Predictive value of plasma proenkephalin and neutrophil gelatinase-associated lipocalin in acute kidney injury and mortality in cardiogenic shock. *Annals of Intensive Care*. 2021; 11(1):25. DOI:10.1186/s13613-021-00814-8. PMID:33547528. IF:6,925 (Q1/D2).

• Kataja A, Tarvasmaki T, Lassus J, Sionis A, Mebazaa A, Pulkki K, Banaszewski M, Carubelli V, Hongisto M, Jankowska E, Jurkko R, Jantti T, Kasztura M, Parissis J, Sabell T, Silva J, Spinar J, Tolppanen H, Harjola VP. Kinetics of procalcitonin, C-reactive protein and interleukin-6 in cardiogenic shock - Insights from the CardShock study. *INTERNATIONAL JOURNAL OF CARDIOLOGY*. 2021; 322. DOI:10.1016/j.ijcard.2020.08.069. PMID:32841617. IF:4,164 (Q2/D4).

• Lopez JN, Couselo M, Baluja A, Gonzalez L, Rozados A, Llorente V, de Gonzalo D, Guerra JM, Vilades D, Leta R, Martinez JL, Garcia FJ, Fernandez XA, Gonzalez JR, Eiras S, Rodriguez M. Sex-related differences of fatty acid-binding protein 4 and leptin levels in atrial fibrillation. *EUROPACE*. 2021; 23(5). DOI:10.1093/europace/euaa284. PMID:33319222. IF:5,214 (Q2/D3).

• Lopez R, Gonzalez F, Crespo MG, Segovia J, Cobo M, Delgado J, del Prado J, Martinez M, Marquez JMS, Mirabet S, Gonzalez J, Perez F, Lambert JL, Rabago G, Blasco MT, de la Fuente L, Garrido I, Otero D, Almenar L. Impact of donor-recipient age on cardiac transplant survival. Subanalysis of the Spanish Heart Transplant Registry. *REVISTA ESPANOLA DE CARDIOLOGIA*. 2021; 74(5). DOI:10.1016/j.recesp.2020.02.018. PMID:32600994. IF:4,753 (Q2/D4).

• Loughlin G, Datino T, Arenal A, Ruiz R, Sanchez JM, Perez L, Martinez J, Alzueta J, Perez F, Vinolas X, Andres MLF, de la Concha JF. Predictors of adoption and impact of evidence-based programming on the incidence of implantable cardioverter-defibrillator therapies. *REVISTA ESPANOLA DE CARDIOLOGIA*. 2021; 74(4). DOI:10.1016/j.recesp.2020.06.030. PMID:32773348. IF:4,753 (Q2/D4).

• Martinez M, Tattevin P, Valerio M, de Alarcon A, Farinas MC, Mirabet S, Lavie Y, Ambrosi P, Chabanne C, Duval X, Lecomte R, Lopez R, Uribarri A, Vinuesa D, Munoz P. Infective endocarditis in patients with heart transplantation. *INTERNATIONAL JOURNAL OF CARDIOLOGY*. 2021; 328. DOI:10.1016/j.ijcard.2020.12.018. PMID:33309761. IF:4,164 (Q2/D4).

• Mill J, Agudelo V, Olivares AL, Pons MI, Silva E, Nunez M, Morales X, Arzamendi D, Freixa X, Noailly J, Camara O. Sensitivity Analysis of In Silico Fluid Simulations to Predict Thrombus Formation after Left Atrial Appendage Occlusion. *Mathematics*. 2021; 9(18):2304. DOI:10.3390/math9182304. IF:2,258 (Q1/D1).

• Minguito C, Gomez M, Almenar L, Barge E, Gonzalez F, Delgado JF, del Prado J, Sousa I, Mirabet S, Gonzalez J, Sobrino JM, Perez F, Diaz B, Juan GR, Blasco T, Galan LD, Garrido I, Garcia L, Camino M, Albert DC, Muniz J, Crespo MG. Malignancy following heart transplantation: differences in incidence and prognosis between sexes - a multicenter cohort study. *TRANSPLANT INTERNATIONAL*. 2021; 34(5). DOI:10.1111/tri.13827. PMID:33482021. IF:3,782 (Q1/D3).

• Moliner C, Alvarez DM, Rivas M, Belarte LC, Besora JP, Sole E, Fluvia P, Zegri I, Lopez LL, Brossa V, Pirla MJ, Mesado N, Mirabet S, Roig E, Alvarez J. A Simple Score to Identify Super-Responders to Sacubitril/Valsartan in Ambulatory Patients With Heart Failure. *Frontiers in Physiology*. 2021; 12:642117. DOI:10.3389/fphys.2021.642117. PMID:33679455. IF:4,566(Q1/D2).

- Montero S, Huang F, Rivas M, Chommeloux J, Demondion P, Brechot N, Hekimian G, Franchineau G, Persichini R, Luyt CE, Garcia C, Bayes A, Lebreton G, Cinca J, Leprince P, Combes A, Alvarez J, Schmidt M. Awake venoarterial extracorporeal membrane oxygenation for refractory cardiogenic shock. *European Heart Journal-Acute Cardiovascular Care*. 2021; 10(6). DOI:10.1093/ehjacc/zuab018. PMID:33822901. IF:4,696 (Q2/D4).
- Moreno Z, Muller B, Jadidi AS, Bazan V, Chen J, Park CI, Vivekanantham H, Rodriguez E, Alonso C, Guerra JM, Campos B, Espinosa H, Combes S, Albenque JP, Eichenlaub M, Guy B, de Roy L, Defaye P, Boveda S, Arentz T, Vinolas X. Easily available ECG and echocardiographic parameters for prediction of left atrial remodeling and atrial fibrillation recurrence after pulmonary vein isolation: A multicenter study. *JOURNAL OF CARDIOVASCULAR ELECTROPHYSIOLOGY*. 2021; 32(6). DOI:10.1111/jce.15013. PMID:33772926. IF:2,424 (Q2/D5).
- Muntane G, Urena M, Nombela L, Amat I, Kleiman N, Munoz A, Atienza F, Serra V, Deyell MW, Veiga G, Masson JB, Canadas V, Himbert D, Castrodeza J, Elizaga J, Pascual JF, Webb JG, Hernandez JMD, Asmarats L, Pelletier E, Philippon F, Rodes J. Arrhythmic burden in patients with new-onset persistent left bundle branch block after transcatheter aortic valve replacement: 2-year results of the MARE study. *EUROPACE*. 2021; 23(2). DOI:10.1093/europace/euaa213. PMID:33083813. IF:5,214 (Q2/D3).
- Muntsant A, Jimenez-Altayo F, Puertas-Umbert L, Jimenez-Xarrie E, Vila E, Gimenez-Llort L. Sex-dependent end-of-life mental and vascular scenarios for compensatory mechanisms in mice with normal and ad-neurodegenerative aging. *BIOMEDICINES*. 2021; 9(2):1-29. IF:6,081 (Q1/D2).
- Pappaccogli M, Di S, Warchol E, Lorthioir A, Amar L, Aparicio LS, Beauloye C, Bruno RM, Chenu P, de Leeuw P, De Backer T, Delmotte P, Dika Z, Gordin D, Heuten H, Iwashima Y, Krzesinski JM, Kroon AA, Mazzolai L, Poch E, Sarafidis P, Seinturier C, Spiering W, Toubiana L, Van der Niepen P, van D, Visona A, et al., European Int Registry Initiat FMD, European Soc Hypertension E [De la Llama PF, Barros AJ]. The European/International Fibromuscular Dysplasia Registry and Initiative (FEIRI)-clinical phenotypes and their predictors based on a cohort of 1000 patients. *CARDIOVASCULAR RESEARCH*. 2021; 117(3). DOI:10.1093/cvr/cvaa102. PMID:32282921. IF:10,787 (Q1/D1).
- Pfeffer MA, Claggett B, Lewis EF, Granger CB, Kober L, Maggioni AP, Mann DL, McMurray JJV, Rouleau JL, Solomon SD, Steg PG, Berwanger O, Cikes M, De Pasquale CG, East C, Fernandez A, Jering K, Landmesser U, Mehran R, Merkely B, Mody FV, Petrie MC, Petrov I, Schou M, Senni M, Sim D, van der Meer P, Lefkowitz M, et al., PARADISE &. Angiotensin Receptor-Nepilysin Inhibition in Acute Myocardial Infarction [Sionis AJ]. *NEW ENGLAND JOURNAL OF MEDICINE*. 2021; 385(20). DOI:10.1056/NEJMoa2104508. PMID:34758252. IF:91,245 (Q1/D1).
- Pope MK, Hall TS, Schirripa V, Radic P, Virdone S, Pieper KS, Le JY, Jansky P, Fitzmaurice DA, Cappato R, Atar D, Camm AJ, Kakkak AK, Viñolas X, GARFIELD I. Cardioversion in patients with newly diagnosed non-valvular atrial fibrillation: observational study using prospectively collected registry data. *BMJ-British Medical Journal*. 2021; 375:e066450. DOI:10.1136/bmj-2021-066450. PMID:34706884. IF:39,890 (Q1/D1).
- Quesada A, Arteaga F, Romero R, Perez L, Martinez J, Alzueta J, de la Concha JF, Martinez JG, Vinolas X, Porres JM, Anguera I, Porro R, Quesada B, de la Guia F, Palanca V, Jimenez J, Quesada J, Sanchis F, UMBRELLA GRP. Sex-Specific Ventricular Arrhythmias and Mortality in Cardiac Resynchronization Therapy Recipients. *JACC-Clinical Electrophysiology*. 2021; 7(6). DOI:10.1016/j.jacep.2020.10.009. PMID:33358670. IF:6,375 (Q1/D2).
- Rodriguez M, Jorda P, Hernandez J, Munoz C, Grima EZ, Garcia A, Canadas MV, Jimenez V, Oloriz T, Basterra N, Calvo D, Perez L, Arias MA, Exposito V, Aleman A, Diaz E, Guerra JM, Fernandez J, Arce A, Sanchez JM, Sousa P, Garcia I, Baluja A, Campuzano O, Sarquella G, Martinez JL, Gonzalez JR, Gimeno JR, Brugada J, Arbelo E. Long-term prognosis of women with Brugada syndrome and electrophysiological study. *HEART RHYTHM*. 2021; 18(5). DOI:10.1016/j.hrthm.2020.12.020. PMID:33359877. IF:6,343 (Q1/D2).
- Roman E, Poca M, Amoros G, Rosell J, Gely C, Nieto JC, Vidal S, Urgell E, Ferrero A, Alvarado E, Cuyas B, Hernandez E, Santesmases R, Guarner C, Escorsell A, Soriano G. Phase angle by electrical bioimpedance is a predictive factor of hospitalisation, falls and mortality in patients with cirrhosis. *Scientific Reports*. 2021; 11(1):20415. DOI:10.1038/s41598-021-99199-8. PMID:34650096. IF:4,379 (Q1/D3).
- Salamanca-Bautista P, Alvarez-Garcia J, Aramburu-Bodas O, Ferrero-Gregori A, Arias-Jimenez JL, Delgado JF, Formiga F, Vazquez R, Manzano L, Puig T, Llacer P, Vives-Borras M, Cinca J, Montero-Perez-Barquero M, Arias-Jimenez JL. Modes of death in heart failure according to age, sex and left ventricular ejection fraction. *Internal and Emergency Medicine*. 2021; 16(3):643-652. IF:3,397 (Q2/D3).
- Sanchez D, Nus M, Navas M, Fite J, Perez B, Barros AJ, Soto B, Martinez J, Camacho M, Rodriguez C, Mallat Z, Galan M. Oxidative Stress and Inflammatory Markers in Abdominal Aortic Aneurysm. *Antioxidants*. 2021; 10(4):602. DOI:10.3390/antiox10040602. PMID:33919749. IF:6,312 (Q1/D1).
- Sans J, Fernandez E, Duran A, Carreras J, Sionis A, Alvarez J, Garcia HM. Coronary Microvascular Dysfunction in Takotsubo Syndrome Assessed by Angiography-Derived Index of Microcirculatory Resistance: A Pressure-Wire-Free Tool.

Journal of Clinical Medicine. 2021; 10(19):4331. DOI:10.3390/jcm10194331. PMID:34640350. IF:4,241 (Q1/D3).

• Sedaghat A, Vij V, Al B, Gloekler S, Galea R, Furholz M, Meier B, Valgimigli M, O'Hara G, Arzamendi D, Agudelo V, Asmarats L, Freixa X, Flores E, De Backer O, Sondergaard L, Nombela L, McInerney A, Korsholm K, Nielsen JE, Afzal S, Zeus T, Operhalski F, Schmidt B, Montalescot G, Guedeney P, Iriart X, Miton N, Saw J, Gilhofer T, Fauchier L, et al. Device-Related Thrombus After Left Atrial Appendage Closure Data on Thrombus Characteristics, Treatment Strategies, and Clinical Outcomes From the EURO-C-DRT-Registry. *Circulation-Cardiovascular Interventions*. 2021; 14(5):e010195. DOI:10.1161/CIRCINTERVENTIONS.120.010195. PMID:34003661. IF:6,546 (Q1/D2).

• Senis E, Esgleas M, Najas S, Jimenez V, Bertani C, Gimenez M, Escriche A, Ruiz J, Hergueta M, Jimenez M, Giralta A, Nuciforo P, Alba MM, Peinado H, Toro DD, Hove L, Goetz M, Abad M. TUNAR lncRNA Encodes a Microprotein that Regulates Neural Differentiation and Neurite Formation by Modulating Calcium Dynamics. *Frontiers in Cell and Developmental Biology*. 2021; 9:747667. DOI:10.3389/fcell.2021.747667. PMID:35036403. IF:6,684 (Q1/D2).

• Testa L, Agnifili M, Van NM, Tchetché D, Asgar AW, De Backer O, Latib A, Reimers B, Stefanini G, Trani C, Colombo A, Giannini F, Bartorelli A, Wojakowski W, Dabrowski M, Jagielak D, Banning AP, Kharbanda R, Moreno R, Schofer J, van N, Pinto D, Serra A, Segev A, Giordano A, Brambilla N, Rubbio AP, Casenghi M, Oreglia J, De Marco F, et al. Transcatheter Aortic Valve Replacement for Degenerated Transcatheter Aortic Valves The TRANSIT International Project. *Circulation-Cardiovascular Interventions*. 2021; 14(6):e010440. DOI:10.1161/CIRCINTERVENTIONS.120.010440. PMID:34092097. IF:6,546 (Q1/D2).

• Trejo B, Estevez R, Carrasco F, Fernandez F, Arzamendi D, Pan MU, Pascual I, Nombela L, Amat IJ, Freixa X, Hernandez RA, Trillo R, Ikazuriaga LA, Lopez JR, Cervera DS, Sanchis J, Diez JL, Ruiz V, Urbano C, Becerra VM, Benito T, Li CH, Mesa D, Avanzas P, Armijo G, Serrador AM, Sanchis L, Loban CFG, Cid B, Hernandez JM, Garrote C, et al. Prognostic Role of TAPSE to PASP Ratio in Patients Undergoing MitraClip Procedure. *Journal of Clinical Medicine*. 2021; 10(5):1006. DOI:10.3390/jcm10051006. PMID:33801311. IF:4,241 (Q1/D3).

• Ullmo J, Cruz M, Sanchez O, Bos L, De la Llama PF, Calero F, Dominguez C, Garrido C, Trilla C, Carreras F, Sionis A, Mora J, Garcia A, Ordonez J, Llurba E. Cardiac dysfunction and remodeling regulated by anti-angiogenic environment in patients with preeclampsia: the ANGIOCOR prospective cohort study protocol. *BMC Pregnancy and Childbirth*. 2021; 21(1):816. DOI:10.1186/s12884-021-04263-w. PMID:34879854. IF:3,007 (Q2/D4).

• Ureña P, D'Marco L, Raggi P, García X, Brandenburg V, Mazzaferro S, Lieber A, Guirado L, Bover J. Valvular heart disease and calcification in CKD: More common than appreciated. *NEPHROLOGY DIALYSIS TRANSPLANTATION*. 2021; 35(12). DOI:10.1093/NDT/GFZ133. PMID:31326992. IF:5,992 (Q1/D2).

• Van NM, Unverdorben M, Hengstenberg C, Mollmann H, Mehran R, Lopez D, Nombela L, Moreno R, Nordbeck P, Thiele H, Lang IE, Zamorano JL, Shalw F, Yamamoto M, Watanabe Y, Hayashida K, Hambrecht R, Meincke F, Vranckx P, Jin JM, Boersma E, Rodes J, Ohlmann P, Capranzano P, Kim HS, Pilgrim T, Anderson R, Baber U, et al. ENVISAGE TAVI AF I [Asmarats L]. Edoxaban versus Vitamin K Antagonist for Atrial Fibrillation after TAVR. *NEW ENGLAND JOURNAL OF MEDICINE*. 2021; 385(23). DOI:10.1056/NEJMoa2111016. PMID:34449183. IF:91,245 (Q1/D1).

• Vicent L, Alvarez J, Gonzalez JR, Rivera M, Segovia J, Worner F, Bover R, Pascual D, Vazquez R, Cinca J, Fernandez F, Martinez M. Prognostic impact of hyponatraemia and hypernatraemia at admission and discharge in heart failure patients with preserved, mid-range and reduced ejection fraction. *INTERNAL MEDICINE JOURNAL*. 2021; 51(6). DOI:10.1111/imj.14836. PMID:32237007. IF:2,048 (Q3/D6).

• Vicent L, Guerra J, Vazquez R, Gonzalez JR, Dolz LM, Segovia J, Pascual D, Bover R, Worner F, Delgado J, Fernandez F, Martinez M. Ischemic Etiology and Prognosis in Men and Women with Acute Heart Failure. *Journal of Clinical Medicine*. 2021; 10(8):1713. DOI:10.3390/jcm10081713. PMID:33921155. IF:4,241 (Q1/D3).

• Vilades D, Garcia X, Gomez M, Pujadas S, Ferrero A, Donate T, Mirabet S, Leta R, Pons G, Carreras F, Cinca J. Differentiation of athlete's heart and hypertrophic cardiomyopathy by the fractal dimension of left ventricular trabeculae. *INTERNATIONAL JOURNAL OF CARDIOLOGY*. 2021; 330. DOI:10.1016/j.ijcard.2021.02.042. PMID:33621621. IF:4,164 (Q2/D4).

• Werner GS, Avran A, Mashayekhi K, Reifart J, Galassi AR, Boudou N, Meyer M, Garbo R, Buettner JH, Bufe A, Spratt JC, Bryniarski L, Kalnins A, Lismanis A, Christiansen EH, Martin V, Isaaq K, Sianos G, Gagnor A, di C, Hildick D, Serra A, Grancini L, Reifart N. Radiation Exposure for Percutaneous Interventions of Chronic Total Coronary Occlusions in a Multicenter Registry: The Influence of Operator Variability and Technical Set-up. *JOURNAL OF INVASIVE CARDIOLOGY*. 2021; 33(3). PMID:33570501. IF:2,022 (Q3/D8).

• Witberg G, Codner P, Landes U, Schwartzberg S, Barbanti M, Valvo R, De Backer O, Ooms JF, Islas F, Marroquin L, Sedaghat A, Sugiura A, Masiero G, Werner P, Armario X, Fiorina C, Arzamendi D, Santos S, Fernandez F, Baz JA, Steblovnik K, Mauri V, Adam M, Merdler I, Hein M, Ruile P, Grasso C, Branca L, Estevez R, Benito T, Amat IJ, et al. Effect of Transcatheter Aortic Valve Replacement on Concomitant Mitral Regurgitation and Its

Impact on Mortality. *JACC-Cardiovascular Interventions*. 2021; 14(11). DOI:10.1016/j.jcin.2021.02.030. PMID:33992550. IF:11,195 (Q1/D1).

• Zeymert U, Ludman P, Danchin N, Kala P, Laroche C, Sadeghi M, Caporale R, Shaheen SM, Legutko J, Iakobsishvili Z, Alhabib KF, Motovska Z, Studencan M, Mimoso J, Becker D, Alexopoulos D, Kereseslidze Z, Stojkovic S, Zelveian P, Goda A, Mirrakhimov E, Bajraktari G, Al H, Serpytis P, Raungaard B, Marandi T, Moore AM, et al. [Sionis A]. Reperfusion therapies and in-hospital outcomes for ST-elevation myocardial infarction in Europe: the ACVC-EAPCI EORP STEMI Registry of the European Society of Cardiology. *EUROPEAN HEART JOURNAL*. 2021; 42(44). DOI:10.1093/eurheartj/ehab342. PMID:34389857. IF:29,983 (Q1/D1).

Other scientific production

• Alvarado E, Vilades D, Brujats A, Villanueva C. Reply to: "Non-selective beta blockers and mortality in decompensated cirrhosis: Is cirrhotic cardiomyopathy the missing link?". *JOURNAL OF HEPATOLOGY*. 2021; 75(4). DOI:10.1016/j.jhep.2021.06.026. PMID:34224780. IF:25,083 (Q1/D1).

• Asmarats L, Li CH, Millan X, Moustafa AH, Serra A, Arzamendi D. Pacemaker Lead Entrapment Complicating Heterotopic Transcatheter Tricuspid Valve Implantation. *CANADIAN JOURNAL OF CARDIOLOGY*. 2021; 37(7). DOI:10.1016/j.cjca.2021.04.009. PMID:33933608. IF:5,223 (Q2/D3).

• Garcia V, Mendez F, Rodriguez E, Alonso C, Guerra JM, Campos B, Moreno Z, Benedicto AM, Vinolas X. ICD shock below the detection rate therapy zone-When appropriate is inadequate. *JOURNAL OF CARDIOVASCULAR ELECTROPHYSIOLOGY*. 2021; 32(12). DOI:10.1111/jce.15241. PMID:34532919. IF:2,424 (Q2/D5).

• Sionis A, Sans J. Dexmedetomidine in the cardiac intensive care unit: still no simple answers to a complex problem. *European Heart Journal-Acute Cardiovascular Care*. 2021; 10(4). DOI:10.1093/ehjacc/zuab017. PMID:33855350. IF:4,696 (Q2/D4).

Other publications

• Alonso C, García S, Campos B, Guerra J, Moreno Z, Méndez F, Montiel R, Betancur A, Viñolas X, Rodríguez E. Atrial Fibrillation Originating in the Inferior Vena Cava: A Typical Presentation of an Atypical Location. *Jacc: Case Reports*. 2021; 3(18). DOI:10.1016/j.jaccas.2021.11.001.

• Asmarats L, Shoeib O, Cortese B. Abluminus DES: a step forward in the fight against diabetes?. *Minerva Cardiology And Angiology*. 2021; 69(5). DOI:10.23736/S2724-5683.20.05565-6. PMID:33427428.

• Garcia-Moll X, Barrios V, Franch-Nadal J. Moving from the stratification of primary and secondary prevention of cardiovascular risk in diabetes towards a continuum of risk: need for a new paradigm. *Drugs Context*. 2021 18;10:2021-6-3.

• Herraiz-Martínez A, Tarifa C, Lozano-Velasco E, Jiménez-Sábado V, Casabella S, Hernández-Torres F, Daimi H, Vázquez Ruíz de Castroviejo E, Delpón E, Caballero R, Aránega A, Franco D, Hove-Madsen L. Novel PITX2 Homeodomain-Contained mutations from ATRIAL fibrillation patients deteriorate calcium homeostasis. *Hearts*. 2021; 2 (2): 251-269. DOI: 10.3390/hearts2020020.

• Lauten A, Rudolph TK, Messika D, Thambyrajah J, Serra A, Schulz E, Frey N, Maly J, Aiello M, Lloyd G, Bortone AS, Clerici A, Delle G, Rieber J, Indolfi C, Mancone M, Belle L, Arnold M, Bouma BJ, Lutz M, Deutsch C, Kurucova J, Thoenes M, Bramlage P, Steeds RP. Management of patients with severe aortic stenosis in the TAVI-era: how recent recommendations are translated into clinical practice. *Open Heart*. 2021; 8(1):e001485. DOI:10.1136/openhrt-2020-001485. PMID:33431618.

• Martínez A, Barreiro M, Li C-I, Jiménez J, Guzmán G, Fernández C, Aguadé S, López T. Selection of the best of 2020 in cardiovascular imaging. *Rec: Cardioclinics*. 2021; 56. DOI:10.1016/j.rccl.2020.10.010.

• Mendez F, Alonso C, de Diego IR, Rodriguez E, Campos B, Guerra JM, Moreno Z, Vinolas X. Remote monitoring in a patient with multiple leadless pacemakers. *Journal Of Arrhythmia*. 2021; 37(1). DOI:10.1002/joa3.12495. PMID:33664915.

• Petras A, Moreno Z, Leoni M, Gerardo L, Guerra JM. Systematic Characterization of High-Power Short-Duration Ablation: Insight From an Advanced Virtual Model. *Frontiers In Medical Technology*. 2021; 3. DOI:10.3389/fmedt.2021.747609. PMID:35047958.

• Salido M, Soriano M, Fernández E, Arzamendi D, Maestro A, Sans J, Vidal M, Bos L, Viladés D, Sionis A. Acute Mitral Regurgitation Secondary to Spontaneous Left Atrial Appendage Occluder Migration. *Jacc: Case Reports*. 2021; 3(6). DOI:10.1016/j.jaccas.2021.01.016.

• Steeds RP, Messika D, Thambyrajah J, Serra A, Schulz E, Maly J, Aiello M, Rudolph TK, Lloyd G, Bortone AS, Clerici A, Delle G, Rieber J, Indolfi C, Mancone M, Belle L, Lauten A, Arnold M, Bouma BJ, Lutz M, Deutsch C, Kurucova J, Thoenes M, Bramlage P, Frey N, IMPULSE GRP. IMPULSE: the impact of gender on the presentation and management of aortic stenosis across Europe. *Open Heart*. 2021; 8(1):e001443. DOI:10.1136/openhrt-2020-001443. PMID:33419934.

Communication and dissemination activities

Outreach activities to society

- Formació Voluntaris OCATT i BST Curs de formació sobre aspectes bàsics de l'àmbit de la donació i el trasplantament d'òrgans, teixits i cèl·lules. El cor i el trasplantament cardíac. OCATT 2021. Sònia Mirabet
- Novetats terapèutiques en insuficiència cardíaca: fem-ho bé. El tractament de la IC: què hi ha de nou?. XX Jornades d'Actualització Terapèutica 2021 CAMFIC. Catalunya. Decembre 2021. Sònia Mirabet

Media relations

- SANT PAU - web: El Hospital de Sant Pau de Barcelona implanta un innovador dispositiu transcatèter para reparar la vàlvula "olvidada" sin necesidad de operar a corazón abierto. Sistema de reparación valvular transcatèter Edwards PASCAL™. D. Arzamendi. 27/09/2021
- EUROPAPRESS – Catalunya: El Hospital de Sant Pau implanta un dispositiu transcatèter para reparar la vàlvula tricúspide. D. Arzamendi. Publicado 27/09/2021
- COPE.es: Implantan un nuevo dispositivo para reparar vàlvula cardíaca sin operación. D. Arzamendi. 27/09/2021
- CON SALUD.es: El Sant Pau implanta un innovador dispositiu transcatèter para reparar la vàlvula "olvidada". D. Arzamendi. 27/09/2021
- News web CCMA. Marcapassos amb control remot per fer el seguiment dels pacients fora de l'hospital. Xavier Viñolas. 2 may 2021
- LA VANGUARDIA. El hospital de Sant Pau vigila a sus pacientes de corazón de forma telemàtica. Xavier Viñolas. 18 may 2021
- EL PUNT AVUI. Sant Pau i Bellvitge despleguen un model per monitorar via control remot els pacients amb marcapassos. Xavier Viñolas. 18 may 2021
- CRONICA GLOBAL. Sant Pau y Bellvitge aplican un sistema que controla a distancia a pacientes con marcapassos. Xavier Viñolas. 18 may 2021

Scientific dissemination

Congresses

- RITMO 2021 – Virtual 21-25 Jun 2021
- NUEVAS HERRAMIENTAS EN LA ABLACIÓN DE FIBRILACIÓN AURICULAR: CUÉNTAME LO ÚLTIMO EN... Energías de ablación y técnicas de single-shot. Dr. José M^a Guerra Ramos
- ESTIMULACIÓN SIN CABLES. Situación actual de la

estimulación sin cables en España: ¿de dónde venimos y hacia dónde nos dirigimos? Dr. Xavier Viñolas Prat

- MUERTE SÚBITA EN LA MIOCARDIOPATÍA DILATADA SIN INFARTO PREVIO. ¿Cuándo implantar un DAL... y cuándo no? Dra. Concepción Alonso Martín
- CONGRESO SEC 2021 – Zaragoza, 28-30 Oct 2021
- Ritmo y Estimulación Cardíaca:
- Casos Interactivos: Cuando lo raro no lo es tanto. J. Pérez-Villacastín / O. Durán Bobin / R. Matía Francés / J. M. Guerra Ramos / F. Rodríguez Entem / M. F. Arcocha Torres
- Simposios: Marcapasos sin cables, presente y futuro. X. Viñolas Prat / F. J. García Seara / M. Pachón Iglesias / J. G. Martínez Martínez
- Controversia: Ablación con catéter como primera opción terapéutica en pacientes con fibrilación auricular paroxística. C. Alonso Martín / N. Pérez Castellano / J. R. González Juanatey
- Seminario: Claves del manejo del paciente cardio-renal. S. Mirabet Pérez / M. Cobo Marcos / J. I. Morgado García de Polavieja
- Cardiología clínica. Taller: Protección eficaz y segura contra el Paro Cardíaco Súbito: ¿cómo integrar el chaleco desfibrilador (WCD*) en su práctica clínica?. ¿Qué es el chaleco desfibrilador cardioversor (WCD*) portátil y cómo funciona?. José M^a Guerra Ramos
- Cardiología Intervencionista – Controversia: Paciente reoperado con insuficiencia tricúspide severa: ¿Qué ofrecerle?. L. Nombela Franco / D. Arzamendi Aizpurua / F. E. Calvo
- Mini-oral: Alteraciones eléctricas y estructurales en el infarto auricular agudo y crónico. Gerard Amorós-Figueras, Sergi Casabella-Ramon, Georgina Company, Dabit Arzamendi, Esther Jorge, Yolanda Macias, Damián Sanchez-Quintana, Javier Rosell-Ferrer, Jose M. Guerra, Juan.
- RIICE 2021 – Salamanca, 8-10 sept 2021:
- CIERRE DE OREJUELA. Nuevos dispositivos en cierre de orejuela: Ultraseal. Lluís Asmarats
- VALVULOPATÍA MITRAL. Moderadores: Xavier Freixa y Antoni Serra. Valvulopatía mitral tratada con dispositivo Pascal. Dabit Arzamendi
- LEAKS. MODELOS 3D PARA CARDIOPATÍA ESTRUCTURAL Abdel Hakim Moustafa
- ACUTE CARDIOVASCULAR CARE 2021 - Virtual, 13-14 march 2021
- Pulmonary artery catheter: the basics. Session: The why, when and how of the pulmonary artery catheter in the intensive care unit. A. Sionis
- ISHLT 41 st Annual Meeting and Scientific Sessions –Toronto, 24-28 April 2021
- SYMPOSIUM 07. We are the world: Building Transplant Programms Internationally. Talk: Nothing's gonna stop us now:

challenges of growing a transplant program. Sònia Mirabet

- SYMPOSIUM 36 - Tales from the Plague Year: Remote Monitoring of Heart Transplant Recipients. Co-Chair: Sonia Mirabet

News releases

- REC: Interventional Cardiology – BLOG: Simulaciones de flujo tras el cierre de orejuela. D. Arzamendi. 25 noviembre 2021
- CardioTV – Directos Online. En el Día Mundial del Corazón, ¿hacemos todo lo posible para controlar al paciente con riesgo cardiovascular?. Dr. Xavier Garcia-Moll Marimon. 29 sept 2021

Courses

- Máster en Técnicas Avanzadas de Diagnóstico por Imagen en Cardiología (11a edición). Universitat Autònoma de Barcelona – Hospital Santa Creu i Sant Pau, Barcelona oct 2021 – jun 2022. Coord: Jose Guerra.
- Máster en Intervencionismo Endovascular Estructural 2021-2023. Sociedad Española de Cardiología – Fundación IMAS – Universidad Rey Juan Carlos. 2021-2022. Dabit Arzamendi, Antoni Serra, Lluís Asmarats, Pedro Li
- RETAC 2021-2022 – Annual Workshop. Hospital Santa Creu i Sant Pau, Barcelona 24-25 march 2022. Coord: Xavier Viñolas.
- V Curso sobre la prevención de transmisión de enfermedades y control de riesgos en la donación y trasplante de órganos y

tejidos. 2021. Formato virtual. 2021. Trasplante cardíaco. Sònia Mirabet

- Máster en cuidados agudos y críticos cardiovasculares de la SEC (Fundación IMAS-Universidad Rey Juan Carlos). Director: A.Sionis. Oct 2020 – jun 2022
- XVII edición Master Enfermo Crítico y Emergencias de la Universidad de Barcelona – Universidad Autónoma de Madrid. Co-director: A.Sionis. 2021-2022
- RIICE 2021 – 8th INTERNATIONAL MEETING ON PERCUTANEOUS INTERVENTION FOR STRUCTURAL HEART DISEASES. Salamanca, 8-10 sept 2021. Co-dir: Dabit Arzamendi
- CSC CORONARY AND STRUCTURAL COURSE 2021. Madrid, 17- 19 nov 2021. Comité Dir: Antoni Serra, Comité Cient: Dabit Arzamendi
- 5a REUNIÓN Oclusiones Crónicas – OMG Course. Hospital Sant Pau. Barcelona 4-5 Oct 2021. Dir: Antoni Serra
- Curso online a Campus SEC 2021: Electro-imagen en la práctica clínica. 24-26 febrero 2021. Comité org: D. Viladés, M. Descalzo y R. Leta
- XXXIX Congreso de la Asociación Española de Imagen Cardíaca 2021. Mallorca – virtual, 24-26 febrero 2021. Comité Científico Asesor: Pedro Li, D. Viladés, Francesc Carreras.



Thrombosis and Haemostasis

Coordinator

Souto Andres, Joan Carles FGS
jsouto@santpau.cat

Members

Acosta Isaac, Francisco René	FGS	Millon Caño, Juan Antonio	FGS
Arús Avilés, Marc	IR	Mojal García, Sergio	IR
Carrasco Exposito, Marina	FGS	Moret Puig, Carla	FGS
Corrochano Fatule, Mariana	FGS	Plaza Seijas, Melania	IR
Llobet Lorente, Maria Dolors	FGS	Romero Román, Lidia	FGS
Macho López, Raquel	IR	Tirado Garcia, Isabel	FGS
Martínez Pérez, Víctor A.	IR	Vallve Fornieles, Cristina	FGS
Mateo Arranz, Jose	FGS	Vilalta Setó, Noelia	FGS

Main lines of research

- Investigation of the genetic basis of venous and arterial thrombosis. GAIT-1 and GAIT-2 projects.
- Research on the involvement of platelet adhesiveness and related phenotypes and their genetic determinants in venous thrombosis risk. RETROVE3 Project
- Investigation of new antithrombotic drugs: thrombin inhibitors, molecules against activated factor X, low molecular weight heparin with oral activity, among others. MACACOD Registry.
- Biomarkers of prothrombotic states in patients under 55 years with venous thromboembolic disease, acute ischaemic stroke, or acute myocardial infarction. VEREMA project.
- Applied clinical development of the self-management model of oral anticoagulant treatment. ORION project. Retrospective analysis of the clinical outcomes from patient self-management of antivitamin-K treatment at the Hospital de Sant Pau. NCT3532724

- Mathematical models of prediction of the individual risk of thromboembolic disease in general population (RETROVE Project).
- Management of venous thromboembolism in patients with active cancer in Spain using electronic health records and big data techniques. Bleeding and recurrence risk- cancer study. PredictIA Study.
- KIR_HLA SARS-CoV-2_INM Study on HLA and KIR genes variation in Spanish patients with COVID-19 With the Stanford University California, USA)
- FANHDI Study. Post-Authorization Study to Assess the Safety and Efficacy of Fanhdi® (Double-inactivated Human Antihemophilic Factor) in Subjects with Von Willebrand Disease". Study Number: IG1403 from GRIFOLS S.A. Protocol code-EVW-ESP-2019.
- Project "Telemonitorización de los pacientes con hemofilia a través de nuevos diarios de recogida digitales". Promotor: Swedish Orphan Biovitrum S.L. (SOBI)

Scientific challenges

- Study QTL detected in GAIT-1 families in relation to phenotypes of haemostasis with thrombosis risk (resistance to activated protein C, factor VIII, homocysteine, factor XII, body mass index and others).
- Replicate QTL related to thrombosis in GAIT-1 families by means of the linkage analysis using new GAIT-2 families.
- Conduct genome-wide association study (GWAS) of phenotypes involved in GAIT-1 and GAIT-2.
- Analyse RNA expression in the GAIT-2 families and in RETROVE case-control study.
- Investigate miRNA associated with thromboembolic disease in GAIT-2 and RETROVE.
- To explain the mechanisms underlying the relationship between platelet function and venous thrombosis risk.
- Role of TMAO and other metabolites from the gut microbiota on the risk of venous thrombosis
- Development of risk prediction models of venous thromboembolism in general population and in cancer patients.
- Research plasma proteins associated with the risk of venous thromboembolism by using high affinity proteomics developed at Karolinska Institutet. VEREMA project, joint collaboration between the European case-control studies VEBIOS (Sweden), RETROVE (from our unit) and MARTHA (France).

- Investigation on laboratory and clinical management of DOACs.
- Search for new universal laboratory methods for the assessment of any kind of oral anticoagulant (AVK and DOACs).
- Immunotherapy of solid cancer (ITACA Project). Neutrophils as anti-tumorals. Clinical trial on sustained neutrophilia in advanced head and neck cancer (approved trial, waiting for financial support)
- Use on artificial intelligence and big data in predicting the risk of bleeding in patients with cancer and venous thromboembolism

Collaborations

Collaborations with other IIB Sant Pau research groups

- Genomics of Complex Diseases (GAIT1, GAIT2, RETROVE, VEREMA and MIRTO Project).
- Vascular Surgery (GAIT2, genetics of venous insufficiency).
- Gynecologic and peritoneal oncology group (ITACA Project, on immunotherapy of solid cancer)
- CIM (Centre de Investigació de Medicaments) in the investigation of COVID-19 outcomes related to antithrombotic therapies.
- Pathophysiology of lipid-related disease and study of relationship between TMAO and other microbiota metabolites and VTE risk (RETROVE Project)
- Clinical Epidemiology and Healthcare Services (LIMIT Clinical Trial)

External collaborations

- Karolinska Institutet, Stockholm, Sweden: GAIT2 and VEREMA.
- La Timone Hospital, Marseilles, France: GAIT2 and VEREMA.
- Pierre and Marie Curie University, INSERM, UMR-S 1166, Paris, France: GAIT2 and VEREMA.
- Université de Genève, Switzerland: GAIT2.
- Texas Research Institute (formerly Southwest Foundation for Biomedical Research), San Antonio, USA: GAIT1 and GAIT2.
- Universitat Politècnica de Catalunya, Barcelona, Spain. Centre for Biomedical Engineering Research: RETROVE project.
- Thrombosis Group of the Spanish Medical Oncology Society (SEOM): ONCOTHROMB.
- Institut of Biological Psychiatry, Mental Health Snc. Hans. Roskilde (Denmark).
- Servicio de Hematología del Hospital Sant Joan de Deu (Clinical modeling for the management of haemophilic patients and patients under self-management of VKA therapy)
- Hematopathology, Pathological Anatomy. Hospital Clinic of Barcelona, Biomedical Diagnosis Centre (CDB), Institute of Biomedical Research August Pi i Sunyer (IDIBAPS), University of Barcelona, Barcelona, Spain. RETROVE 3 Project.
- Barcelona Endothelium Team. Hospital Clinic/University of Barcelona Campus; Barcelona. RETROVE 3 Project
- Congenital coagulopathy. Blood and Tissue Bank (BST) of

Catalonia. Barcelona. RETROVE 3 Project

- Population Health Research Institute (PHRI), en Hamilton, Ontario (Canada)

Active grants

- MACACOD register. Protocol IIBSP-ACO-2018-31. NCT04042155. Funded with a collaboration agreement with Daiichi-Sankyo España. Amount: 467.000 €. Duration: 2019-2022. Researcher: Juan Carlos Souto Andrés.
- LIMIT study. Low INR to Minimize bleeding with mechanical valves Trial. NCT036362. Organized by Population Health Research Institute (PHRI), en Hamilton, Ontario (Canada). Started in 2021. N° EudraCT: 2019-004975-37. Principal investigator: Juan Carlos Souto Andrés. Spain coordinator: Ekaterine Popova.

Scientific production

- Anaya R, Rodriguez M, Gil JM, Vilalta N, Merchan A, Moral V, Mateo J, Martinez MJ. Correlation between PlateletWorks(R) and PFA-100(R) for Measuring Platelet Function before Urgent Surgery in Patients with Chronic Antiplatelet Therapy. *Journal of Clinical Medicine*. 2021; 10(2):255. DOI:10.3390/jcm10020255. PMID:33445597. IF:4,241 (Q1/D3).
- Goumidi L, Thibord F, Wiggins KL, Li RF, Brown MR, Vlieg AV, Souto JC, Soria JM, Ibrahim M, Saut N, Daian D, Olaso R, Amouyel P, Debette S, Boland A, Bailly P, Morrison AC, Mook DO, Deleuze JF, Johnson A, de Vries PS, Sabater M, Chiaroni J, Smith NL, Rosendaal FR, Chasman DI, Tregouet DA, Morange PE. Association between ABO haplotypes and the risk of venous thrombosis: impact on disease risk estimation. *BLOOD*. 2021; 137(17). DOI:10.1182/blood.2020008997. PMID:33512453. IF:22,113 (Q1/D1).
- Koller T, Kinast N, Castellanos AG, Garcia SP, Iglesias PP, Vintro XL, Arranz JM, Seto NV, Garcia MVM, Moreno AB, Aznar J, Albaladejo GE, Diaz M. Normalization of blood clotting characteristics using prothrombin complex concentrate, fibrinogen and FXIII in an albumin based fluid: experimental studies in thromboelastometry. *Scandinavian Journal of Trauma Resuscitation & Emergency Medicine*. 2021; 29(1):57. DOI:10.1186/s13049-021-00867-5. PMID:33836790. IF:2,953 (Q2/D3).
- Llobet D, Vallve C, Tirado I, Vilalta N, Carrasco M, Oliver A, Mateo J, Fontcuberta J, Souto JC. Platelet hyperaggregability and venous thrombosis risk: results from the RETROVE project. *BLOOD COAGULATION & FIBRINOLYSIS*. 2021; 32(2). DOI:10.1097/MBC.0000000000001006. PMID:33337623. IF:1,276 (Q4/D10).
- Mingot ME, Pardos J, Haya S, Bastida JM, Tassies D, Marco A, Nunez R, Garcia F, De Mora MCFS, Soto I, Alvarez MT, Asenjo

S, Carrasco M, Lluch R, Martin JM, Rodriguez A, Rosello E, Torres L, Marcellini S, Moreto A, Rodriguez JA, Aguinaco R, Alonso N, Cervero C, Fernandez N, Martinez MP, Perez M, Perez R, Rodriguez R, Uribe M, Caparros IS, et al. Management of acquired hemophilia A: results from the Spanish registry. *Blood Advances*. 2021; 5(19). DOI:10.1182/bloodadvances.2021004626. PMID:34521101. IF:6,686 (Q1/D2).

- Perez A, Batlle J, Pinto JC, Corrales I, Borrás N, Garcia I, Cid AR, Bonanad S, Parra R, Mingot ME, Navarro N, Altisent C, Perez R, Moreto A, Herrero S, Soto I, Mosteirín NF, Jimenez V, Jacob AD, Fontanes E, Mateo J, Quismondo NC, Batlle F, Vidal F, Lopez MF. Type 2N VWD: Conclusions from the Spanish PCM-EVW-ES project. *HAEMOPHILIA*. 2021; 27(6). DOI:10.1111/hae.14405. PMID:34494337. IF:4,287 (Q2/D4).
- Roman M, Benitez O, Canaro MI, Fernandez MFL, Jaime FLJ, Arranz JM, Nunez R, Lopez MR, Aisa CS, Jimenez V. Expert opinion paper on the treatment of hemophilia B with albutrepenonacog alfa. *EXPERT OPINION ON BIOLOGICAL THERAPY*. 2021; 21(9). DOI:10.1080/14712598.2021.1932811. PMID:34225551. IF:4,388 (Q2/D3).

Other publications

- Drobnic F, de Suso JMG, Turmo A, Gudelis M, Valle X, Peirau X, Souto JC, Escudero JR, Soria JM. Prevalence and predisposition to deep vein thrombosis in professional male soccer players. *Apunts Sports Medicine*. 2021; 56(212):100364. DOI:10.1016/j.apunsm.2021.100364.

Communication and dissemination activities

Teaching

- Manejo Clínico de los ACODs y de la Trombofilia en una Unidad Especializada en Terapia Antitrombótica. Programa Sant Pau Docent. Director: Joan Carles Souto. Professors: Carla Moret, René Acosta, Sergi Mojal i Melania Plaza

- XIX Curso de Formación continuada (Puesta al día en tratamiento antitrombótico. De la evidencia científica a la práctica clínica). Organizado por la SETH y la FETH. Dias 30 septiembre y 1 de octubre 2021. Directors: José Mateo, Ramón Lecumberri.

Conferences

- Noèlia Vilalta. Speaker at Simposio: Trombosis ¿Qué hay de nuevo? del LVIII Congreso Nacional de la SEHH y XXXVIII Congreso Nacional de la SETH en Pamplona del 14 al 16 de octubre de 2021. Title: La inmunotrombosis. Formas clínicas y tratamientos.
- Joan Carles Souto. Speaker at III Edición de "Avanzando juntos en ETEV ¿Usted qué haría? Reunión virtual 2nd Feb 2021.

Organiser: Laboratorios farmacéuticos ROVI. Title: Papel de las plaquetas en la trombosis venosa.

- Joan Carles Souto. Speaker at “VII encuentro Nacional de Tromboembolismo en Paciente Oncológico”, 24th 25th February 2021. Organiser: ROVI and SEOM. Virtual meeting.
- Workshop “¿Son útiles las herramientas que tenemos para medir el riesgo de sangrado y ETV?”. Virginia Martínez Marin and Juan Carlos Souto.
- Speaker at X Foro de Oncología sobre trombosis 2021. Funded by Laboratorios Leo Pharma. Virtual session. 24th March 2021
- Session “Implicaciones de perfiles moleculares de los tumores en riesgo trombótico”. Moderator: José Ramón González Porras. Speakers: Victoria Castellón and Juan Carlos Souto.
- Speaker at VI Reunión Ampliando horizontes, con el auspicio de la SETH. Organised by Laboratorios Rovi. Virtual Meeting. 21st and 22nd June 2021
- Round table speaker at “Se debe tratar el TEP subsegmentario”. Speakers: Dr Carmen Fernández Capitán and Dr Juan Carlos Souto
- Professor at XIX Course “Puesta al día en tratamiento antitrombótico. De la evidencia científica a la práctica clínica”. Organisers: SETH and FETH. 30th Sept 1st Oct 2021. Castelldefels. Session: Trombofilia 2021. Moderator: Vicente Vicente. Speakers: Juan Carlos Souto and Elisa Llurba.
- Speaker at Symposium “Utilidad práctica de nuevos mecanismos patogénicos de las trombosis” LVIII Congreso Nacional de la SEHH and XXXVIII Congreso Nacional de la SETH. Pamplona, 14-16 Oct 2021. Title: Micro-RNAs en tromboembolismo venoso, ¿herramientas predictivas de riesgo y más?

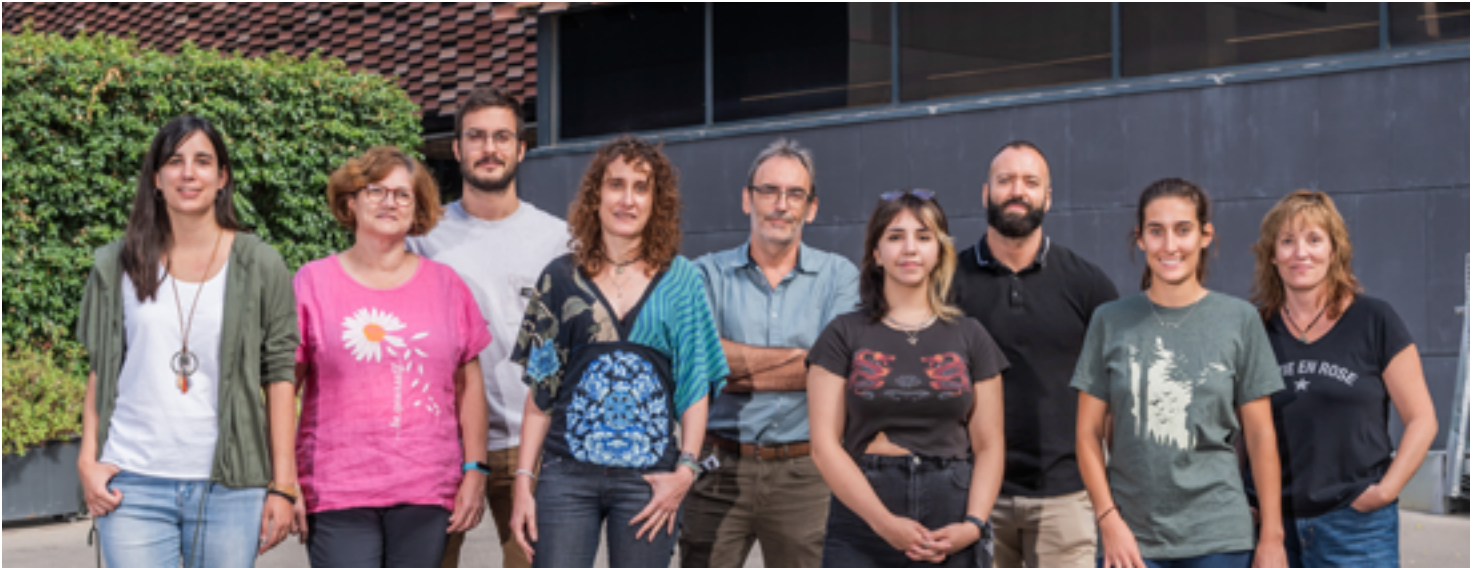
Communications in national conferences

- Corrochano M, Acosta-Isaac FR, Mojal S, Miqueleiz S, Rodriguez D, Quijada MA, Soria JM, Castillo M, Amaro K, Albiol N, Souto JC. Papel de la terapia antitrombótica previa en pacientes hospitalizados por COVID-19. 2º Congreso Nacional Multidisciplinar COVID19 de las Sociedades Científicas de España (12-16 abril 2021). Oral communication. Virtual meeting.
- Vilalta N, Bernardo A, Butta N, Rodriguez-Martorell J, Mojal S, Cortina V. Validación del tiempo de tromboplastina activado modificado para la dosificación de emicizumab. LXIII Congreso Nacional de la AEHH y XXXVII Congreso Nacional de la SETH 2021
- Plaza M, Llobet D, Canyelles M, Escolà-Gil JC, Tondo M, Mojal S, Martínez-Sánchez J, Carrasco M, Vilalta N, Díaz-Ricart M, Blanco-Vaca F, Souto JC Asociación entre los metabolitos de la microbiota intestinal y la enfermedad tromboembólica venosa. Resultados del proyecto RETROVE. LXIII Congreso Nacional de la AEHH and XXXVII Congreso Nacional de la SETH. Pamplona, 14-16 Oct 2021.

- Plaza M, Llobet D, Canyelles M, Escolà-Gil JC, Tondo M, Mojal S, Martínez-Sánchez J, Carrasco M, Vilalta N, Díaz-Ricart M, Blanco-Vaca F, Souto JC. Los metabolitos de la microbiota intestinal (MMI) no se asocian a los fenotipos de función plaquetaria, pero si a la generación de trombina. LXIII Congreso Nacional de la AEHH and XXXVII Congreso Nacional de la SETH. Pamplona, 14-16 Oct 2021.
- Corrochano M, Acosta FR, Mojal S, Plaza M, Muñoz R, Souto JC. Impacto de la función renal en los resultados clínicos y biológicos en pacientes del mundo real con ACODs. LXIII Congreso Nacional de la AEHH and XXXVII Congreso Nacional de la SETH. Pamplona, 14-16 Oct 2021.
- Martín-Fernández L, García-Martínez I, Llobet D, Mojal S, Carrasco M, Vilalta N, Ramírez L, Comes N, Martínez-Sánchez J, Soria JM, Díaz-Ricart M, Vidal F, Souto JC. Estudio de variantes genéticas raras en pacientes con enfermedad tromboembólica venosa y su asociación con la función plaquetaria global. LXIII Congreso Nacional de la AEHH y XXXVII Congreso Nacional de la SETH. Pamplona, 14-16 Oct 2021. Oral communication.
- Soria JM, Mojal S, Martínez-Pérez A, Acosta FR, López S, Miqueleiz S, Rodríguez D, Quijada MA, Cárdenas A, Vidal F, Remacha A, Antonijoan MR, Souto JC. Utilización de un algoritmo clínico-biológico para evaluar el riesgo de trombosis en pacientes con COVID19 que reciben tromboprolifaxis. LXIII Congreso Nacional de la AEHH and XXXVII Congreso Nacional de la SETH. Pamplona, 14-16 Oct 2021.

Communications in international conferences

- Llobet D, Vallvé C, Mojal S, Carrasco M, Vilalta N, Mateo J, Corrochano M, Millón J, Souto JC. Interaction between the von Willebrand factor and ADAMTS13 on VTE risk in women. Results from the RETROVE Project. XXIX Virtual Congress of the ISTH. Philadelphia, July 17-21, 2021. Oral Communication OC19.4
- Corrochano M, Acosta R, Mojal S, Grabalosa N, Plaza M, Jiménez B, Souto JC. Correlation between plasma levels, anti-FXa activity and coagulation parameters in real-world patients on treatment with edoxaban. XXIX Virtual Congress of the ISTH. Philadelphia, July 17-21, 2021.
- Tirado I, Vilalta N, Romero L, Vallvé C, Gich I, Souto JC, Mateo J. Thrombin generation: Normal values for bleedscreen. XXIX Virtual Congress of the ISTH. Philadelphia, July 17-21, 2021.
- Vilalta N, Tirado I, Romero L, Mateo J. Next generation sequencing in patients with bleeding, thrombotic and platelet disorders: A single centre experience. XXIX Virtual Congress of the ISTH. Philadelphia, July 17-21, 2021.
- Riera A, Plaza A, Pagès N, Masip M, Riera P, Carrasco M, Mateo J, Vilalta N. Effectiveness, safety and cost assessment of emicizumab in clinical practice. XXIX Virtual Congress of the ISTH. Philadelphia, July 17-21, 2021.



Cardiovascular Biochemistry

Coordinator

Sanchez Quesada, Jose Luis IR
jsanchezq@santpau.cat

Members

Benitez Gonzalez, Sonia	IR	Porcel Jabalera, Inmaculada	FGS
Freixa Martin, Julia	FGS	Puig Grifol, Núria	IR
García Osuna, Álvaro	FGS	Rivas Urbina, Andrea Patricia	IR
Grau Agramunt, Margarita	FGS	Rives Jiménez, José	FGS

Main lines of research

Atherosclerosis mechanisms

- Mechanisms leading to lipoprotein aggregation in the arterial wall.
- Use of mimetic peptides derived from apoJ as therapeutic tools.
- Involvement of LDL(-) on lipid accumulation in cardiomyocytes associated to diabetes, obesity and heart failure.
- Inflammatory mechanisms induced by LDL(-) on monocytes from patients with diabetes
- Analysis of the secretome of the adipose tissue from cardiac surgery patients

- Alterations of lipoprotein properties in patients with Alzheimer disease and cerebral amyloid angiopathy

Diagnosis and Biomarkers

- Analysis of apolipoprotein J (apoJ) as a marker of CVR.
- Development of algorithms for ruling-out acute coronary disease.
- Assessment of new biomarkers of acute cardiovascular disease: cardiac troponins, natriuretic peptides, ST-2.
- Development of methods for point-of-care biomarker measurement.

- Vulnerability markers in atheromatous plaque: electronegative LDL, LDL size, HDL function, myeloperoxidase, phospholipase.
- Lipoprotein-related biomarkers to assess carotid plaque inflammation in ischemic stroke
- Lipoprotein alterations as biomarkers of CVR in HIV patients

Scientific challenges

- Determine the intracellular mechanisms involved in the inflammatory response induced by LDL(-) and the components of the particle that entail atherogenicity.
- Analyse the therapeutic potential of mimetic peptides derived from apoJ to delay the development of atherosclerosis in animal models.
- Demonstrate that electronegative LDL is a marker of vulnerable atheromatous plaque.
- Find new markers of cardiovascular risk in diseases such as diabetes, obesity, HIV or cardiac failure.

Collaborations

Collaborations with other IIB Sant Pau research groups

- Metabolic Basis of Cardiovascular Risk (Dr F. Blanco Vaca)
- Endocrinology, Diabetes and Nutrition (Dr A. Pérez)
- Cerebrovascular Diseases (Dr J. Martí Fabregas)
- Image Cardiology Unit (Dr D. Vilades)
- Angiology, Vascular Biology and Inflammation (Dr M. Camacho)
- Lipids and Cardiovascular Pathology (Dr. C. Llorente)
- Women and Perinatal Health Research (Dr E. Llorba)

External collaborations

- Dr Kati Óorni, Wihuri Research Institute, Helsinki, Finland.
- Dr Olga Gursky, Boston University School of Medicine, Boston, MA, USA.
- Dr Chu Huang Chen, Baylor College of Medicine, Houston, TX, USA
- Dr Sandra Villegas Hernández, Biochemistry and Molecular Biology Department, UAB, Barcelona, Spain.
- Dr. Ferdinando Mannello, Department of Biomolecular Sciences, University "Carlo Bo", Urbino, Italy
- Dr. Mar Hernández-Guillamon, Neurovascular Res Laboratory, Vall d'Hebron Research Institute; Barcelona, Spain
- Dr. Ana Reis, Faculdade de Ciências da Universidade do Porto, Portugal
- Dr Daniel Podzamczar, HIV Unit, Infectious Disease Service, Bellvitge University Hospital, Barcelona, Spain
- Dr Esteban Martínez, Infectious Disease Service, Hospital Clinic, Barcelona, Spain
- Dr Fred S. Apple, Department of Laboratory Medicine and Pathology, University of Minnesota, USA.

- Dr Paul O. Collinson, Cardiovascular and Laboratory Departments, St. George's Hospital, London, UK.
- Dr Alan S. Jaffe, Mayo Clinic, Cardiovascular Division, Rochester, New York, USA

Active grants

- JOSE LUIS SANCHEZ QUESADA. Relación de la grasa epicárdica, la función lipoproteica y la inflamación con el desarrollo de arteriosclerosis y miocardiopatía diabética.. PI16/00471. Instituto de Salud Carlos III. Duration 2017-2021. 131.500,00 €.
- SONIA BENITEZ GONZALEZ. Lipoproteínas modificadas y marcadores inflamatorios asociados con vulnerabilidad de placa carotídea e ictus isquémico.. PI19/00421. Instituto de Salud Carlos III. Duration 2020-2022. 108.000,00 €.
- JOSE LUIS SANCHEZ QUESADA. Tejido adiposo epicárdico en obesidad y diabetes. Mecanismos moleculares de riesgo cardiovascular y búsqueda de nuevos biomarcadores.. PI20/00334. Instituto de Salud Carlos III. Duration 2021-2023. 122.000,00 €.
- Relación de la grasa epicárdica, la función lipoproteica y la inflamación con el desarrollo de arteriosclerosis y miocardiopatía diabética. Menarini Diagnostics. 2019-2021. Principal investigators: Antonio Pérez, José Luis Sánchez-Quesada. Amount: 36.000 €
- LRP1 como mediador de los efectos proinflamatorios de la LDL modificada electronegativa en la arteriosclerosis. Beca Sociedad Española de Arteriosclerosis. 2021-2023. Principal investigator: Sonia Benítez González. Amount: 15,000 €
- Tejido adiposo epicárdico en diabetes. Nuevos biomarcadores de insuficiencia cardíaca y perfil de microRNAs. Sociedad Española de Diabetes. 2021-2022. Principal investigator: Idoia Genua Trullós, José Luis Sánchez Quesada. Amount: 12.000 €
- AÏLLAMENT I CARACTERITZACIÓ BIOQUÍMICA DE LIPOPROTEÏNES DE PACIENTS AMB VIH. IIPSV (in the framework of the project "Papel del microbioma intestinal en la estabilidad y función de los lípidos y las lipoproteínas: recuperación inmune y progresión de la enfermedad por infección VIH (LipoHIV)" PI20/00326, IP Anna Rull Aixà). José Luis Sánchez Quesada. 2021-2022. Amount: 15.943 €

Note: Total amount granted to PI. It does not include indirect costs

Doctoral theses

- Andrea Rivas Urbina, D-[113-122]apoJ mimetic peptide as a therapy against atherosclerosis. An in vitro and in vivo approach., Universitat Autònoma de Barcelona, José Luis Sánchez Quesada, 22/10/2021

Scientific production

- Aengevaeren VL, van RRJ, Ordonez J, Garcia A, Kaier TE, Marber M, Froeling M, van den Berg S, Hooijmans MT, Monte JR, Hopman M, Strijkers GJ, Nederveen AJ, Bakermans AJ, Eijsvogels TMH. Cardiac Biomarker Kinetics and Their Association With Magnetic Resonance Measures of Cardiomyocyte Integrity Following a Marathon Run: Implications for Postexercise Biomarker Testing. *Journal of the American Heart Association*. 2021; 10(13):e020039. DOI:10.1161/JAHA.120.020039. PMID:34180243. IF:5,501 (Q1/D3).
- Alvarez J, Garcia A, Vives M, Ferrero A, Martinez M, Vazquez R, Gonzalez JR, Rivera M, Segovia J, Pascual D, Bover R, Bascompte R, Delgado J, Sepulveda AG, Bardaji A, Perez F, Zamorano JL, Crespo M, Sanchez PL, Ordonez J, **Cinca J**. A 3-Biomarker 2-Point-Based Risk Stratification Strategy in Acute Heart Failure. *Frontiers in Physiology*. 2021; 12:708890. DOI:10.3389/fphys.2021.708890. PMID:34744758. IF:4,566 (Q1/D2).
- Amaro AB, Curco AS, Garcia E, Julve J, Rives J, Benitez S, Cortes VL. Apolipoprotein and LRP1-Based Peptides as New Therapeutic Tools in Atherosclerosis. *Journal of Clinical Medicine*. 2021; 10(16):3571. DOI:10.3390/jcm10163571. PMID:34441867. IF:4,241 (Q1/D3).
- Bonaterra A, Fernandez S, Rivas A, Puig N, Benitez S, Pancorbo O, Rodriguez D, Pujadas F, Freijo MD, Tur S, Martinez M, Portela PC, Vera R, Lebrato L, Arenillas JF, Perez S, Montaner J, Sanchez JL, Hernandez M. Comparison of Plasma Lipoprotein Composition and Function in Cerebral Amyloid Angiopathy and Alzheimer's Disease. *Biomedicines*. 2021; 9(1):72. DOI:10.3390/biomedicines9010072. PMID:33445800. IF:6,081 (Q1/D2).
- Camps P, Jimenez E, Soler M, Puig N, Aguilera A, Marin R, Prats L, Delgado R, Martinez A, Guisado D, Guasch M, Marti J. Endothelial Progenitor Cells Count after Acute Ischemic Stroke Predicts Functional Outcome in Patients with Carotid Atherosclerosis. *Journal of Stroke & Cerebrovascular Diseases*. 2021; 30(12):106144. DOI:10.1016/j.jstrokecerebrovasdis.2021.106144. PMID:34649037. IF:2,136 (Q4/D8).
- Canyelles M, Garcia A, Junza A, Yanes O, Puig N, Ordonez J, Sionis A, Sans J, Alquezar A, Santos D, Rotllan N, Julve J, Tondo M, Escola JC, Blanco F. The Capacity of APOB-Depleted Plasma in Inducing ATP-Binding Cassette A1/G1-Mediated Macrophage Cholesterol Efflux-But Not Gut Microbial-Derived Metabolites-Is Independently Associated with Mortality in Patients with ST-Segment Elevation Myocardial Infarction. *Biomedicines*. 2021; 9(10):1336. DOI:10.3390/biomedicines9101336. PMID:34680453. IF:6,081 (Q1/D2).
- Chen DY, Sawamura T, Dixon R, Sanchez JL, Chen CH. Autoimmune Rheumatic Diseases: An Update on the Role of Atherogenic Electronegative LDL and Potential Therapeutic Strategies. *Journal of Clinical Medicine*. 2021; 10(9):1992. DOI:10.3390/jcm10091992. PMID:34066436. IF:4,241 (Q1/D3).
- Colom C, Rull A, Sanchez JL, Perez A. Cardiovascular Disease in Type 1 Diabetes Mellitus: Epidemiology and Management of Cardiovascular Risk. *Journal of Clinical Medicine*. 2021; 10(8):1798. DOI:10.3390/jcm10081798. PMID:33924265. IF:4,241 (Q1/D3).
- Crovetto F, Crispi F, Llubra E, Pascal R, Larroya M, Trilla C, Camacho M, Medina C, Dobano C, Gomez MD, Figueras F, Gratacos E, Garcia A, Mora J. Impact of Severe Acute Respiratory Syndrome Coronavirus 2 Infection on Pregnancy Outcomes: A Population-based Study. *CLINICAL INFECTIOUS DISEASES*. 2021; 73(10)DOI:10.1093/cid/ciab104. PMID:33556958. IF:9,079 (Q1/D1).
- Diaz SO, Sanchez JL, de Freitas V, Leite A, Barros AS, Reis A. Exploratory analysis of large-scale lipidome in large cohorts: are we any closer of finding lipid-based markers suitable for CVD risk stratification and management?. *ANALYTICA CHIMICA ACTA*. 2021; 11D420I:10.1016/j.aca.2020.10.037. PMID:33280696. IF:6,558 (Q1/D2).
- Genua I, Puig N, Minambres I, Benitez S, Gil P, Grau M, Rivas A, Balague C, Fernandez S, Garcia A, Perez A, Sanchez JL. Changes in the Composition and Function of Lipoproteins after Bariatric Surgery in Patients with Severe Obesity. *Journal of Clinical Medicine*. 2021; 10(8):1716. DOI:10.3390/jcm10081716. PMID:33923393. IF:4,241 (Q1/D3).
- Genua I, Tuneu L, Ramos A, Stantonyonge N, Caimari F, Balague C, Fernandez-Ananin S, Sanchez-Quesada JL, Perez A, Minambres I. Effectiveness of Bariatric Surgery in Patients with the Metabolically Healthy Obese Phenotype. *OBESITY SURGERY*. 2021; 31(2):517-522. DOI: 10.1007/s11695-020-04967-6. PMID: 32915359. IF:4,129 (Q1/D2).
- Nan MN, Roig R, Martinez S, Rives J, Urgell E, Espinos JJ, Tirado M, Carreras G, Aulinas A, Webb SM, Corcoy R, Blanco F, Tondo M. Comprehensive Genetic Testing of CYP21A2: A Retrospective Analysis in Patients with Suspected Congenital Adrenal Hyperplasia. *Journal of Clinical Medicine*. 2021; 10(6):1183. DOI:10.3390/jcm10061183. PMID:33809035. IF:4,241 (Q1/D3).
- Rotllan N, Camacho M, Tondo M, Diarte E, Canyelles M, Mendez KA, Benitez S, Alonso N, Mauricio D, Escola JC, Blanco F, Julve J. Therapeutic Potential of Emerging NAD plus -Increasing Strategies for Cardiovascular Diseases. *Antioxidants*. 2021; 10(12):1939. DOI:10.3390/antiox10121939. IF:6,312 (Q1/D1).
- Saumoy M, Di S, Perez S, Sanchez JL, Valdivielso JM, Subirana I, Imaz A, Tiraboschi JM, Garcia B, Ordonez J, Benitez S, Podzamczar D, Grau M. Carotid atherosclerosis in virologically suppressed HIV patients: comparison with a healthy sample and prediction by cardiovascular risk equations. *HIV MEDICINE*. 2021; 22(7). DOI:10.1111/hiv.13093. PMID:33817938. IF:3,180 (Q3/D6).

- Saumoy M, Sanchez JL, Ordonez J, Podzamczar D. Do All Integrase Strand Transfer Inhibitors Have the Same Lipid Profile? Review of Randomised Controlled Trials in Naive and Switch Scenarios in HIV-Infected Patients. *Journal of Clinical Medicine*. 2021; 10(16):3456. DOI:10.3390/jcm10163456. PMID:34441755. IF:4,241 (Q1/D3).

- Ullmo J, Cruz M, Sanchez O, Bos L, De la Llama PF, Calero F, Dominguez C, Garrido C, Trilla C, Carreras F, Sionis A, Mora J, Garcia A, Ordonez J, Llurba E. Cardiac dysfunction and remodeling regulated by anti-angiogenic environment in patients with preeclampsia: the ANGIOCOR prospective cohort study protocol. *BMC Pregnancy and Childbirth*. 2021; 21(1):816. DOI:10.1186/s12884-021-04263-w. PMID:34879854. IF:3,007 (Q2/D4).

Communication and dissemination activities

Meetings and conferences

- 12th CIBERDEM ANNUAL MEETING. November 3-4, 2021. Heparin binding triggers human VLDL remodeling by lipoprotein lipase: Relevance to VLDL functionality in diabetes and hypertriglyceridemia. José Luis Sánchez Quesada

- 89th Congress of the European Atherosclerosis Society, Helsinki 2021. Cytotoxic and inflammatory effects induced by secretome from epicardial adipose tissue of diabetic patients in human cardiomyocytes are partly reverted by HDL and apoJ. Sonia Benitez, Núria Puig, Inka Miñambres, Jose Rives, Pedro Gil, Laura Rabanal, Margarida Grau-Agramunt, Antonio Pérez, Jose Luis Sánchez-Quesada.

- 89th Congress of the European Atherosclerosis Society, Helsinki 2021. Altered properties of plasma low-density lipoprotein (LDL) in ischemic stroke patients with carotid atherosclerosis. Núria Puig, Pol Camps-Renom, Ana Aguilera-Simón, Mercedes Camacho, Francesc Jiménez-Altayó, Jose Luis Sanchez-Quesada, Elena Jiménez-Xarrié, Sonia Benitez.

- Congreso Sociedad Española de Diabetes (SED) 2021. El tejido adiposo epicárdico de pacientes con diabetes tipo 2 secreta especies de ácidos grasos libres y ceramidas con efecto inflamatorio y citotóxico sobre cardiomiocitos. Nuria Puig, Jose Rives, Inka Miñambres, Pedro Gil, Antonio Perez, Jose Luis Sanchez-Quesada, Sonia Benitez

- European Stroke Organisation Conference, ESOC 2021. Soluble Intercellular Adhesion Molecule-1 Is Associated with Plaque Inflammation in Patients with Recent Ischemic Stroke and Carotid Atherosclerosis. Pol Camps-Renom, Núria Puig-Grifol, Sònia Benítez-González, Mercedes Camacho, Ana Aguilera-Simón, Rebeca Marín, Raquel Delgado-Mederos, Alejandro Martínez-Domeño, Luis Prats-Sánchez, Daniel Guisado-Alonso, Marina Guasch-Jiménez, Joan Martí-Fàbregas, Elena Jiménez-Xarrié.

- XV Congreso Nacional del Laboratorio Clínico. AEBML, AEFA y SEQC-ML. 2021. España. A propósito de un caso: monitorización de concentraciones de amikacina en líquido cefalorraquídeo en paciente con nocardiosis cerebral. Validación de un método analítico comercial. Jose Rives Jimenez; Noelia Benitez Falga; Madalina Nicoleta Nan; Rosa Ferrer Perez; Alvaro Garcia Osuna.

- XV Congreso Nacional del Laboratorio Clínico. AEBML, AEFA, SEQC-ML. 2021. España. Revisión de la eficacia del cribado de aneuploidías en el primer trimestre de embarazo. Madalina Nicoleta Nan; Assumpta Antonijuan Pares; Vanessa Orantes Gallego; Silvia Terzan Molina; Margarida Grau Agramunt; Jose Rives Jimenez; Rosa Ferrer Perez; Josefina Mora Brugues.

- XV Congreso Nacional del Laboratorio Clínico. AEBML, AEFA y SEQC-ML. 2021. España. Verificación periódica de la intercambiabilidad de resultados. Leonor Guiñon Muñoz; Pradip Mora Brugues; Judith Llanos Ramos; Madalina Nicoleta Nan; Jose Rives; Rosa Ferrer Perez; Angel Sahuquillo Estrugo; Luisa Alvarez Dominguez.

- 62 Congreso Nacional de la Sociedad Española de Endocrinología y Nutrición. Sociedad Española de Endocrinología y Nutrición (SEEN). 2021. España. Presentación, tratamiento y evolución de los pacientes con sospecha de hipercalcemia hipocalciúrica familiar estudio genético positivo vs. negativo, ¿existen diferencias?. Helena Sarda Simo; Queralt Asla Roca; Nuria Segui; Jose Rives Jimenez; Merce Fernandez Miro; Eulalia Urgell Rull; Josep Oriola Ambrós; Mireia Mora Porta; Mireia Tondo Colomer; Anna Aulinas Maso.



Molecular Pathology and Therapeutic of Ischaemic and Atherothrombotic Diseases

Coordinator

Badimon Maestro, Lina IR
lbadimon@santpau.cat

Members

Alcover Rullan, Sebastián	IR	Gerbolés Freixas, Esther	IR
Aledo Zamora, Rosa	CIBERCV	Huertas Segarra, Sònia	IR
Arderiu Marques, Gemma	IR	López Bernal, Sergio	IR
Borrell Pages, Maria	IR	Luquero Gómez, Aureli	IR
Cánovas Noé, María Ángeles	IR	Maestro Benedicto, Alba	IR
Catalina García, Pablo	IR	Morató Simó, Sílvia	IR
Civit Urgell, Anna	IR	Múñoz García, Natalia	IR
De Santiesteban Vilaplana, Victoria M.	IR	Pescador Romero, Mònica	IR
Escate Chavez, Oscar Rafael	CIBERCV	Schoch, Leonie	IR
Gallinat O'Callaghan, Alexandre	IR	Suades Soler, Rosa	IR
García García, Olaya	IR	Traver Tejedor, Susanna	IR
García Hernández, Nerea	IR	Vilahur García, Gemma	IR

Main lines of research

- Pathophysiological role of LRP family proteins in chronic diseases.
- Role of lipids and inflammation in atherosclerosis and ischemic heart disease.
- Vascular impact of ischemia and angiogenesis in heart disease. Tissue-factor mediated angiogenic switch-Cell and advanced therapies.

- Search of new targets to inhibit the transformation of silent atherosclerosis into ischemic syndromes and promote cardioprotection

Scientific challenges

- Broaden the experimental focus to include transgenic animal models with/without cardiovascular risk factors in order

to proceed to in-depth analysis of molecules involved in the modulation of new proteins identified by post-genomic technologies and systems biology approaches.

- Maintain present scientific networks and establish new multidisciplinary collaborations.
- Increase international funding for the extension of new and established platforms in order to implement proposed activities.

Collaborations

Collaborations with other IIB Sant Pau research groups

- Acute and Intensive Cardiac Care Unit (Sionis A, Sans-Roselló J, Sánchez-Martínez M, Vila-Perales M, Duran-Cambra A)
- Department of Obstetrics and Gynecology, (Porta Roda O, Pero M))
- Radiology Unit (Capdevila A, Hidalgo A)
- Biomarkers for Cardiovascular Disease (Padro T)
- Clinical and Translational Cardiology (Carreras F)
- Pharmacological Research in Humans (Antonijoan RM)
- Barcelona Tissue Bank, Banc de Sang i Teixits (BST) (Castells-Sala C, Pérez ML, López-Chicón P, Vilarrodona Serrat A)
- Department of Immunology (Alserawan De Lamo L)
- Lipids and Cardiovascular Pathology (Llorente-Cortés V)
- Metabolic Basis of Cardiovascular Risk (Escola-Gil JC, Cedo L)
- Internal Medicine Department- Infectious Diseases Unit (Domingo P)

External collaborations

National Collaborations

- Department of Internal Medicine, Hospital Clínic, Barcelona, Spain (R Estruch)
- Lipid Clinic, Endocrinology and Nutrition Service, Hospital Clínic, Barcelona, Spain (A Sala-Vila, E Ros)
- Department of Cardiology, Thorax Institute, Hospital Clínic, University of Barcelona, Barcelona, Spain (S Brugaletta, V MartínYuste, C Cola, M Sabaté, G Mendieta).
- Endocrinology and Nutrition Department, Institut d'Investigacions Biomèdiques August Pi Sunyer, Hospital Clínic, Barcelona, Spain (G Chiva-Blanch, O Giro)
- Fundación Hipercolesterolemia Familiar. Madrid, Spain (P Mata, R Alonso, L Perez-Isla).
- Servicio de Medicina Interna, Hospital Virgen del Rocio, Sevilla, Spain (O Muñiz)
- Department of Internal Medicine, Hospital Abente y Lago, A Coruña, Spain (JL Díaz-Díaz)
- Department of Cardiology, Hospital Universitario de San Juan, Alicante, Spain (V Bertomeu-Martínez, V Bermoteu-González, J Moreno-Arribas, JM Rivera-Caravaca)
- Department of Cardiology, Hospital Clínico Universitario Virgen de la Arrixaca, Murcia, Spain (MA Esteve-Pastor, F Marín)
- Department of Cardiology, Hospital La Paz, Madrid, Spain (I Roldan-Rabadan)
- Instituto Universitario de Ciencias de la Salud, Instituto de

Investigación Biomédica de A Coruña (INIBIC), Universidade da Coruña, La Coruña, Spain (J Muñiz)

- Hospital General Universitario Gregorio Marañón, Instituto de Investigación Sanitaria Gregorio Marañón, Universidad Complutense, Madrid, Spain (F. Fernandez-Aviles, AM Climent, L Grigorian Shamagian, R Sanz-Ruiz)
- Centro Nacional de Investigaciones Cardiovasculares Carlos III (CNIC), Madrid, Spain (V Fuster, B Ibañez)
- Unitat de Lípids i Risc Vascular, Department of Medicine, Hospital del Mar, Barcelona, Spain (J Pedro-Botet)
- Lipid and Atherosclerosis Unit, Department of Internal Medicine (J López-Miranda)/ Department of Cardiology (M Ruiz-Ortiz, M Anguita) / IMIBIC/Reina Sofia University Hospital/University of Cordoba, Cordoba, Spain
- Unidad de Lípidos, Hospital Universitario Miguel Servet, IIS Aragón, Universidad de Zaragoza, Zaragoza, Spain. (F Civeira)
- Internal Medicine Service, Hospital Carlos III, Madrid, Spain. (JM Mostaza)
- Lipids and Vascular Risk Unit, Internal Medicine (X Pintó)/ Department of Cardiology (A Cequier) / Geriatric Unit, Internal Medicine Service (F Formiga), Hospital Universitario de Bellvitge, Hospitalet de Llobregat, Barcelona, Spain
- Cell Therapy Network (TerCel), RD16/0018
- CIBER Cardiovascular Diseases CB16/11

International Collaborations

- Experimental, Diagnostic and Speciality Medicine, University of Bologna, Bologna, Italy (Raffaele Bugiardini, Edina Cenko).
- Department of Clinical Biochemistry and Immunohematology, Faculty of Health Sciences, University of Talca, Chile (Ivan Palomo).
- Centre for Clinical Heart Research, Department of Cardiology, Oslo University Hospital Ullevål, Oslo, Norway (Ingebjørg Seljeflot)
- Department of Pharmacology, Catholic University School of Medicine, Rome, Italy (Carlo Patrono)
- Department of NeuroFarBa, C.I.M.M.B.A., University of Florence, Florence, Italy (Elisabetta Cerbai)
- Department of Epidemiology and Prevention, IRCCS Istituto Neurologico Mediterraneo Neuromed, Pozzilli, Italy (Giovanni de Gaetano)
- Cardiology Department, University of Medicine and Pharmacy "Carol Davila" of Bucharest, Emergency Clinical Hospital of Bucharest, Bucuresti, Romania (Maria Dorobantu)
- Cardiovascular and Metabolic Diseases, Innovative Medicines and Early Development Biotech Unit, AstraZeneca, Mölndal, Sweden (Leif Carlsson)
- Cardiology Unit, Department of Medicine, Solna, Karolinska Institute and Karolinska University Hospital, Stockholm, Sweden (Francesco Cosentino)
- Liverpool Centre for Cardiovascular Science, University of Liverpool and Liverpool Heart & Chest Hospital, Liverpool, UK. (Gregory Y.H. Lip)
- Department of Experimental, Diagnostic, and Specialty Medicine, University of Bologna, Bologna, Italy (Raffaele Bugiardini)

- Department of Pharmacological and Biomolecular Sciences, University of Milan and MultiMedica IRCCS, Milano, Italy (Alberico L. Catapano)
- Laboratory of Pharmacology, Faculty of Pharmacy, National and Kapodistrian University of Athens, Athens, Greece (Ioanna Andreadou, Panagiota-Efstathia Nikolaou)
- Institute for Physiology, Justus-Liebig University Giessen, Giessen, Germany (Rainer Schulz)
- Center of Experimental Medicine, Slovak Academy of Sciences, Institute for Heart Research, Bratislava, Slovak Republic (Adriana Adameová)
- Institut für Pathophysiologie, Westdeutsches Herz- und Gefäßzentrum, Universitätsklinikum Essen, Essen, Germany (Petra Kleinbongard, Gerd Heusch)
- Hatter Institute for Cardiovascular Research in Africa, Department of Medicine, Faculty of Health Sciences, University of Cape Town, Cape Town, South Africa (Sandrine Lecour, Nicholas Woudberg)
- Unidade de Investigação Cardiovascular, Departamento de Cirurgia e Fisiologia, Faculdade de Medicina, Universidade do Porto, Porto, Portugal (Ines Falcao-Pires)
- Department of Pharmacology and Pharmacotherapy, Semmelweis University, Budapest, Hungary (Péter Ferdinandy)
- Department of Bioethics and Safety, Section of Pharmacology, Catholic University School of Medicine, Rome, Italy (Bianca Rocca)
- Centre for Bioscience, Faculty of Science & Engineering, Manchester Metropolitan University, Manchester, UK (Yvonne Alexander)
- Cardiovascular Research Unit, Luxembourg Institute of Health, Strassen, Luxembourg (Yvan Devaux)
- Department of Infection, Immunity and Cardiovascular Disease, University of Sheffield, UK (Robert F. Storey)
- Ludwig Boltzmann Institute for Cardiovascular Research, Vienna, Austria (Johann Wojta)
- TACTICS - Transnational Alliance for Regenerative Therapies in Cardiovascular Syndromes (Fernández-Avilés F, Sanz-Ruiz R, Climent AM, Charron D, Fuster V, Janssens S, Kastrup J, Kim HS, Lüscher TF, Martin J, Menasché P, Simari R, Stone GW, Terzic A, Willerson JT, Wu J)
- ALEXANDRE GALLINAT O'CALLAGHAN. Factor tisular no-coagulante y angiogénesis terapéutica para reparar el tejido isquémico.. BES2017-081378. Ministeri d'Economia i Competitivitat. Duration 2018-2022. 88.250,00 €.
- LINA BADIMON MAESTRO. Apo J-Glyc en la isquemia cardiovascular (AGLIC).. RTC-2017-6710-1. Ministeri d'Economia i Competitivitat. Duration 2018-2021. 251.381,00 €.
- GEMMA VILAHUR GARCIA. Estrategias innovadoras para restaurar la actividad cardioprotectora de las HDL: perfil molecular y caracterización fenotípica de HDL disfuncionales y restauradas.. PGC2018-094025-B-I00. Ministeri de Ciència, Innovació i Universitats. Duration 2019-2021. 150.000,00 €.
- LINA BADIMON MAESTRO. Compuesto para su uso en la prevención y/o reducción del daño por isquemia.. DTS19/00131. Instituto de Salud Carlos III. Duration 2020-2021. 66.000,00 €.
- LINA BADIMON MAESTRO. Nuevas terapias avanzadas para mejorar la disfunción microvascular y regenerar tejido isquémico.. PID2019-107160RB-I00. Ministeri de Ciència, Innovació i Universitats. Duration 2020-2023. 400.000,00 €.
- LINA BADIMON MAESTRO. NETWORK OF EXCELLENCE FOR THE DEVELOPMENT OF ADVANCED THERAPIES FOR THE TREATMENT OF MYOCARDIAL INFARCTIONS BASED ON REGENERATIVE MEDICINE AND 3D PRINTING.. SOE4/P1/E1063. Unió Europea. Duration 2020-2023. 111.375,00 €.
- GEMMA ARDERIU MARQUES. Reprogramación directa de las ASCs a células endoteliales mediante factores de transcripción para inducir la regeneración vascular en la enfermedad arterial periférica.. PI20/01517. Instituto de Salud Carlos III. Duration 2021-2023. 122.000,00 €.
- MARIA MONTSERRAT BORRELL PAGES. Progresión de la aterosclerosis: nuevas funciones del PCSK9 y los LRP5.. PI20/01282. Instituto de Salud Carlos III. Duration 2021-2023. 112.000,00 €.
- ALBA MAESTRO BENEDICTO. Contractes Rio Hortega 2020.. CM20/00220. Instituto de Salud Carlos III. Duration 2021-2023. 53.732,00 €.
- GEMMA VILAHUR GARCIA. Reconstitución de las HDL: bioingeniería para restaurar la función perdida por hipercolesterolemia.. FEA 2019. Fundació Espanyola d'Arteriosclerosi. Duration 2020-2021. 10.909,09 €.
- LINA BADIMON MAESTRO. CARDIATEAM-IMI2-821508.. AMD-821508-11. Centro de Investigación Biomédica en Red. Duration 2019-2024. 40.000,00 €.
- GEMMA VILAHUR GARCIA. Nueva aproximación terapéutica para prevenir el desarrollo de cardiomiopatía diabética a

Active grants

- MARIA MONTSERRAT BORRELL PAGES. ATERTROMBOSIS Y SU INHIBICION: LRP5/WNT EN LA RESPUESTA AGUDA A LA LESION VASCULAR. PI16/02014. Instituto de Salud Carlos III. Duration 2017-2021. 53.500,00 €.
- LINA BADIMON MAESTRO. TRANSBIOLINE. 821283 H2020. Unió Europea. Duration 2019-2024. 146.080,00 €.
- LINA BADIMON MAESTRO. Patologia Molecular i Terapèutica de les malalties aterotrombòtiques.. 2017 SGR 1480. Agència de Gestió d'Ajuts Universitaris i de Recerca. Duration 2017-2021. 61.192,00 €.

través de la inhibición funcional de la HMGCoA-reductasa y la activación de la vía de señalización de la AMPK.. SEC 2020. Societat Espanyola de Cardiologia. Duration 2020-2021. 15.000,00 €.

- LINA BADIMON MAESTRO. Prevención del deterioro cognitivo de origen vascular (VCI) mediante la activación del tráfico de colesterol y la reducción de la oxidación celular.. AC20/00054. Instituto de Salud Carlos III. Duration 2021-2023. 144.610,00 €.

- LINA BADIMON MAESTRO. MEDICAL TECHNOLOGIES, DIGITAL TOOLS AND ARTIFICIAL INTELLIGENCE ANALYTICS TO IMPROVE SURVEILLANCE AND CARE AT HIGH TECHNOLOGY READLINES.. 101016072. Unió Europea. Duration 2020-2022. 200.000,00 €.
- LINA BADIMON MAESTRO. Red de Terapia Celular (TerCel).. RD16/0011/0018. Instituto de Salud Carlos III. Duration 2017-2021. 166.255,00 €.

Note: Total amount granted to PI. It does not include indirect costs.

Other active grants

- GEMMA VILAHUR GARCIA. Avances en el diagnóstico y pronóstico de aterosclerosis en paciente diabéticos (ADAIR). PLEC2021- 007664. I+D+i Agencia Estatal de Investigación- MICINN – NextGenerationEU. Duration: 2021-2024. 271.697,0 €

- GEMMA VILAHUR GARCIA. Nuevas estrategias de protección del eje corazón-cerebro tras una parada cardíaca. Academia de la ciencias médicas y de la salud de Cataluña – Consejo Catalán de resuscitación. Duration: 2021-2023. 6.000 €

- ROSA SUADES SOLER. Programa Beatriu de Pinós. 2019 BP 00211. Agència de Gestió d'Ajuts Universitaris i de Recerca (AGAUR) cofinançat a través del programa COFUND de les accions Marie Skłodowska-Curie del programa "Horizon2020" (per la Unió Europea, número de contracte 801370). Duration: 2021-2024.144.300,00€.

- LINA BADIMON MAESTRO, GEMMA VILAHUR GARCIA. Co-investigadors. IF21 Adquisición de Equipamiento e Infraestructuras científico-técnicas. MICINN-Next Generation EU (Plan de Recuperación, Transformación y Resiliencia 2021-2023)

- IFEQ21/00135 Adquisición de EQUIPO DE RX para investigación traslacional en un Servicio de experimentación animal. Durantion: 2021. 185.000 €

- LINA BADIMON MAESTRO, GEMMA VILAHUR GARCIA. Co-investigadors. IF21 Adquisición de Equipamiento e Infraestructuras científico-técnicas. MICINN-Next Generation EU (Plan de Recuperación, Transformación y Resiliencia 2021-2023)

- IFEQ21/00136 Adquisición ECOGRAFO DE ULTRA ALTA FRECUENCIA para investigación traslacional en un servicio de experimentación animal. Durantion: 2021. 196.150 €

- LINA BADIMON MAESTRO/GEMMA VILAHUR GARCIA. Administration of APT-102 on top of ticagrelor provides additional cardioprotective benefits to that of ticagrelor alone. Astra Zeneca. Duration 2017 - 2021. 520.770,00 €

- LINA BADIMON MAESTRO/TERESA PADRO CAPMANY. Efectos del probiótico "AB-Life" sobre la cantidad y perfil de ácidos biliares, y el perfil lipídico y metabólico en sujetos sanos con sobrepeso moderado. AB-BIOTICS. Duration 2019 - 2021 . 250.592,4 €

Note: Total amount granted to PI. It does not include indirect costs.

Grants awarded in 2021

- AURELI LUQUERO GOMEZ, PID2019-107160RB-100. Nuevas Terapias avanzadas para mejorar la disfunción microvascular y regenerar tejido isquémico., PRE2020-096422, Ministeri de Ciència, Innovació i Universitats, 2021 - 2025, 97.460,00 €.

Note: Total amount granted to PI. It does not include indirect costs.

Awards

- ESC Education Committee Member for Scientific Endorsement for Life Educational Events of the European Society of Cardiology (2021-2022): G.Vilahr

- Premio extraordinario Tesis: New therapeutic strategies to protect against cardiovascular disease: impact of hypercholesterolemia (defensa 18 Junio 2020 Excelente Cum Laude) Doctorando: Soumaya Ben-Aicha.

Books or chapters with ISBN

- Badimon L, Mendieta G, Padro T, Vilahr G. Atherothrombosis: Disease Initiation, Progression, and Treatment (Chapter 134). Williams Hematology, 10th Edition. Eds: Kenneth Kaushansky, Marshall A. Lichtman, Josef T. Prchal, Marcel Levi, Linda J. Burns, David C. Linch. Ed: Mc Graw Hill Medical, 2021. ISBN: 978-1260464122

Patents

- Lina Badimon Maestro; Judit Cubedo Ràfols; Teresa Padró Capmany, Methods and kits for the diagnosis and risk stratification of patients with ischemia. , KR1020187032609, International - Corea, 02/12/2021

- Lina Badimon Maestro; Judit Cubedo Ràfols; Teresa Padró Capmany, Methods and kits for the diagnosis and risk stratification of patients with ischemia. , RU2018139780, International (Federacion Rusa), 21/06/2021

- Lina Badimon Maestro; Judit Cubedo Ràfols; Teresa Padró Capmany, Methods and kits for the diagnosis and risk stratification of patients with ischemia, IL262245, International (Israel), 25/03/2021

- Lina Badimon Maestro; Gemma Vilahur García, Statin for prevention/reduction of ischemia-related damage , DK3600278, International (Dinamarca), 26/04/2021

- Lina Badimon Maestro; Gemma Vilahur García, Statin for prevention/reduction of ischemia-related damage , RU2019134491, International (Rusia), 30/04/2021

- Lina Badimon Maestro; Gemma Vilahur García, Statin for prevention/reduction of ischemia-related damage , PL18715625, International (Polonia), 02/08/2021

- Lina Badimon Maestro; Gemma Vilahur García, Statin for prevention/reduction of ischemia-related damage., ES2877646, Nacional, 17/11/2021

- Lina Badimon Maestro; Judit Cubedo Ràfols; Gemma Vilahur García, Methods and compositions for the prevention and/or treatment of ischemia and of ischemia/reperfusion injury, EP3890830, Europa, 13/10/2021

- Lina Badimon Maestro; Judit Cubedo Ràfols; Gemma Vilahur García, Methods and compositions for the prevention and/or treatment of ischemia and of ischemia/reperfusion injury, CN113395994, International (China), 14/09/2021

- Lina Badimon Maestro; Judit Cubedo Ràfols; Teresa Padró Capmany, Antibodies specific for glycosylated APOJ and uses thereof, US20210388108, International (United States), 16/12/2021

- Lina Badimon Maestro; Judit Cubedo Ràfols; Teresa Padró Capmany, Antibodies specific for glycosylated APOJ and uses thereof, 40050397A, International (Hong Kong), 24/12/2021

- Lina Badimon Maestro; Judit Cubedo Ràfols; Teresa Padró Capmany, Antibodies specific for glycosylated APOJ and uses thereof, CN113366021, International (China), 07/09/2021

- Lina Badimon Maestro; Judit Cubedo Ràfols; Teresa Padró Capmany, Antibodies specific for glycosylated APOJ and uses thereof, EP3870614, Europea, 01/09/2021

- Lina Badimon Maestro; Judit Cubedo Ràfols; Teresa Padró Capmany, Antibodies specific for glycosylated APOJ and uses thereof, BR112021006516, International (Brasil), 13/07/2021

- Lina Badimon Maestro; Judit Cubedo Ràfols; Teresa Padró Capmany, Antibodies specific for glycosylated APOJ and uses thereof, IL282384, International (Israel), 30/06/2021

- Lina Badimon Maestro; Judit Cubedo Ràfols; Teresa Padró Capmany, Antibodies specific for glycosylated APOJ and uses thereof, SG11202103124W , International (Singapur), 29/04/2021

- Lina Badimon Maestro; Judit Cubedo Ràfols; Gemma Vilahur García; Teresa Padró Capmany, Prevention and/or treatment of ischemia or ischemia/reperfusion injury, US11,052,136, International (Estados Unidos), 06/07/2021

Transfer products

Spin-offs

- Ivestatin Therapeutics SL (Feb 2021). Founders: Lina Badimon Maestro, Gemma Vilahur Garcia, Teresa Padro Capmany.

- Glycardial Diagnostics SL (Septembre 2017). Founders: Lina Badimon Maestro, Gemma Vilahur Garcia, Teresa Padro Capmany, Judit Cubedo Ràfols

Scientific production

- Ajjan RA, Kietsiroje N, Badimon L, Vilahur G, Gorog DA, Angiolillo DJ, Russell DA, Rocca B, Storey RF. Antithrombotic therapy in diabetes: which, when, and for how long?. *EUROPEAN HEART JOURNAL*. 2021; 42(23). DOI:10.1093/eurheartj/ehab128. PMID:33764414. IF:29,983 (Q1/D1).

- Alexander Y, Osto E, Schmidt A, Shechter M, Trifunovic D, Duncker DJ, Aboyans V, Back M, Badimon L, Cosentino F, De Carlo M, Dorobantu M, Harrison DG, Guzik TJ, Hofer I, Morris PD, Norata GD, Suades R, Taddei S, Vilahur G, Waltenberger J, Weber C, Wilkinson F, Bochaton ML, Evans PC. Endothelial function in cardiovascular medicine: a consensus paper of the European Society of Cardiology working Groups on Artherosclerosis and Vascular Biology, Aorta and Peripheral Vascular Diseases, Coronary Pathophysiology and Microcirculation, and Thrombosis. *CARDIOVASCULAR RESEARCH*. 2021; 117(1). DOI:10.1093/cvr/cvaa085. PMID:32282914. IF:10,787 (Q1/D1).

- Arauna D, Chiva-Blanch G, Padro T, Fuentes E, Palomo I, Badimon L. Frail older adults show a distinct plasma microvesicle profile suggesting a prothrombotic and proinflammatory phenotype. *JOURNAL OF CELLULAR PHYSIOLOGY*. 2021; 236(3):2099-2108. DOI: 10.1002/jcp.29996. PMID: 32749745. IF:6,384 (Q1/D1).

- Badimon L, Luquero A, Crespo J, Pena E, Borrell M. PCSK9 and LRP5 in macrophage lipid internalization and inflammation. *CARDIOVASCULAR RESEARCH*. 2021; 117(9). DOI:10.1093/cvr/cvaa254. PMID:32991689. IF:10,787 (Q1/D1).

- Badimon L, Robinson EL, Jusic A, Carpusca I, DeWindt LJ, Emanueli C, Ferdinandy P, Gu W, Gyongyosi M, Hackl M, Karadzovic K, Lustrek M, Martelli F, Nham E, Potocnjak I, Satagopam V, Schneider R, Thum T, Devaux Y. Cardiovascular RNA markers and artificial intelligence may improve COVID-19

outcome: a position paper from the EU-CardioRNA COST Action CA17129. *CARDIOVASCULAR RESEARCH*. 2021; 117(8). DOI:10.1093/cvr/cvab094. PMID:33839767. IF:10,787 (Q1/D1).

- Badimon L, Vilahur G, Rocca B, Patrono C. The key contribution of platelet and vascular arachidonic acid metabolism to the pathophysiology of atherothrombosis. *CARDIOVASCULAR RESEARCH*. 2021; 117(9). DOI:10.1093/cvr/cvab003. PMID:33484117. IF:10,787 (Q1/D1).

- Bertomeu-Gonzalez V, Moreno-Arribas J, Esteve-Pastor MA, Roldan-Rabadan I, Muniz J, Otero Garcia D, Ruiz-Ortiz M, Cequier A, Bertomeu-Martinez V, Badimon L, Anguita M, Lip GYH, Marin F. Peripheral artery disease and clinical outcomes in patients with atrial fibrillation: A report from the FANTASIA registry. *EUROPEAN JOURNAL OF CLINICAL INVESTIGATION*. 2021; 51(4): e13431. DOI: 10.1111/eci.13431. PMID: 33065765. IF:4,686 (Q1/D3).

- Cenko E, Badimon L, Bugiardini R, Claeys MJ, De Luca G, de Wit C, Derumeaux G, Dorobantu M, Duncker DJ, Eringa EC, Gorog DA, Hassager C, Heinzl FR, Huber K, Manfrini O, Milicic D, Oikonomou E, Padro T, Trifunovic D, Vasiljevic Z, Vavlukis M, Vilahur G, Tousoulis D. Cardiovascular disease and COVID-19: a consensus paper from the ESC Working Group on Coronary Pathophysiology & Microcirculation, ESC Working Group on Thrombosis and the Association for Acute Cardiovascular Care (ACVC), in collaboration with the European Heart Rhythm Association (EHRA). *CARDIOVASCULAR RESEARCH*. 2021; 117(14). DOI:10.1093/cvr/cvab298. PMID:34528075. IF:10,787 (Q1/D1).

- Chiva G, Bratseth V, Laake K, Arnesen H, Solheim S, Schmidt EB, Badimon L, Seljeflot I. One year of omega 3 polyunsaturated fatty acid supplementation does not reduce circulating prothrombotic microvesicles in elderly subjects after suffering a myocardial infarction. *CLINICAL NUTRITION*. 2021; 40(12). DOI:10.1016/j.clnu.2021.10.007. PMID:34742136. IF:7,324 (Q1/D1).

- Chiva G, Pena E, Cubedo J, Garcia M, Pane A, Gil PA, Perez A, Ortega E, Padro T, Badimon L. Molecular mapping of platelet hyperreactivity in diabetes: the stress proteins complex HSPA8/Hsp90/CSK2 alpha and platelet aggregation in diabetic and normal platelets. *Translational Research*. 2021; 235. DOI:10.1016/j.trsl.2021.04.003. PMID:33887528. IF:7,012 (Q1/D1).

- Chiva G, Vilella A, Padro T, Formiga F, Ferrer A, Badimon L. Functional and Cognitive Decline Is Associated With Increased Endothelial Cell Inflammation and Platelet Activation: Liquid Biopsy of Microvesicles in Community- Dwelling Octogenarians. *Frontiers in Cell and Developmental Biology*. 2021; 9:716435. DOI:10.3389/fcell.2021.716435. IF:6,684 (Q1/D2).

- Davidson SM, Padro T, Bollini S, Vilahur G, Duncker DJ, Evans PC, Guzik T, Hoefler IE, Waltenberger J, Wojta J, Weber C. Progress in cardiac research: from rebooting cardiac regeneration to a complete cell atlas of the heart. *CARDIOVASCULAR RESEARCH*. 2021; 117(10). DOI:10.1093/cvr/cvab200. PMID:34114614. IF:10,787 (Q1/D1).

- Escate R, Padro T, Suades R, Camino S, Muniz O, Diaz JL, Sionis A, Mata P, Badimon L. High miR-133a levels in the circulation anticipates presentation of clinical events in familial hypercholesterolaemia patients. *CARDIOVASCULAR RESEARCH*. 2021; 117(1). DOI:10.1093/cvr/cvaa039. PMID:32061123. IF:10,787 (Q1/D1).

- Evans P, Wojta J, Hoefler IE, Waltenberger J, Guzik T, Badimon L, Weber C, Council Basic Cardiovasc S. The year in basic vascular biology research: from mechanoreceptors and neutrophil extracellular traps to smartphone data and omics. *CARDIOVASCULAR RESEARCH*. 2021; 117(8). DOI:10.1093/cvr/cvab105. PMID:33744925. IF:10,787 (Q1/D1).

- Flores EJ, Ortega L, Cepas PL, Giacchi G, Padro T, Badimon L, Sabate M, Brugaletta S. Endothelial Progenitor Cell Function in Patients With Coronary Chronic Total Occlusion and its Relationship With Collateral Circulation. *JOURNAL OF INVASIVE CARDIOLOGY*. 2021; 33(10). PMID:34544035. IF:2,022 (Q3/D8).

- Garcia M, Diaz E, Pena E, Escate R, Juan O, Mata P, Badimon L, Padro T. Alternative C3 Complement System: Lipids and Atherosclerosis. *INTERNATIONAL JOURNAL OF MOLECULAR SCIENCES*. 2021; 22(10):5122. DOI:10.3390/ijms22105122. PMID:34066088. IF:5,923 (Q1/D3).

- Giro O, Jimenez A, Pane A, Badimon L, Ortega E, Chiva G. Extracellular vesicles in atherothrombosis and cardiovascular disease: Friends and foes. *ATHEROSCLEROSIS*. 2021; 330. DOI:10.1016/j.atherosclerosis.2021.07.002. PMID:34256307. IF:5,162 (Q1/D3).

- Grigorian L, Sanz R, Climent A, Badimon L, Barile L, Bolli R, Chamuleau S, Grobbee DE, Janssens S, Kastrup J, Kragten L, Madonna R, Mathur A, Menasche P, Pompilio G, Prosper F, Sena E, Smart N, Zimmermann WH, Fernandez F. Insights into therapeutic products, preclinical research models, and clinical trials in cardiac regenerative and reparative medicine: where are we now and the way ahead. Current opinion paper of the ESC Working Group on Cardiovascular Regenerative and Reparative Medicine. *CARDIOVASCULAR RESEARCH*. 2021; 117(6). DOI:10.1093/cvr/cvaa337. PMID:33258961. IF:10,787 (Q1/D1).

- Krychtiuk KA, Speidl WS, Giannitsis E, Gigante B, Gorog DA, Jaffe AS, Mair J, Mockel M, Mueller C, Storey RF, Vilahur G, Wojta J, Huber K, Halvorsen S, Geisler T, Morais J, Lindahl B, Thygesen K. Biomarkers of coagulation and fibrinolysis in acute myocardial infarction: a joint position paper of the Association for Acute Cardiovascular Care and the European Society of Cardiology Working Group on Thrombosis. *European Heart Journal-Acute Cardiovascular Care*. 2021; 10(3). DOI:10.1093/ehjacc/zuua025. PMID:33620437. IF:4,696 (Q2/D4).

- Kunadian V, Chieffo A, Camici PG, Berry C, Escaned J, Maas A, Prescott E, Karam N, Appelman Y, Fraccaro C, Buchanan GL, Manzo S, Al R, Regar E, Lansky A, Abbott JD, Badimon L, Duncker DJ, Mehran R, Capodanno D, Baumbach A. An EAPCI Expert Consensus Document on Ischaemia with Non-Obstructive Coronary Arteries in Collaboration with European

Society of Cardiology Working Group on Coronary Pathophysiology & Microcirculation Endorsed by Coronary Vasomotor Disorders International Study Group. *EuroIntervention*. 2021; 16(13). DOI:10.4244/EIJY20M07_01. PMID:32624456. IF:6,534 (Q1/D2).

• Luquero A, Badimon L, Borrell M. PCSK9 Functions in Atherosclerosis Are Not Limited to Plasmatic LDL-Cholesterol Regulation. *Frontiers in Cardiovascular Medicine*. 2021; 8:639727. DOI:10.3389/fcvm.2021.639727. PMID:33834043. IF:6,050 (Q1/D3).

• Luquero A, Vilahur G, Crespo J, Badimon L, Borrell M. Microvesicles carrying LRP5 induce macrophage polarization to an anti-inflammatory phenotype. *JOURNAL OF CELLULAR AND MOLECULAR MEDICINE*. 2021; 25(16). DOI:10.1111/jcmm.16723. PMID:34288375. IF:5,310 (Q2/D4).

• Mata P, Alonso R, de Isla LP, Badimon L. Dyslipidemia and aortic valve disease. *CURRENT OPINION IN LIPIDOLOGY*. 2021; 32(6). DOI:10.1097/MOL.0000000000000794. PMID:34629429. IF:4,776 (Q2/D3).

• Munoz N, Escate R, Badimon L, Padro T. Moderate Beer Intake Downregulates Inflammasome Pathway Gene Expression in Human Macrophages. *Biology-Basel*. 2021; 10(11):1159. DOI:10.3390/biology10111159. PMID:34827151. IF:5,079 (Q1/D2).

• Padro T, Munoz N, Pena E, Badimon L. Sex Differences and Emerging New Risk Factors for Atherosclerosis and Its Thrombotic Complications. *CURRENT PHARMACEUTICAL DESIGN*. 2021; 27(29). DOI:10.2174/138161282666201118094209. PMID:33213315. IF:3,116 (Q3/D6).

• Pero M, Casani L, Castells C, Perez ML, Naranjo EM, Juan O, De Lamo LA, Lopez P, Serrat AV, Badimon L, Roda OP. Rabbit as an animal model for the study of biological grafts in pelvic floor dysfunctions. *Scientific Reports*. 2021; 11(1):10545. DOI:10.1038/s41598-021-89698-z. PMID:34006889. IF:4,379 (Q1/D3).

• Povsic TJ, Sanz R, Climent AM, Bolli R, Taylor DA, Gersh BJ, Menasche P, Perin EC, Pompilio G, Atsma DE, Badimon L, DeMaria AN, Hare JM, Henry TD, Janssens S, Kastrup J, Torella D, Traverse JH, Willerson JT, Fernandez F. Reparative cell therapy for the heart: critical internal appraisal of the field in response to recent controversies. *ESC Heart Failure*. 2021; 8(3). DOI:10.1002/ehf2.13256. PMID:33652498. IF:4,411 (Q2/D4).

• Proietti M, Esteve MA, Rivera JM, Roldan V, Rabadan IR, Muniz J, Cequier A, Bertomeu V, Badimon L, Anguita M, Lip GYH, Marin F, FANTASIA I. Relationship between multimorbidity and outcomes in atrial fibrillation. *EXPERIMENTAL GERONTOLOGY*. 2021; 153:111482. DOI:10.1016/j.exger.2021.111482. PMID:34303775. IF:4,032 (Q2/D5).

• Rodriguez L, Badimon L, Mendez D, Padro T, Vilahur G, Pena E, Carrasco B, Vogel H, Palomo I, Fuentes E. Antiplatelet Activity of Isorhamnetin via Mitochondrial Regulation. *Antioxidants*. 2021; 10(5):666. DOI:10.3390/antiox10050666. PMID:33922903. IF:6,312 (Q1/D1).

• Schoch L, Badimon L, Vilahur G. Unraveling the Complexity of HDL Remodeling: On the Hunt to Restore HDL Quality.

Biomedicines. 2021; 9(7):805. DOI:10.3390/biomedicines9070805. PMID:34356869. IF:6,081 (Q1/D2).

• Vasiljevic Z, Scarpone M, Bergami M, Yoon J, van der Schaar M, Krljanac G, Asanin M, Davidovic G, Simovic S, Manfrini O, Mickovski N, Badimon L, Cenko E, Bugiardini R. Smoking and sex differences in first manifestation of cardiovascular disease. *ATHEROSCLEROSIS*. 2021; 330. DOI:10.1016/j.atherosclerosis.2021.06.909. PMID:34233252. IF:5,162 (Q1/3D).

• Vilahur G, Sutelman P, Mendieta G, Ben S, Borrell M, Pena E, Crespo J, Casani L, Badimon L. Triglyceride-induced cardiac lipotoxicity is mitigated by Silybum marianum. *ATHEROSCLEROSIS*. 2021; 324. DOI:10.1016/j.atherosclerosis.2021.03.014. PMID:33857761. IF:5,162 (Q1/D3).

Other scientific production

• Badimon L. New trials in the scene of cardiovascular disease: innovation, controversy, and reassurance. *CARDIOVASCULAR RESEARCH*. 2021; 117(4):cvab048. DOI:10.1093/cvr/cvab048. PMID:33615348. IF:10,787 (Q1/D1).

• Devaux Y, Badimon L. CDR132L: another brick in the wall towards the use of miRNAs to treat cardiovascular disease. *EUROPEAN HEART JOURNAL*. 2021; 42(2). DOI:10.1093/eurheartj/ehaa870. PMID:33147612. IF:29,983 (Q1/D1).

• Kleinbongard P, Andreadou I, Vilahur G. The platelet paradox of injury versus protection in myocardial infarction-has it been overlooked?. *BASIC RESEARCH IN CARDIOLOGY*. 2021; 116(1). DOI:10.1007/s00395-021-00876-6. PMID:34037862. IF:17,165 (Q1/D1).

• Ten J, Sibbing D, Rocca B, Van E, Chevalier B, Collet JP, Dudek D, Gilard M, Gorog DA, Grapsa J, Grove EL, Lancellotti P, Petronio AS, Rubboli A, Torracca L, Vilahur G, Witkowski A, Mehilli J. Management of antithrombotic therapy in patients undergoing transcatheter aortic valve implantation: a consensus document of the ESC Working Group on Thrombosis and the European Association of Percutaneous Cardiovascular Interventions (EAPCI), in collaboration with the ESC Council on Valvular Heart Disease. *EUROPEAN HEART JOURNAL*. 2021; 42(23). DOI:10.1093/eurheartj/ehab196. PMID:33822924. IF:29,983 (Q1/D1).

Other publications

• Padro T, Munoz N, Badimon L. The role of triglycerides in the origin and progression of atherosclerosis. *Clinica E Investigacion En Arteriosclerosis*. 2021; 33. DOI:10.1016/j.arteri.2021.02.007. PMID:34006350.

Communication and dissemination activities

Courses

• Master de postgrado en prevención secundaria. Sociedad Española de Cardiología. Investigación en tratamiento

antitrombotico. Nuevas dianas terapéuticas y fármacos en desarrollo. Jan-May 2021 (Vilahir, G).

• Master de postgrado en prevención secundaria y Cardiopatía Isquémica. Sociedad Española de Cardiología y la Universidad Internacional de Cataluña . Aterotrombosis y Prevención Secundaria: Investigación en tratamiento antitrombotico. Nuevas dianas terapéuticas y fármacos en desarrollo. Papel de los test de reactividad plaquetaria. Dec 2021 – Mar 2022. (Vilahir, G)

Meetings and conferences

• Annual Meeting CIBERCV, On-line; Feb 2021. Title: Lo mejor del CiberCV en 2020 (Co-moderator: Badimon L).

• Campus Sociedad Española de Cardiología, On-line; Madrid; Feb 2021. Title: ¿Qué relación tiene la inflamación con la función plaquetar y el tratamiento antiagregante?. (Vilahir G)

• Cardiovascular Research Institute Düsseldorf, On-line; Mar 2021. Guest Lecture – Repositioning of statins as acute and direct cardioprotective agents: targeting protein prenylation. (Vilahir, G)

• XXVIII Congreso Peruano de Cardiología; On-line; Apr 2021. Aterotrombosis coronaria: de lípidos a inflamación (Badimon, L)

• ALPIC 2021, Kalavrita, Grecia; May 2021. Plenary Session. Recent Advances in VTE pathophysiology and treatment (Co-moderación: Badimon, L).

• 89th EAS Congress, Virtual Congress; May, 2021. Workshop: Lipid metabolism and atherothrombosis (Co-moderación: Badimon, L)

• Karolinska Institute, On-line; May, 2021. Guest Lecture Functional and structural changes in HDL particles and the risk for cardiovascular disease. (Vilahir, G).

• XXXIII Congreso de la Sociedad Española de Arteriosclerosis, Virtual; June 2021. Symposium “Nuevos enfoques y futuras estrategias para reducir el C-LDL” (Badimon, L)

• Congreso de la Sociedad Interamericana de Cardiología, SIAC Virtual; June, 2021. Dr. Ignacio Chávez: Enfermedad arterial coronaria, isquemia y daño miocárdico: el continuo avance hacia la insuficiencia cardíaca (Badimon, L)

• ESCI 2021's virtual Meeting; June 2021. Session 3: Cardiovascular and ischemic disease. Liquid biopsies in precision medicine for cardiovascular disease (Badimon, L)

• Best Practices in Regenerative Medicine - Cardiopatch; June 2021. Good practice in cell culture: obtention and miRNA regulation of ASCs to induce endothelial differentiation for therapeutic application (Arderiu, G).

• EMLTD Webinar Covid-19 and Thrombosis, Virtual Meeting; July 2021. COVID-19: a “vascular” disease? (Badimon, L)

• INSVACOR, Instituto Valenciano del Corazón, On-line; Sept 2021. Fermentados y enfermedades cardiovasculares. Qué dicen los estudios (Badimon, L)

• XXII Workshop de SEMiPYP, I Congreso de la SIAMP&P, On-line; Sept. 2021. Probióticos en el control de las dislipemias. Probióticos en el metabolismo del colesterol (Badimon L)

• International Symposium Cardiometabolic Risk and Vascular Disease from Mechanisms to Treatment, On-line; Sept 2021. Session I - Novel Mechanisms of Disease (Moderator: Badimon, L). Regulatory mechanisms of platelet biology and blood coagulation (Badimon L)

• Conferencia Cerveza y salud Cardiovascular Insvacor, On-line; Sept. 2021. Los efectos del consumo de cerveza en la salud cardiovascular (Badimon, L)

• Fundación Azierta, Madrid, Sept. 2021. “Recuperación Socioeconómica en una sociedad vacunada” El hoy y el mañana de la sostenibilidad y de la salud Post Covid-19” - Science to business to people. Educar, informar y comprometer a la población. Transmitir la importancia y necesidad de la investigación para el desarrollo de nuestra sociedad a todos los niveles. (Moderator: Badimon, L)

• GICOR – XXV setmana del cor, Girona; Oct 2021. Teràpia amb cèl.lules mare per regenerar el cor infartat: beneficis i barreres (Vilahir, G)

• 8th Cardioprotection COST Action WG Meeting, Mallorca; Oct. 2021. Keynote Lecture Chairperson (Moderación: Badimon, L)

• COST Workshop-Cellular mechanism of protein quality control (Moderator: Badimon, L). Extracellular microvesicles (Badimon, L). Oral abstract ECI presentations and STSMs (Moderación: Badimon L). New data on platelet inhibitors. (Vilahir, G).

• Sexto Curso Real Academia Nacional de Farmacia, On-line; Oct. 2021. Riesgo Cardiovascular en Obesidad y Síndrome Metabólico (Badimon, L)

• Congreso ISA 2021, Online; Oct 2021. Transformation of Silent Atherosclerosis Into Cardiovascular Events: Novel Mechanisms in Atherothrombosis (Badimon, L).

• Congreso SEC 21 de la Salud Cardiovascular, Zaragoza; Oct. 2021.

SESION II. Avances en el papel de la inflamación en la enfermedad cardiovascular (Moderación: Badimon, L)

Simposio: Próximos retos en la investigación cardiovascular (Moderator: Badimon, L). PCSK9: a view beyond the canonical impact of cholesterol lowering. (Borrell, M)

El poder de los antiplaquetares: descifrando nuevas estrategias de cardioprotección (Vilahir, G)

• 1st Annual Consortium Meeting CARDIOPACTH – (SOE4/P1/E1063), Toulouse (France); Oct. 2021. (Arderiu, G)

• European Heart Journal - Dialogue; Oct. 2021. P2Y12 inhibitor monotherapy or dual antiplatelet therapy after coronary revascularisation: individual patient level meta-analysis of randomised controlled trials.(Moderator: Vilahir, G)

- Cardiopatch, Pamplona; Nov 2021. Terapias Avanzadas de Tratamiento del Infarto de Miocardio. Agotamiento del potencial regenerativo celular por complicaciones cardiometabólicas y su posible reversión (Badimon, L)

- Reunión Annual Tercei, Barcelona; Nov 2021.

Tercera Mesa: Cardiocel (Co-moderación: Badimon, L)

Las microvesículas liberadas por el endotelio transportan miR-126 que inducen la reprogramación proangiogénica en los monocitos. (Arderiu G)

- EMLTD Congress / 27th ICT2021, On-line; Nov 2021.

Congress Opening: EMLTD: Past-Present-Future (Badimon, L)

Keynote Lecture I (Moderación: Badimon, L)

Involvement of innate immunity cells in human coronary thrombosis (Badimon, L)

- Cátedra Extraordinaria de bebidas fermentadas. Universidad Complutense de Madrid; Dec 2021. Consumo moderado de bebidas fermentadas y salud cardiovascular. Bebidas fermentadas, dieta y salud: una actualización para 2022. (Vilahrur, G)

- Scientific Retreat 2021- IIB Sant Pau; Dec 2021. Shield4Heart: Una aproximació innovadora en la protecció front l'infart. (Vilahrur, G)

Communications in conferences

- Cenke E, Yoon J, Van der Schaar M, Bergami M, Manfrini O, Vasiljevic Z, Stankovic G, Vavlukis M, Kedev S, Milicic D, Badimon L, Bugiardini R. Sex differences in heart failure following acute coronary syndromes. Journal of the American College of Cardiology May, 77 (18_Supplement_1) 104; 2021. AAC'21

- Cenke E, Bergami M, Yoon J, Fabian N, van der Schaar M, Manfrini O, Vasiljevic Z, Zdravkovic M, Vavlukis M, Kedev S, Milicic D, Badimon L, Bugiardini R. Statins and severity of clinical manifestations among women and men with incident coronary heart disease. Journal of the American College of Cardiology May, 77 (18_Supplement_1) 162; 2021. AAC'21

- Diaz-Riera E, Lopez L, Garcia-Arguinzonis M, Vilahrur G, Garcia-Moll X, Badimon L, Padro T. Differential urine proteomic signature in early phase of renal damage in acute decompensated heart failure. European Journal of Clinical Investigation Jun; 51(1): 136-136; 2021. ESCI Congress.

- Cenke E, Yoon J, Van Der Schaar M, Bergami M, Manfrini O, Vasiljevic Z, Zdravkovic M, Stankovic G, Vavlukis M, Kedev S, Milicic D, Badimon L, Bugiardini R. Acute heart failure: a mechanism underscoring sex differences in outcomes following acute coronary syndromes. ESC CONGRESS 2021.

- Mendieta G, Calvo M, Guzmán J, Perez P, Alamar M, Vilahrur G, Gavarra J, Vargas S, Rello P, Valente F, Rios J, Badimon L, Rodriguez-Palomares L, Bodi V, Tomas Ortiz J. CMR analysis of the cardioprotective effects of chronic oral statin therapy prior to first STEMI: a propensity score analysis. ESC CONGRESS 2021.

- Bergami M, Cenke E, Yoon J, Mendieta G, Kedev S, Zdravkovic M, Vasiljevic Z, Milicic D, Manfrini O, Van Der Schaar M, Gale CP, Badimon L, Bugiardini R. Statins for primary prevention among elderly men and women. ESC CONGRESS 2021

- Mendieta G, Calvo M, Guzmán J, Perez P, Alamar M, Vilahrur G, Gavarra J, Vargas S, Rello P, Valente F, Rios J, Badimon L, Rodriguez-Palomares L, Bodi V, Tomas Ortiz J. Efectos cardioprotectores del tratamiento crónico con estatinas previo al primera IAMCEST evaluados mediante RMC. Congreso de las Enfermedades Cardiovasculares, Sociedad Española de Cardiología 2021.

Outreach activities to society

- Blog Salud Cardiovascular de Catalana Occidente. Prevención de enfermedades cardiovasculares: nutrición, lípidos y ejercicio físico. <https://www.seguoscatalanaoccidente.com/canal/nutricion/post/prevencion-enfermedades-cardiovasculares> 2021. (Badimon L, Borrell M)

- Ciencia Cardiovascular, (revista de divulgación de la Fundación Española del Corazón; núm. 141, págs. 58-61). Inflamación y aterosclerosis: combatiendo la inflamación para prevenir la aterosclerosis. 2021. (Badimon L, Borrell M)

- Diario Medico: Mas mujeres y mas fuentes de financiación, mas y mejor investigación. <https://www.diariomedico.com/opinion/mas-mujeres-y-mas-fuentes-de-financiacion-mas-y-mejor-investigacion.html> 16/02/2021 (Badimon, L)

- Científicas que inspiran: CIBER ISCIII-Centro de Investigación Biomedica en Red. <https://www.ciberisciii.es/comunicacion/cultura-cientifica/cientificas-que-inspiran#> 17/02/2021 (Badimon, L)

- Ajuntament de Barcelona / Barcelona Turisme. Taula Rodona: Tu ets Barcelona. Re-connectem?. Pla Barcelona MICE 2022. Conèixer el projecte de la ciutat com a líder de turisme de la indústria d'esdeveniments. 21/12/2021 (Badimon, L)

- Cardioflix : Serie, coordinada por el Dr. Alberto Cordero, pretende dar difusión a la gran cantidad de datos que se están produciendo actualmente en el ámbito de la Cardiología. Lo último en investigación en cardiología. 2021.

Capítulo: Avances en Arteriosclerosis (Badimon, L)

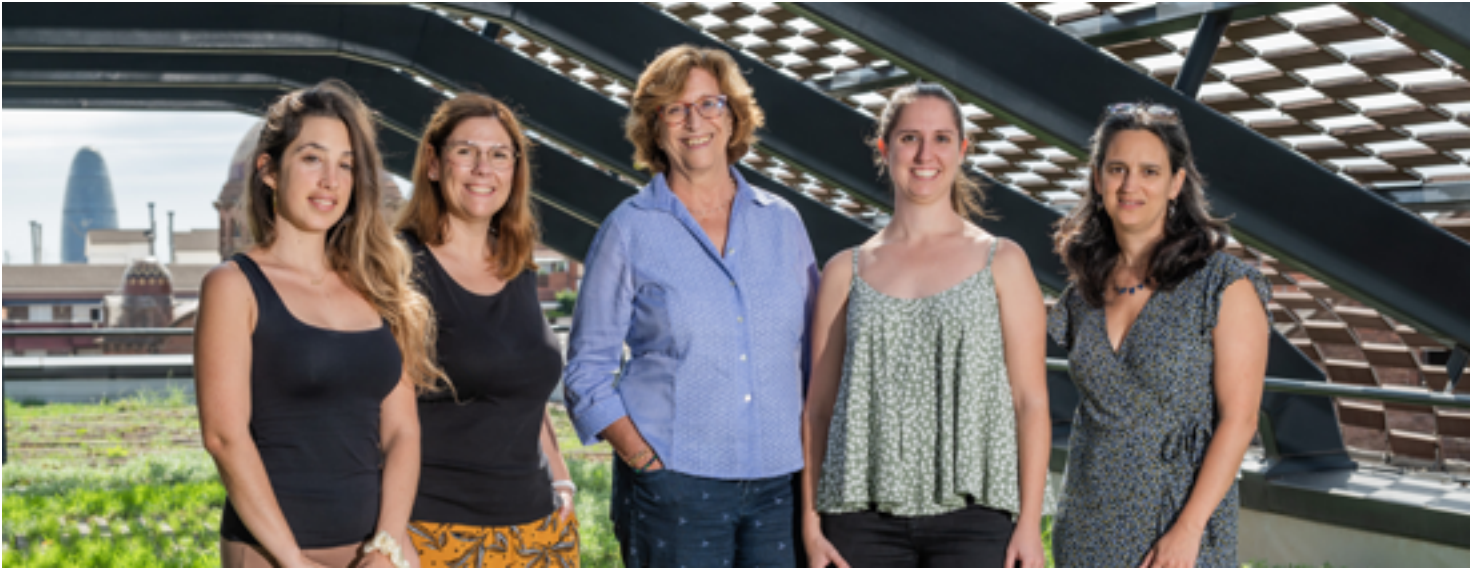
https://www.cardioflixbyferrer.es/?utm_source=veeva&utm_medium=email&utm_campaign=vae_oct21_accesocardioclic7capitulos2

Meeting and conference organiser

- 8th EU-CARDIOPROTECTION COST Action WG Meeting. October 11th – 13th 2021, Mallorca, Spain. Local organising committee / Dra. Gemma Vilahrur / Prof. Lina Badimon.

- Reunion Anual TERCEL Barcelona 2021. 25- 26 Nov 2021, Barcelona, Spain. Coordinador : Lina Badimon Maestro

- Meeting of the European Society for Clinical Investigation. June 2021 (On-line). Organiser: Gemma Vilahrur Garcia.



Biomarkers for Cardiovascular Disease

Coordinator

Padró Capmany, Teresa IR
tpadro@santpau.cat

Members

Díaz Riera, Elisa	IR	Gómez-Pardo Arellano, Montserrat	IR
García Arguinzonis, Maisa Inés	IR	Vilella Figuerola, Alba	IR

Main lines of research

The main line of research refers to the identification and characterization of key molecular and cellular biomarkers of atherothrombosis and ischemic heart disease, with potential use in prevention, disease diagnosis, risk stratification and, treatment. In general, the research activities focus on cardiovascular disease, vascular remodeling and atherosclerosis, thrombosis, risk factors, and ischemic and heart disease, covering studies at cellular, pre-clinical and clinical level. Moreover, current studies focus on myocardial remodelling post-infarction and its association with the scar evolution following ischemic events.

Scientific challenges

- Identify and characterize new biomarkers and molecular targets of tissue remodelling

in atherosclerotic vessels and cardiac tissue post-myocardial infarction.

- Generate new information on extracellular vesicles (microvesicles /exosomes) due to their specific feature as carriers of RNAs (miRNA, lncRNAs and mRNAs) and proteins derived from the parental cells providing precise bioprints of defined pathophysiological scenarios and consequently being ideal biomarker candidates of disease evolution.

- Studies on cardiovascular-disease associated soluble biomarkers (serum, plasma, urine) and microvesicles or lipoprotein carried molecular biomarkers by proteomic technologies based on liquid chromatography / bidimensional electrophoresis and mass spectrometry, lipidomic approaches by mass spectrometry

coupled to ultra performance liquid chromatography and, transcriptomic (mRNA, miRNA) studies based on array-systems and real-time PCR.

- Studies on biomarkers for diagnosis and prognosis of cardiovascular disease using specific quantitative techniques (confocal microscope, ELISA, multiplex assays, etc).
- Characterize molecular and functional mechanisms for selected biomarkers in cardiovascular pathology and myocardial remodeling (biology of systems).

Collaborations

Collaborations with other IIB Sant Pau research groups

- Molecular Pathology and Therapeutic of Ischemic and Atherothrombotic Diseases (PI: Lina Badimon; Gemma Vilahur)
- Pharmacological Research in Humans (PI: Rosa M Antonijoan)
- Clinical and Translational Cardiology (Xavier Garcia-Moll, Alessandro Sionis; Laura Lopez)
- Molecular Basis Cardiovascular Risk (PI: Francisco Blanco Vaca; Joan Carles Escolà)
- Internal Medicine Department- Infectious Diseases Unit (PI: Pere Domingo)

External collaborations

National Collaborations

- CIBER in the specific area of Cardiovascular Diseases (CIBERCV) CIBER-CB16/11/00411 Instituto de Salud Carlos III. CIBER. Since 2017 (Member of the Research Team 02)
- "Red Terapia Celular" - TERCEL - (RD16/0011/018). Instituto Carlos III - Fondo Europeo de Desarrollo Regional (FEDER). Since 2017.
- Fundación Hipercolesterolemia Familiar. Madrid. (Pedro Mata, Rodrigo Alonso, Leopoldo Perez-Isla, Raquel Arroyo and other members of SAFEHEART).
- Department of Rheumatology, Consorci Sanitari de Terrassa (CST). Terrassa, Bacerlona (Carmen Garcia-Gomez).
- Internal Medicine Department Lipids and Vascular Risk Units, University Hospital of Bellvitge, Hospitalet de Llobregat, Barcelona (Xavier Pinto).
- UCERV-UCAMI, Hospital Virgen del Rocío, Sevilla (Ovidio Muñiz).
- Department of Internal Medicine, Hospital Abente y Lago, A Coruña (Jose Luis Diaz-Diaz).
- Department of Internal Medicine . Hospital Clinic. Barcelona (Ramon Estruch).
- Department of Endocrinology and Nutrition, Institut d'Investigacions Biomèdiques August Pi Sunyer (IDIBAPS), Hospital Clínic, Barcelona, Spain. (Gemma Chiva-Blanch)
- Lipids Clinic, Department of Endocrinology, Hospital Clinic, Batcelona (Daniel Zambon)
- Internal Medicine Department, University Hospital of Bellvitge, Hospitalet de Llobregat, Barcelona (Francesc Formiga).
- Department of Cardiology, Thorax Institute, Hospital Clínic,

University of Barcelona, Spain (Salvatore Brugaletta, Victoria Martin-Yuste, Clarissa Cola, Manel Sabaté).

International Collaborations

- Platelet Research Center, Faculty of Health Sciences, University of Talca, Chile (Ivan Palomo, Eduardo Fuentes).
- TransBioLine consortium (IMI-Project)
- MeBiomarCare Consortium (EU-Project)
- COVIRNA consortium (EU-Project)
- School of Healthcare Science, Manchester Metropolitan University, Manchester, United Kingdom (Mark Slevin).

Active grants

- MARIA TERESA PADRO CAPMANY. Reparación de la matriz estructural miocárdica en el corazón infartado: Papel regulador de la Adipsina, una proteína de inmunidad innata asociada al matrisoma de la matriz extracelular. PI19/01687. Instituto de Salud Carlos III. Duration 2020-2022. 147.000,00 €.

Note: Total amount granted to PI. It does not include indirect costs

Other active grants

Competitive grants

- Project Title:Translational Safety Biomarker Pipeline Project (TRansBioLine) - (Competitive Project). Co-Financed by: "EU-Commission. IMI-JU (IMI2-2017-13-11)". Period (Years): obtained in 2018 (5-years) (starting February 2019). Co-Investigators IR-HSCSP: (Lina Badimon, Teresa Padro). Euros: 182.600,00 €
- Project Title: COVIRNA: A diagnostic test to improve surveillance and care of COVID-19 patients. Grant Agreement number 101016072. Financed by: "EU-Commission. H2020-SC1-PHE-CORONAVIRUS-2020-2 / H2020-SC1-PHECORONAVIRUS-2020-2-CNECT". Period (Years): Nov 2020-Nov 2022. Co-Investigators IR-HSCSP: (Lina Badimon, Teresa Padro; Pere Domingo; Gemma Vilahur, Gemma Arderiu). Euros: 250,000 €.
- Project Title: Prevention of Vascular Cognitive Impairment through Early Detection of Cardiovascular Diseases (ERA-CVD Joint Transnational Call 2020). Co-Financed by: Instituto de Salud Carlos III - (Proyectos de programación conjunta internacional 2020). Period (Years): 2021-2023. Co-Investigators IR-HSCSP: (Lina Badimon, Teresa Padro; Gemma Vilahur, Maria Borrell). Euros: 174.978,10 €.
- Project Title: Network of excellence for the development of advanced therapies for the treatment of myocardial infarctionsbased on regenerative medicine and 3d printing. Financed by: EU-Commission - Interreg Sudoe (SOE4/P1/E1063). Period (Years): 2021-2023. Co-Investigators IR-HSCSP: (Lina Badimon, Gemma Vilahur, Gemma Arderiu, Teresa Padro). Euros: 174.978,10 €.

Non-competitive Grants

- Project Title: Efectos del probiótico “AB-Life” sobre la cantidad y perfil de ácidos biliares, y el perfil lipídico y metabólico en sujetos sanos con sobrepeso moderado. Financed by: AB-BIOTICS. Period (Years): 2019-2022. Co- Principal Investigators IR-HSCSP: (Lina Badimon, Teresa Padro). Euros: 250.592,4 €.

- Title of the work “protecting immunomodulation in healthy adults: effects of beer intake on the inflammasome”. Award of “The Dutch Beer Institute”. Period (Years): 2020-2021. Principal Investigator: Teresa Padro. Award: 5000 €. Books or chapters with ISBN

- Badimon L, Mendieta G, Padro T, Vilahur G. Atherothrombosis: Disease Initiation, Progression, and Treatment (Chapter 134). Williams Hematology, 10th Edition. Eds: Kenneth Kaushansky, Marshall A. Lichtman, Josef T. Prchal, Marcel Levi, Linda J. Burns, David C. Linch. Ed: Mc Graw Hill Medical, 2021. ISBN: 978-1260464122

Awards

- Differential urine proteomic signature in early phase of renal damage in acute decompensated heart failure. E Diaz Riera, L Lopez, M García-Arguinzonis, G Vilahur, X Garcia-Moll, L Badimon, T Padró. 55th Annual Scientific Meeting. European Society for Clinical Investigation. Online event. Oral presentation Prize at ESCI’s 55TH Virtual ASM.

- Chairperson-Elect (2020-2022) in the Working Group on Microcirculation and Coronary Pathophysiology of the European Society of Cardiology (ESC).

- General Secretary (2020-2024) of the European and Mediterranean League against Thrombotic Diseases (EMLTD).

- Representative Member of the Working Group on Microcirculation and Coronary Pathophysiology in the Council on basic Sciences of the European Society of Cardiology (ESC).

Patents

- Lina Badimon Maestro; Judit Cubedo Ràfols; Teresa Padró Capmany. , Methods and kits for the diagnosis and risk stratification of patients with ischemia., KR1020187032609, International - Corea, 02/12/2021

- Lina Badimon Maestro; Judit Cubedo Ràfols; Teresa Padró Capmany, Methods and kits for the diagnosis and risk stratification of patients with ischemia., RU2018139780, International (Federacion Rusa), , 21/06/2021

- Lina Badimon Maestro; Judit Cubedo Ràfols; Teresa Padró Capmany., Methods and kits for the diagnosis and risk stratification of patients with ischemia., IL262245, International (Israel), 25/03/2021

- Lina Badimon Maestro; Judit Cubedo Ràfols; Teresa Padró Capmany, Antibodies specific for glycosylated APOJ and uses thereof, US20210388108., International. (Estados Unidos), , 16/12/2021

- Lina Badimon Maestro; Judit Cubedo Ràfols; Teresa Padró Capmany, Antibodies specific for glycosylated APOJ and uses thereof, 40050397A, , International (Hong Kong), , 24/12/2021

- Lina Badimon Maestro; Judit Cubedo Ràfols; Teresa Padró Capmany. , Antibodies specific for glycosylated APOJ and uses thereof, CN113366021, International (China), , 07/09/2021

- Lina Badimon Maestro; Judit Cubedo Ràfols; Teresa Padró Capmany. , Antibodies specific for glycosylated APOJ and uses thereof, EP3870614, , Europea, , 01/09/2021

- Lina Badimon Maestro; Judit Cubedo Ràfols; Teresa Padró Capmany, Antibodies specific for glycosylated APOJ and uses thereof., BR112021006516., International (Brasil), , 13/07/2021

- Lina Badimon Maestro; Judit Cubedo Ràfols; Teresa Padró Capmany, Methods and kits for the diagnosis and risk stratification of patients with ischemia , WO2017/178521, International, , 19/10/2017

- Lina Badimon Maestro; Judit Cubedo Ràfols; Teresa Padró Capmany, Methods and kits for the diagnosis and risk stratification of patients with ischemia , WO2017/178521, International, , 19/10/2017

- Lina Badimon Maestro; Judit Cubedo Ràfols; Gemma Vilahur; Teresa Padró Capmany, Prevention and/or treatment of ischemia or ischemia/reperfusion injury. , , WO/2017/157958, International, , 23/01/2019

- Lina Badimon; Judit Cubedo; Teresa Padró, Apolipoprotein J isoforms as biomarkers of organ damage, EP16382167.1, Nacional -España, 12/04/2016

- Lina Badimon Maestro; Judit Cubedo Ràfols; Gemma Vilahur Garcia; Teresa Padró Capmany, Prevention and/or treatment of ischemia or ischemia/reperfusion injury, US11,052,136, International (Estados Unidos),, 06/07/2021

Transfer products

Spin-offs

- Ivestatin Therapeutics SL (Feb 2021). Founders: Lina Badimon Maestro, Gemma Vilahur Garcia, Teresa Padro Capmany.

- Glycardial Diagnostics SL (Septembre 2017). Founders: Lina Badimon Maestro, Gemma Vilahur Garcia, Teresa Padro Capmany, Judit Cubedo Ràfols

Scientific production

- Arauna D, Chiva-Blanch G, Padro T, Fuentes E, Palomo I, Badimon L. Frail older adults show a distinct plasma microvesicle profile suggesting a prothrombotic and proinflammatory phenotype. *JOURNAL OF CELLULAR PHYSIOLOGY*. 2021; 236(3):2099-2108. DOI: 10.1002/jcp.29996. PMID: 32749745. IF:6,384 (Q1/D1).
- Cenko E, Badimon L, Bugiardini R, Claeys MJ, De Luca G, de Wit C, Derumeaux G, Dorobantu M, Duncker DJ, Eringa EC, Gorog DA, Hassager C, Heinzel FR, Huber K, Manfrini O, Milicic D, Oikonomou E, Padro T, Trifunovic D, Vasiljevic Z, Vavlukis M, Vilahur G, Tousoulis D. Cardiovascular disease and COVID-19: a consensus paper from the ESC Working Group on Coronary Pathophysiology & Microcirculation, ESC Working Group on Thrombosis and the Association for Acute Cardiovascular Care (ACVC), in collaboration with the European Heart Rhythm Association (EHRA). *CARDIOVASCULAR RESEARCH*. 2021; 117(14). DOI:10.1093/cvr/cvab298. PMID:34528075. IF:10,787 (Q1/D1).
- Chiva G, Pena E, Cubedo J, Garcia M, Pane A, Gil PA, Perez A, Ortega E, Padro T, Badimon L. Molecular mapping of platelet hyperreactivity in diabetes: the stress proteins complex HSPA8/Hsp90/CSK2 alpha and platelet aggregation in diabetic and normal platelets. *Translational Research*. 2021; 235. DOI:10.1016/j.trsl.2021.04.003. PMID:33887528. IF:7,012 (Q1/D1).
- Chiva G, Vilella A, Padro T, Formiga F, Ferrer A, Badimon L. Functional and Cognitive Decline Is Associated With Increased Endothelial Cell Inflammation and Platelet Activation: Liquid Biopsy of Microvesicles in Community- Dwelling Octogenarians. *Frontiers in Cell and Developmental Biology*. 2021; 9:716435. DOI:10.3389/fcell.2021.716435. IF:6,684 (Q1/D2).
- Davidson SM, Padro T, Bollini S, Vilahur G, Duncker DJ, Evans PC, Guzik T, Hoefler IE, Waltenberger J, Wojta J, Weber C. Progress in cardiac research: from rebooting cardiac regeneration to a complete cell atlas of the heart. *CARDIOVASCULAR RESEARCH*. 2021; 117(10). DOI:10.1093/cvr/cvab200. PMID:34114614. IF:10,787 (Q1/D1).
- Escate R, Padro T, Suades R, Camino S, Muniz O, Diaz JL, Sionis A, Mata P, Badimon L. High miR-133a levels in the circulation anticipates presentation of clinical events in familial hypercholesterolaemia patients. *CARDIOVASCULAR RESEARCH*. 2021; 117(1). DOI:10.1093/cvr/cvaa039. PMID:32061123. IF:10,787 (Q1/D1).
- Flores EJ, Ortega L, Cepas PL, Giacchi G, Padro T, Badimon L, Sabate M, Brugaletta S. Endothelial Progenitor Cell Function in Patients With Coronary Chronic Total Occlusion and its Relationship With Collateral Circulation. *JOURNAL OF INVASIVE CARDIOLOGY*. 2021; 33(10). PMID:34544035. IF:2,022 (Q3/D8).
- Garcia M, Diaz E, Pena E, Escate R, Juan O, Mata P, Badimon L, Padro T. Alternative C3 Complement System: Lipids and Atherosclerosis. *INTERNATIONAL JOURNAL OF MOLECULAR SCIENCES*. 2021; 22(10):5122. DOI:10.3390/ijms22105122. PMID:34066088. IF:5,923 (Q1/D3).
- Munoz N, Escate R, Badimon L, Padro T. Moderate Beer Intake Downregulates Inflammasome Pathway Gene Expression in Human Macrophages. *Biology-Basel*. 2021; 10(11):1159. DOI:10.3390/biology10111159. PMID:34827151. IF:5,079 (Q1/D2).
- Padro T, Munoz N, Pena E, Badimon L. Sex Differences and Emerging New Risk Factors for Atherosclerosis and Its Thrombotic Complications. *CURRENT PHARMACEUTICAL DESIGN*. 2021; 27(29). DOI:10.2174/1381612826666201118094209. PMID:33213315. IF:3,116 (Q3/D6).
- Perez de Isla L, Alonso R, de Diego JJG, Muniz O, Diaz JL, Zambon D, Miramontes JP, Fuentes F, de Andres R, Werenitzky J, Padro T, Saltijeral A, Mata P. Coronary plaque burden, plaque characterization and their prognostic implications in familial hypercholesterolemia: A computed tomographic angiography study. *ATHEROSCLEROSIS*. 2021; 317. DOI:10.1016/j.atherosclerosis.2020.11.012. PMID:33261814. IF:5,162 (Q1/D3).
- Perez de Isla L, Watts GF, Alonso R, Diaz JL, Muniz O, Zambon D, Fuentes F, de Andres R, Padro T, Lopez J, Mata P. Lipoprotein(a), LDL-cholesterol, and hypertension: predictors of the need for aortic valve replacement in familial hypercholesterolaemia. *EUROPEAN HEART JOURNAL*. 2021; 42(22). DOI:10.1093/eurheartj/ehaa1066. PMID:33437997. IF:29,983 (Q1/D1).
- Rodriguez L, Badimon L, Mendez D, Padro T, Vilahur G, Pena E, Carrasco B, Vogel H, Palomo I, Fuentes E. Antiplatelet Activity of Isorhamnetin via Mitochondrial Regulation. *Antioxidants*. 2021; 10(5):666. DOI:10.3390/antiox10050666. PMID:33922903. IF:6,312 (Q1/D1).

Other publications

- Padro T, Munoz N, Badimon L. The role of triglycerides in the origin and progression of atherosclerosis. *Clinica E Investigacion En Arteriosclerosis*. 2021; 33. DOI:10.1016/j.arteri.2021.02.007. PMID:34006350.

Communication and dissemination activities

Congresses – Invited Speaker

- Teresa Padro; “Ischaemic Heart Disease: The risk of being woman”. 55th Annual Scientific Meeting – ESCI Virtual 2021 – 9-11 June 2021
- Teresa Padro. “Circulating micro RNAs in subjects at high cardiovascular risk”
- Joint session with the ESC Working Group on Coronary Pathophysiology & Microcirculation’ (22 October 2021). XXIII Congress of the Cardiology society of Serbia (21-24 October 2021)

Congresses – Contributions

• E Díaz Riera, L Lopez, M García-Arguinzonis, G Vilahur, X Garcia-Moll, L Badimon, T Padró. Differential urine proteomic signature in early phase of renal damage in acute decompensated heart failure. 55th Annual Scientific Meeting. European Society for Clinical Investigation. Online event. Oral Presentation

Courses – Invited Speaker

• Teresa Padro; New insights into the pathophysiology of VTE Teresa Padró (Spain) in the session Recent Advances in VTE pathophysiology and treatment.

• Advance Learning on Platelets & Thrombosis International Course (ALPIC 2021).

Congresses – Chairperson

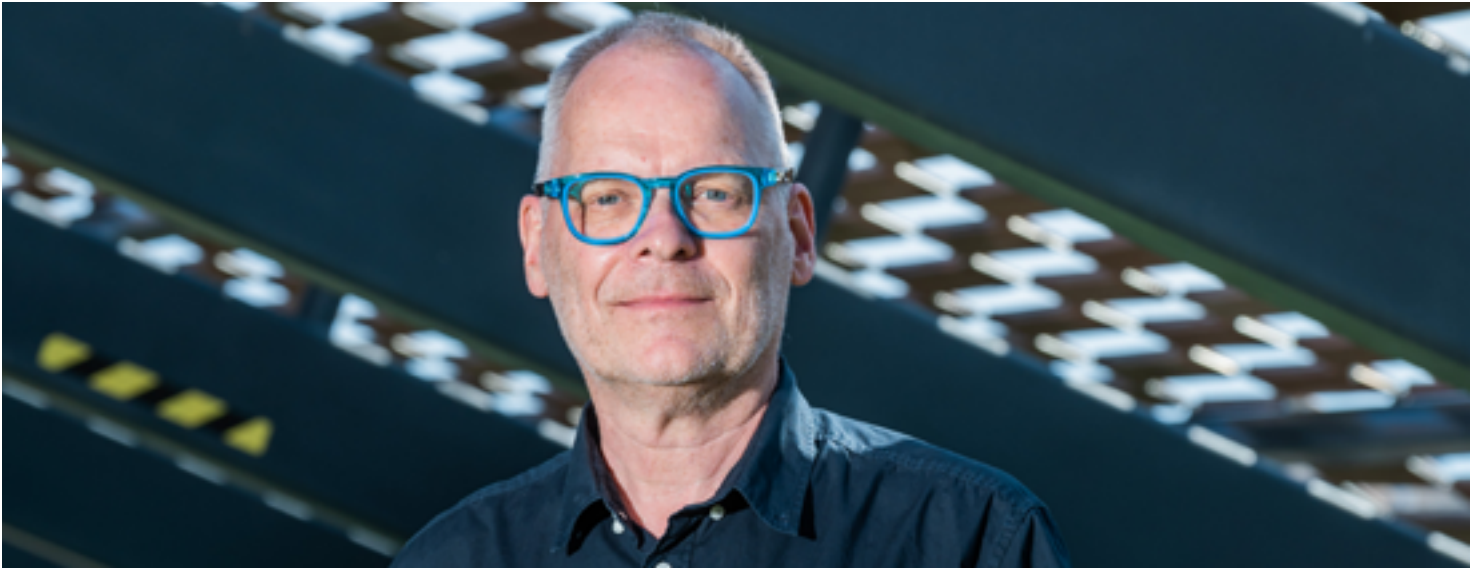
• Teresa Padro : Chairperson in the Session “El potencial de las nuevas herramientas de investigación : EWAS, microRNA-arrays, y RNA-cell-seq” during the Track in Basic Sciences (Virtual Edition, 28th October) during the Spanish Society of Cardiology (SEC-2021, 28th -30th October 2021)

• Teresa Padro: Chairperson in the Session “Teresa Padro : Chair-person in the Session “Epidemiología, modelos de organización de la asistencia y nuevas aportaciones científicas” in the Congress of the Spanish Society of Cardiology (SEC-2021, 28th -30th October 2021)

• Teresa Padro : Chairperson in the Session “Immunothrombosis” in the International Congress on Thrombosis (ICT2021- Virtual Edition, 27-28 November 2022) of the European and Mediterranean League Against Thrombotic Diseases (EMLTD)

• Teresa Padro: Jury member of the Young Investigator Award Session in Coronary Pathophysiology and Microcirculation of the European Society Cardiology. (year 2021), during the ESC Congress (ESC-2021- Virtual Edition)

• Teresa Padro: Chairperson during the “ Young Investigator Award Session in Coronary Pathophysiology and Microcirculation” of the European Society Cardiology. (year 2021), during the ESC Congress (ESC-2021- Digital Edition)



Regulation of Cardiac Rhythm and Contraction

Coordinator

Hove-Madsen, Leif CSIC
lmadsen@santpau.cat

Members

Casabella Ramón, Sergi CSIC
Izquierdo Castro, Paloma CSIC

Main lines of research

- Receptor-mediated changes in intracellular calcium homeostasis in atrial fibrillation.
- Contribution of genetic variants to electrical remodelling and cardiac arrhythmogenesis.
- Effects of development, sex and ageing on calcium handling in cardiac myocytes.
- Detection of events and patterns in live-cell imaging signals
- Mathematical modeling of calcium homeostasis and electrical activity in cardiac myocytes.

Scientific challenges

Our goal is to consolidate the group as a reference in research on calcium handling in atrial fibrillation and to establish it

within other lines of research by including emerging technology and fields of research. Specifically we aim to:

- Develop computational tools and models to improve the analysis and understanding of intracellular calcium handling in cardiac myocytes.
- Incorporate emerging technology such as stretching and measurements of force development in single cardiomyocytes.
- Consolidate current national and international collaborations and establish new strategic collaborations within emerging fields of research such as the use of super-resolution fluorescence imaging (STORM, STED-techniques) and the detection and role of Reactive Oxygen Species in diseased cardiomyocytes.

- Achieve international funding for incorporation of scientific expertise and participation in multidisciplinary international research projects.

Collaborations

Collaborations with other IIB Sant Pau research groups

- Clinical and Translational Cardiology. Collaboration on the impact of cardiovascular risk factors, concurrent disease and pharmacological treatments on calcium homeostasis and electrical activity in human atrial myocytes.
- Regulatory mechanisms of cardiovascular remodelin. Collaboration on the role of NOR-1 as a modulator of intracellular calcium homeostasis and its contribution to the development of hypertrophy and cardiac arrhythmia.

External collaborations

- Professor Glen F. Tibbits' groups @ Dept. Biomedical Physiology and Kinesiology, Simon Fraser University and the Cellular and Regenerative Medicine Centre (CRMC), BC Children's Hospital Research Institute, Vancouver, Canada: Current collaboration uses human stem cell-derived cardiomyocytes to study the functional electrophysiological effects of single nucleotide polymorphisms and mutation causing cardiac arrhythmias in humans.
- Professor SR Wayne Chen's group @ Dept. Physiology and Pharmacology, University of Calgary, Canada: Current collaboration investigates molecular mechanisms underlying arrhythmogenesis in cardiomyocytes from transgenic mice with GFP-tagged ryanodine receptors (RyR) or carrying mutations in the RyR that cause cardiac arrhythmias in humans.
- Professor Raúl Benítez's group @ Dept. Automatic Control, Universitat Politècnica de Catalunya, Spain: Current collaboration aims to develop new tools for spatio-temporal analysis of fluorescent signals in live-cell imaging experiments using isolated cells or cell cultures.
- Professor Blas Echebarria's group @ Dept Physics, Universitat Politècnica de Catalunya. Current collaboration aims to develop realistic mathematical myocyte models to investigate how the spatio-temporal regulation of calcium homeostasis and electrical activity is modulated.
- Professor Morten S. Olesens' group @ Dept Biomedical Sciences, Copenhagen University, Denmark. Current collaboration investigates the impact of single nucleotide polymorphisms on electrophysiological function in native human atrial myocytes.

Active grants

- Title: Impact of Genetic and Clinical Risk on Molecular Signaling and Electrophysiological Dysfunction in Atrial Fibrillation. Financing entity: National R + D + I Plan. PID2020-

116927RB-C21. 181,500€ Coordinator and PI: Leif Hove-Madsen. From: 01/09/2020 – 31/08/2024.

- Title: Catecholaminergic polymorphic ventricular tachycardia (CPVT): arrhythmogenic mechanisms and personalized intervention. Financing entity: Canadian Institutes of Health Research CIHR- 451191 924,120 \$Cnd. PI: Glen F Tibbits; Participating Scientist: Leif Hove-Madsen, 2021-2026 (5 years).
- Title: Filling the translational gap: Single nucleotide polymorphisms as biomarkers and targets for personalized treatment of electrophysiological defects in atrial fibrillation. Financing entity: National R + D + I Plan. SAF2017-88019_C3-1-R. 121,000€. Coordinator and PI: Leif Hove-Madsen. From: 01/01/2018 – 30/09/2021.
- Title: Anàlisi i control del ritme cardíac (ANCORA), Grup de recerca Pre-consolidat. Financing entity: Generalitat de Catalunya. SGR2017-1769. 15,000€. PI: Leif Hove-Madsen. From: 01/01/2018 – 30/09/2021.
- Title: CIBER CARDIOVASCULAR, CB16/11/00276. PI: José Geurra; Participating Scientist: Leif Hove-Madsen. Since: 01/01/2017.

Doctoral theses

- Carme Nolla Colomer, Anàlisi de patrons funcionals i estructurals en la regulació del calci en les cèl.lules cardíques, Universitat Politècnica de Catalunya, Leif Hove-Madsen & Raúl Benítez, 28/05/2021
- Verónica Jiménez Sábado, Impacto de SNPs (Single Nucleotide Polymorphisms) sobre la homeostasis del calcio intracelular y la actividad eléctrica en miocitos auriculares humanos, Universidad de Barcelona, Leif Hove-Madsen, 19/07/2021

Scientific production

- Godoy H, Duroux R, Jacobson KA, Soler C, Colino H, Jimenez V, Montiel J, Hove L, Ciruela F. Adenosine A(2A) Receptors Are Upregulated in Peripheral Blood Mononuclear Cells from Atrial Fibrillation Patients. *INTERNATIONAL JOURNAL OF MOLECULAR SCIENCES*. 2021; 22(7):3467. DOI:10.3390/ijms22073467. PMID:33801676. IF:5,923 (Q1/D3).
- Herraiz A, Tarifa C, Jimenez V, Llach A, Godoy H, Colino H, Nolla C, Casabella S, Izquierdo P, Benitez I, Benitez R, Rosello E, Rodriguez E, Vinolas X, Ciruela F, Cinca J, Hove L. Influence of sex on intracellular calcium homeostasis in patients with atrial fibrillation. *CARDIOVASCULAR RESEARCH*. 2022; 118(4). DOI:10.1093/cvr/cvab127. PMID:33788918. IF:10,787 (Q1/D1).
- Reinhardt F, Beneke K, Pavlidou NG, Conradi L, Reichen-spurner H, Hove L, Molina CE. Abnormal Calcium Handling in Atrial Fibrillation Is Linked to Changes in Cyclic AMP Dependent

Signaling. *Cells*. 2021; 10(11):3042. DOI:10.3390/cells10113042. PMID:34831263. IF:6,600 (Q2/D3).

• Rosello E, Hove L, Perez V, Munoz C, Artigas V, Padro JM, Dominguez E. Mitochondrial genetic effect on atrial fibrillation: A case-control study. *MITOCHONDRION*. 2021; 56. DOI:10.1016/j.mito.2020.11.007. PMID:33171269. IF:4,160 (Q2/D4).

• Senis E, Esgleas M, Najas S, Jimenez V, Bertani C, Gimenez M, Escriche A, Ruiz J, Hergueta M, Jimenez M, Giralt A, Nuciforo P, Alba MM, Peinado H, Toro DD, Hove L, Goetz M, Abad M. TUNAR lncRNA Encodes a Microprotein that Regulates Neural Differentiation and Neurite Formation by Modulating Calcium Dynamics. *Frontiers in Cell and Developmental Biology*. 2021; 9:747667. DOI:10.3389/fcell.2021.747667. PMID:35036403. IF:6,684 (Q1/D2).

• Sun B, Yao JJ, Ni MK, Wei JH, Zhong XW, Guo WT, Zhang L, Wang RW, Belke D, Chen YX, Lieve KVV, Broendberg AK, Roston TM, Blankoff I, Kammeraad JA, von JC, Lazarte J, Vallmitjana A, Bohne LJ, Rose RA, Benitez R, Hove L, Napolitano C, Hegele RA, Fill M, Sanatani S, Wilde A, Roberts JD, Priori SG, Jensen HK, Chen SRW. Cardiac ryanodine receptor calcium release deficiency syndrome. *Science Translational Medicine*. 2021; 13(579):eaba7287. DOI:10.1126/scitranslmed.aba7287. PMID:33536282. IF:17,956 (Q1/D1).

• Wei JH, Yao JJ, Belke D, Guo WT, Zhong XW, Sun B, Wang RW, Estillore JP, Vallmitjana A, Benitez R, Hove L, Alvarez E, Echebarria B, Chen SRW. Ca²⁺-CaM Dependent Inactivation of RyR2 Underlies Ca²⁺ Alternans in Intact Heart. *CIRCULATION RESEARCH*. 2021; 128(4). DOI:10.1161/CIRCRESAHA.120.318429. PMID:33375811. IF:17,367 (Q1/D1).

Other publications

• Herraiz-Martínez A, Tarifa C, Lozano-Velasco E, Jiménez-Sábado V, Casabella S, Hernández-Torres F, Daimi H, Vázquez Ruiz de Castroviejo E, Delpón E, Caballero R, Aránega A, Franco D and Hove L. Novel PITX2 Homeodomain-Contained Mutations from ATRIAL Fibrillation Patients Deteriorate Calcium Homeostasis. *Hearts*. 2021; 2(2):251-269. DOI: 10.3390/hearts2020020

• Arslanova A, Shafaattalab S, Ye K, Asghari P, Lin L, Kim B, Roston TM, Hove L, Van F, Sanatani S, Moore E, LYNNF, Søndergaard M, Luo Y, Chen SRW, Tibbits GF. Using hiPSC-CMs to Examine Mechanisms of Catecholaminergic Polymorphic Ventricular Tachycardia. *Current Protocols*. 2021; 1(12):e320. DOI:10.1002/cpz1.320. PMID:34958715.



Lipids and Cardiovascular Pathology

Coordinator

Llorente Cortes, Concepcion Vicenta CSIC
 cllorente@santpau.cat

Members

Benitez Amaro, Aleyda	CSIC	La Chica Lhoëst, Maria Teresa	CSIC
Claudi, Lene	ENTITAT EXTERNA	Ni, Jiaqui	CSIC
García Rodríguez, Jesús Eduardo	IR		

Main lines of research

- Molecular mechanisms involved in the modulation of LRP1 by cardiovascular risk factors.
- Impact of LRP1 functionality on vascular and myocardial cholesterol accumulation.
- Impact of lipoproteins on LRP1-Intracellular signal pathways under normoxic and hypoxic conditions.
- Alterations in LRP1 expression and LRP1-intracellular signal pathways in hypoxia/ ischaemia in in vitro and in vivo models.
- Lipids and diabetic cardiomyopathy.
- Lipids and cancer.
- LRP1 in cardiometabolic alterations.
- Circulating non-coding RNAs as biomarkers of cardiovascular disease.
- Non-coding RNAs as biomarkers of coronary artery disease.
- Non-coding RNAs as cardiomyopathy biomarkers

Scientific challenges

- Integrate genomic and functional in vivo studies to validate LRP1 as a new therapeutic target and potential biomarker in cardiometabolic diseases
- Identify and validate circulating non-coding RNAs as potential biomarkers in cardiovascular diseases

- Maintain and amplify relationship with clinicians regarding translation in cardiometabolism.
- Maintain and strengthen national and international collaborations to set up future applications for European funding.
- Establish collaborations with companies with the aim of developing new products useful for prognosis, diagnosis and treatment of cardiometabolic diseases.

Collaborations

Collaborations with other IIB Sant Pau research groups

- Clinical and Translational Cardiology
- Cardiovascular Biochemistry
- Lipids and Cardiovascular Pathology
- Inflammatory Diseases
- Cardiac Imaging Unit - Hospital de la Santa Creu i Sant Pau
- Endocrinology and Nutrition Service - Hospital de la Santa Creu i Sant Pau
- Pathological Anatomy Service - Hospital de la Santa Creu i Sant Pau

External collaborations

National Collaborations

- Regulación mitocondrial de la muerte celular. IIBB-CSIC
- Dianas moleculares del Cáncer. IIBB-CSIC

International Collaborations

- Equipe PHYPOL (Université de Toulouse), France.
- Centro de Investigaciones en Bioquímica Clínica e Inmunología. Universidad Nacional de Córdoba, Argentina.

Active grants

- CONCEPCION VICENTA LLORENTE CORTES. Translational Molecular Imaging for Detection of Cholesterol Entrapment in the Vasculature with ⁶⁸Ga-labeled LRP1-derived Peptides (PlaqueCHOL).. BBVA 2019. Fundación BBVA. Duration 2020-2023. 113.637,00 €.

Note: Total amount granted to PI. It does not include indirect costs.

Other active grants

- Project: Differential LRP1 interactome in Foam Vascular Smooth Muscle cells as a source of coronary risk biomarkers in liquid biopsy. Entidad financiadora: Instituto de Salud Carlos III. FIS PI21/01523. PI: Vicenta Llorente Cortes. 03/01/2022 - 31/12/2024. Amount: 214.170 €
- Project: El LRP1 como mediador de los efectos proinflamatorios de la LDL modificada electronegativa en la arteriosclerosis. Beca de Investigación Básica de la Sociedad Española de

Arteriosclerosis 2021. Co-PIs: Sonia Benitez and Vicenta Llorente Cortes. 01/09/2021 - 29/09/2023. Amount: 15.000 €

- Project: Análisis de las interacciones proteicas con el receptor LRP1 como fuente de nuevos biomarcadores de arteriosclerosis coronaria en pacientes en los que se realiza un estudio de tomografía computarizada (Beca de Investigación Clínica de la Academia de Ciencias Médicas de Cataluña y de las Islas Baleares 2021). PI: David Vilades. 01/04/2021 - 31/03/2023. Amount: 30.000 €.
- Project: The connection between cardiac LRP1 and circulating atrial natriuretic peptide (ANP) levels as a source of new diagnostic and therapeutic opportunities in type 2 diabetes. Instituto de Salud Carlos III. FIS PI 18/01584. PI: Vicenta Llorente Cortes. 01/01/2019 - 31/12/2021. Amount: 159.720 €
- Project: Enfermedades Metabólicas y Cáncer. MINECO RED2018-102799-T. Coordinator: Jose Carlos Fernández-Checa. 01/01/2019 - 31/12/2021. Amount: 20.000 €

Patents

- Vicenta Llorente Cortés; Teresa Tarrago; Roger Prades; Chiara Pallara; Título propiedad industrial registrada: Vascular Cholesterol inhibitors Tipo de propiedad industrial: Patente de invención. Entidad titular de derechos: Consejo Superior de Investigaciones Científicas. Date: 06/05/2019. Patent UE: Si, N° de solicitud: EP19382335.8, Patente UE: Si, 06/05/2019.

Scientific production

- Amaro AB, Curco AS, Garcia E, Julve J, Rives J, Benitez S, Cortes VL. Apolipoprotein and LRP1-Based Peptides as New Therapeutic Tools in Atherosclerosis. *Journal of Clinical Medicine*. 2021; 10(16):3571. DOI:10.3390/jcm10163571. PMID:34441867. IF:4,241 (Q1/D3).
- Gamboa R, Jaramillo MJ, Martinez MD, Soto ME, Torres YE, de Gonzalo D, Del Valle L, Lopez R, Llorente VC, Huesca C. Monocyte Low-Density Lipoprotein Receptor-Related Protein 1 (LRP1) Expression Correlates with cIMT in Mexican Hypertensive Patients. *Arquivos Brasileiros de Cardiologia*. 2021; 116(1). DOI:10.36660/abc.20190535. PMID:33566965. IF:2,000 (Q4/D8).
- Lopez JN, Couselo M, Baluja A, Gonzalez L, Rozados A, Llorente V, de Gonzalo D, Guerra JM, Vilades D, Leta R, Martinez JL, Garcia FJ, Fernandez XA, Gonzalez JR, Eiras S, Rodriguez M. Sex-related differences of fatty acid-binding protein 4 and leptin levels in atrial fibrillation. *EUROPACE*. 2021; 23(5). DOI:10.1093/europace/eaab284. PMID:33319222. IF:5,214 (Q2/D3).

Communication and dissemination activities

Conferences - Invited Speaker

- Speaker at Curso de Verano de la Universidad Europea Miguel de Cervantes con la conferencia "Niveles de colesterol y susceptibilidad al virus Sars-CoV-2". Venue: Universidad Europea Miguel de Cervantes. 19/07/2021.

- Speaker at 5th Barcelona VPH Summer School 7-11, June 2021. "New Molecular Biomarkers and Therapeutic Targets in Atherosclerosis". Organiser: UPF and Instituto VPH. Venue: Universitat Pompeu i Fabra, Barcelona. 07/06/2021.

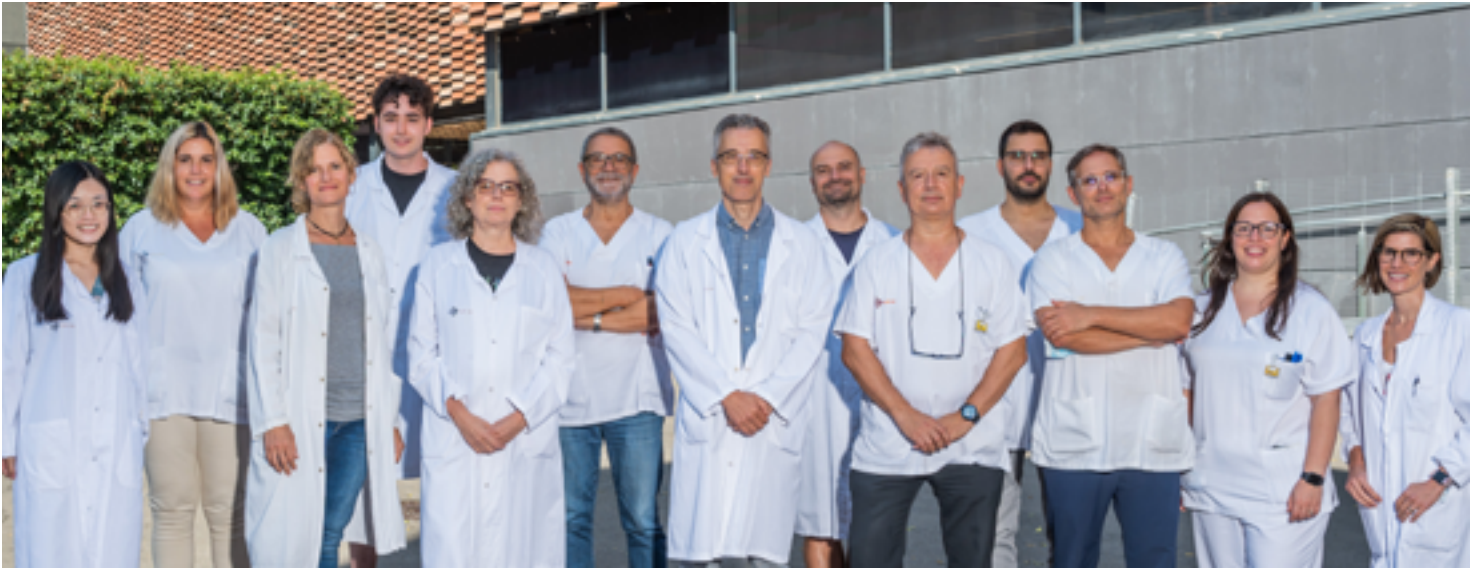
Communications in conferences

- Characterization of cholesteryl ester-loaded human coronary vascular smooth muscle cell secretome. A source of potential biomarkers of coronary artery disease. 89th European Atherosclerosis Society Congress (EAS). Online. 30/05/2021 - 02/06/2021. Organiser: European Atherosclerosis Society (EAS). Authors: E García; A Benitez Amaro; C Pallara; R Prades; T Tarrago; G Espadas García; E Sabido; V Llorente Cortes.

- Identificación de proteínas circulantes con especificidad diagnóstica de presencia vascular de células musculares lisas espumosas y progresión de enfermedad arterial coronaria. XXXIII Congreso de la Sociedad Española de Arteriosclerosis. Online. 07-10/06/2021. Organiser: Sociedad Española de Arteriosclerosis. Authors: E García; A Benitez Amaro; J Piñero González; L Claudi; G Espadas; E Sabidó; D Vilades; V Llorente Cortes.

- La optimización del control metabólico disminuye los niveles circulantes del receptor LRP1 (sLRP1) y del índice sLRP1/ANP en pacientes con diabetes tipo 2 (DM2). XXXII Congreso de la Sociedad Española de Diabetes. Venue: Granada, España. 16-18/06/2021. Organiser: SOCIEDAD ESPAÑOLA DE DIABETES. Authors: P Gil; E García; I Miñambres; A Benitez Amaro; C Rodríguez; L Claudi; JL Sanchez Quesada; A Perez; V; Llorente Cortes.

- El bloqueo de la interacción de las lipoproteínas aterogénicas con el receptor LRP1 impide la generación de resistencia a la insulina en el corazón. 21 Congreso de la Sociedad Española de Cardiología (SEC). Venue: Zaragoza, España. 28-30/10/2021. Organiser: Sociedad Española de Cardiología. Authors: Benitez Amaro; V Actis Dato; E Garcia; A Iborra; JC Escola Gil; G Chiabrande; V Llorente Cortes.



Genomics of Complex Diseases

Coordinator

Soria Fernandez, Jose Manuel IR
jsoria@santpau.cat

Members

Alcolea Ruiz, Sonia	IR	Lopez Moreno, Sonia	IR
Aloy Ortiz, Carme	ENTITAT EXTERNA	Martinez Perez, Angel	IR
Camacho Perez De Madrid, Maria Mercedes	IR	Paüls Verges, Ferran	IR
Cardenas Yebra, Antonio	IR	Rodríguez Rius, Alba	IR
Dilme Muñoz, Jaume Felix	FGS	Romero Carro, Josep Maria	FGS
Escudero Rodriguez, Jose Roman	FGS	Sabater Lleal, Maria	IR
Fité Matamoros, Joan	FGS	Soto Carricas, Begoña	FGS
Lloret Cano, María Dolores	ENTITAT EXTERNA	Temprano Sagrera, Gerard	IR

Main lines of research

Angiology and Vascular Biology

- TAGA Project: Genomic basis of Abdominal Aortic Aneurysm.

Thrombosis and Thrombosis and Cancer

- GAIT Project: Genetic Analysis of Idiopathic Thrombophilia.
- RETROVE Project: Risk of Venous Thromboembolic Disease.
- OncoThromb Project: New biomarkers related with Thrombosis and Cancer.

- AIRTOP and MIRTO Projects: Assesment of the Individual Risk of Thrombosis in Oncology Patients.

Thrombosis and Covid 19

- PRECIS_Covid 19 Project
- SCOURGE_Covid 19 Consortium
- EASI_Genomics Consortium
- Host Genetic Initiative HG_Consortium

Genomics in sport medicine

- MMIT Project (Health in sport and its limits): Marathons and Ultra-trail races. Biological, genetic and clinical impact.
- SHERPA_Everest Project. Exposition to extreme environmental hypoxia and its effect on the inflammatory and cardiopulmonary response: Biological, genetic and clinical impact.
- Xtreme-Genetics K2 project. Expedition to K2 peak. Biological, genetic and clinical impact.

Transversal research areas

- Bioinformatics (Data Science)
- Personalized Medicine

Scientific challenges

- Analysis of Omics data (Genomics, transcriptomics, epigenomics) in the field of complex diseases with translational approach in cooperation with clinical groups.

- Identify new biomarkers (genetic, epigenetic and/or plasmatic) that determine the susceptibility to complex diseases.

- Identify new mechanisms involved in the development and progression of complex diseases.

- Development of predictive algorithms that integrate the genetic, biological and clinical information of the patients (Personalized Medicine).

Collaborations

Collaborations with other IIB Sant Pau research groups

- Thrombosis and Haemostasis, Dr JC. Souto: GAIT, MIRTO, RETROVE Projects.
- Stroke Pharmacogenomics and Genetics, IR Sant Pau. Dr I. Fernandez Cadenas
- Neurology, Dr J. Marti: MIRTO Project. Elena Jimenez: Lipoproteic biomarkers. ICTUS.
- Clinical Hematology, Dr J. Sierra: MIRTO Project.
- Otorhinolaryngology. Dr M Quer and Dr. X Leon. Prediction of response to head and neck cancer.
- Regulatory Mechanisms of Cardiovascular Remodeling. Dr C. Rodriguez. and Dr M. Galán
- Participation in CIBERCV, CIBER de Enfermedades Cardiovasculares. Dr J. Gonzalez
- Clinical Pharmacology, Dr M.A. Mangues, M. Gomis: Cancer and Thrombosis Projects.
- Pathophysiology of lipid-related disease Group. Dr JC Escolá, Dr J Julve

External collaborations

- Clinical Oncology Department, Hospital Gregorio Marañón, Madrid. Dr. A. Muñoz: ONCOTHROMB, AIRTOP Projects.

- Clinical Department of Hematology and Hemostasis. University of Wien, Austria. Dra. Ingrid Pabinger. ONCOTHROMB, MIRTO Projects.
- SciLifeLab, Sweden. Dr Jochen Schwenk.: GAIT Project.
- Department of Genetics, University of Genève, Switzerland, Dr. M. Dermitzakis: GAIT Project.
- University of Newcastle, UK. Ana Viñuela: GAIT Project
- Institute of Biological Psychiatry, Sankt Hans Hospital. Roskilde, Denmark, Dr. A. Buil: Bioinformatics of Complex diseases. GAIT Project.
- INSERM UMR_S1219 - Bordeaux Public Health Center. Bordeaux, France. Dr. DA. Tregouet: GAIT, VEREMA Projects.
- Laboratory Haematology, Hospital Timone Marseille, France, Dr. P. Morange: GAIT, VEREMA Projects.
- Haematology Department, Karolinska Hospital, Sweden, Dr. J.Odeberg: VEREMA Project.
- Hospital Clinic de Barcelona. Neumology Service. Dr. O. Sibila. SUMMIT and SHERPA Projects
- Hospital Clinic de Barcelona, Otorhinolaryngology service. Dr. Francesc Xavier Avilés-Jurado
- Hospital Valle Hebrón. Barcelona. Vascular Surgery Service. Dr. S. Bellmunt.
- Unit of Biophysics. Dpt of Biochemistry and Molecular Biology. Faculty of Medicine, UAB. Dr. Ramón Barnadas Rodriguez.
- Banc de Sang i Teixits (BST). Dr. F Vidal.
- Centre de Recerca en Enginyeria Biomèdica, Universitat Politècnica de Catalunya, Barcelona, Dr. A. Perera: SUMMIT Project.
- CAR, Centre d'Alt Rendiment, Sant Cugat. Dr. Francheck Drobic: Sport Medicine Projects.
- CEGEN. Dr Angel Carracedo, Dra. Inés Quintela. SCOURGE Covid 19 Project
- CNAG. Dr. Ivo Gut. EASI Covid 19 Project
- National Institute of Bioinformatics. ISCIII. Madrid. Dr. Francisco Valencia
- Stanford University, School of Medicine. California. USA. HLA_Covid 19 Project
- Paul de Vries, Nicholas L Smith. Working Grup d'hemostàsia in The Cohorts for Heart and Aging Research in Genomic. Epidemiology (CHARGE) Consortium (US).
- Genetics Consortia GIANT: Global Lipids (GLGC) and AAAgen.
- INVENT consortium of Venous Thrombosis. Nicholas L Smith, David Tregouet
- Dr Sergi Bellmunt (Hospital Vall d'Hebrón) and Dra. Laura Calsina (Hospital del Mar). Novel omics approach to predict abdominal aortic aneurysm growth and rupture (OMIC-AAA) Project.
- Dr Rebecka Hultgren (KI), and Dr. Lars Maegdefessel (TUM), Karolinska Institutet, Stockholm and Technical University of Munich. IDEA Project: Improving Diagnostic Efficiency in AAA Patients.
- Leo-Pharma Company. Prediction of Thrombosis Risk in cancer patients.
- GenIncode Company. Development of Genetic Diagnostics in Thrombosis.
- Labs ROVI. Thrombosis and COVID19

Active grants

- MARIA SABATER LLEAL. Identification of novel biomarkers and genetic pathways involved in Abdominal Aortic Aneurysm.. CP17/00142(P). Instituto de Salud Carlos III. Duration 2018-2021. 99.000,00 €.
- MARIA SABATER LLEAL. Contractes d'Investigadors "Miguel Servet tipo I" 2017.. CP17/00142. Instituto de Salud Carlos III. Duration 2018-2023. 202.500,00 €.
- MARIA MERCEDES CAMACHO PEREZ DE MADRID. Laboratorio de Angiología, Biología Vascular e Inflamación.. 2017 SGR 01243. Agència de Gestió d'Ajuts Universitaris i de Recerca. Duration 2017-2021. 0,00 €.
- JOSE MANUEL SORIA FERNANDEZ. Unitat de Genòmica de Malalties Complexes.. 2017 SGR 01736. Agència de Gestió d'Ajuts Universitaris i de Recerca. Duration 2017-2021. 0,00 €
- MARIA SABATER LLEAL. Population genomic variation, functional biology and the risk of venous thrombosis.. HL134894. National Institute of Health (NIH). Duration 2018-2021. 56.503,06 €.
- MARIA SABATER LLEAL. Nuevo enfoque ómico para predecir el crecimiento y la rotura del aneurisma aórtico abdominal.. PID2019-109844RB-I00. Ministeri de Ciència, Innovació i Universitats. Duration 2020-2023. 110.000,00 €.
- JOSE MANUEL SORIA FERNANDEZ. Un enfoque genómico de e-Health en la trombosis asociada al cáncer (Proyecto ONCOTHROMB_2).. PI20/00325. Instituto de Salud Carlos III. Duration 2021-2023. 132.000,00 €.
- JOSE MANUEL SORIA FERNANDEZ. Validación del Proyecto MIRTO (Modeling the Individual Risk of Thrombosis in Oncology).. PI17/00059. Instituto de Salud Carlos III. Duration 2018-2021. 112.000,00 €.

Note: Total amount granted to PI. It does not include indirect costs.

Other active grants

- THROMBO_COVID19. Labs ROVI. IP: JM Soria. Pis. JC Souto, M Sabater, M Camacho. 2021-2022.
- 2014-2021. Red de Innovación en Tecnologías Sanitarias (ITEMAS). ISCIII Nodo Sant Pau. PI: JM Soria.
- 2020-2023. Project iDATA. Infraestructuras de Medicina Predictiva del ISCIII (IMPACT). Programme: Data Science. Coordinator: Alfonso Valencia. PI Sant Pau: JM Soria.

- 2020 - 2021. European Advanced infraStructure for Innovative Genomics (EASI_Genomics) Consortium. Subproject: Risk Prediction of Sepsis-Induced Coagulopathy in COVID19 patients. H2020_EU_No 824110. EASI_19_P1012558. PI Sant Pau: JM Soria. Consortium Coordinator: Ivo Gut (CNAG).
- 2020-2021, HLA COVID19 Consortium. Stanford University, School of Medicine (USA). KIR_HLA SARS-CoV-2_INM. PI Sant Pau: JM Soria
- 2020-2022. SCOURGE_COVID19 (COV20_0622). ISCIII. Coordinator: Angel Carracedo. Subproject_19: Predicción del Riesgo de Coagulopatía Inducida por Sepsis en pacientes COVID19. (PRECIS_COVID19). PI Sant Pau: JM Soria Grants awarded in 2021
- BARBARA LOBATO DELGADO. Predoctoral contract PFIS. FI21/00197. 2021 - 2024. 89.900€
- GERARD TEMPRANO SAGRERA, Nuevo enfoque ómico para predecir el crecimiento y la rotura del aneurisma aórtico abdominal., SLT017/20/000100, Departament de Salut, 2021 - 2024, 103.040,20 €.

Note: Total amount granted to PI. It does not include indirect costs

Awards

- Gerard Temprano-Sagrera. Oral Communication Young Award. International Society of Thrombosis and Hemostasis (ISTH) Congress. July 17-21 2021.

Transfer products

- Spin off Exheus (Expression in Health for Us). Programa ACCIO. Generalitat de Catalunya (ACE015/20/00034: (Exheus). Co-founder y Chief Scientific Officer (CSO): JM Soria. Patent "Genetic Biomarker profiles for endurance sport suitability". Application number EP17382299.9

Scientific production

- Ahluwalia TS, Prins BP, Abdollahi M, Armstrong NJ, Aslibekyan S, Bain L, Jefferis B, Baumert J, Beekman M, Ben Y, Bis JC, Mitchell BD, de Geus E, Delgado GE, Marek D, Eriksson J, Kajantie E, Kanoni S, Kemp JP, Lu C, Marioni RE, McLachlan S, Milaneschi Y, Nolte IM, Petrelis AM, Porcu E, Sabater M, Naderi E, Seppala I, Shah T, Singhal G, et al., CHARGE Inflammation Working GRP. Genome-wide association study of circulating interleukin 6 levels identifies novel loci. *HUMAN MOLECULAR GENETICS*. 2021; 30(5). DOI:10.1093/hmg/ddab023. PMID:33517400. IF:6,150 (Q1/D2).
- Aviles-Jurado FX, Munoz C, Meler C, Flores JC, Guma J, Benaiges E, Mora J, Camacho M, Leon X, Vilaseca I, Terra X. Circulating microRNAs modulating glycolysis as non-invasive

prognostic biomarkers of HNSCC. *EUROPEAN ARCHIVES OF OTO-RHINO-LARYNGOLOGY*. 2021; 278(5):1585-1594. DOI: 10.1007/s00405-020-06240-z. PMID: 32737645. IF:2,503 (Q2/D4).

• Bastos M, Ortiz J, Pradillo V, Salas E, Marinez C, Munoz A, Buno I, Diez JL, Soria JM, Izquierdo CP. Incorporating genetic and clinical data into the prediction of thromboembolism risk in patients with lymphoma. *Cancer Medicine*. 2021; 10(21). DOI:10.1002/cam4.4280. PMID:34598309. IF:4,452 (Q2/D5).

• Bonfill X, Quintana MJ, Escudero JR, Miralles M, Fite J, Mikelarena E, Castejon B, Garnica M, De Valderrama IF, Rodriguez A, Pijoan JI, Bellmunt S. Appropriateness of surgery performed for abdominal aortic aneurysm at tertiary hospitals in Spain. *INTERNATIONAL ANGIOLOGY*. 2021; 40(4). DOI:10.23736/S0392-9590.21.04654-X. PMID:34060282. IF:2,789 (Q3/D6).

• Canes L, Alonso J, Ballester C, Varona S, Escudero JR, Andres V, Rodriguez C, Martinez J. Targeting Tyrosine Hydroxylase for Abdominal Aortic Aneurysm Impact on Inflammation, Oxidative Stress, and Vascular Remodeling. *HYPERTENSION*. 2021; 78(3). DOI:10.1161/HYPERTENSIONAHA.121.17517. PMID:34304581. IF:10,190 (Q1/D1).

• Ellervik C, Mora S, Kus A, Asvold B, Marouli E, Deloukas P, Sterenborg RBTM, Teumer A, Burgess S, Sabater M, Huffman J, Johnson AD, Tregouet DA, Smith NL, Medici M, DeVries PS, Chasman DI, Kjaergaard AD. Effects of Thyroid Function on Hemostasis, Coagulation, and Fibrinolysis: A Mendelian Randomization Study. *THYROID*. 2021; 31(9). DOI:10.1089/thy.2021.0055. PMID:34210154. IF:6,568 (Q1/D2).

• Fite J, Gayarre R, Puig T, Zamora S, Escudero JR, Roca JS, Bellmunt S. Feasibility and Efficiency Study of a Population-Based Abdominal Aortic Aneurysm Screening Program in Men and Women in Spain. *ANNALS OF VASCULAR SURGERY*. 2021; 73. DOI:10.1016/j.avsg.2020.11.042. PMID:33387620. IF:1,466 (Q4/D8).

• Fite J, Gimenez E, Soto B, Artigas V, Escudero JR, Bellmunt S, Espallargues M. Systematic review on abdominal aortic aneurysm screening cost-efficiency and methodological quality assessment. *INTERNATIONAL ANGIOLOGY*. 2021; 40(1). DOI:10.23736/S0392-9590.20.04547-2. PMID:33086780. IF:2,789 (Q3/D6).

• Goncalves G, Gil D, Tello C, Tenezaca X, Marrero C, Puig T, Gayarre R, Fite J, Bellmunt S. Prevalence of Peripheral Arterial Disease and Associated Vascular Risk Factors in 65-Years-Old People of Northern Barcelona. *Journal of Clinical Medicine*. 2021; 10(19):4467. DOI:10.3390/jcm10194467. PMID:34640483. IF:4,241 (Q1/D3).

• Goumidi L, Thibord F, Wiggins KL, Li RF, Brown MR, Vlieg AV, Souto JC, Soria JM, Ibrahim M, Saut N, Daian D, Olaso R, Amouyel P, Debette S, Boland A, Bailly P, Morrison AC, Mook DO, Deleuze JF, Johnson A, de Vries PS, Sabater M, Chiaroni J, Smith NL, Rosendaal FR, Chasman DI, Tregouet DA, Morange PE. Association between ABO haplotypes and the risk of

venous thrombosis: impact on disease risk estimation. *BLOOD*. 2021; 137(17). DOI:10.1182/blood.2020008997. PMID:33512453. IF:22,113 (Q1/D1).

• Graham SE, Clarke SL, Wu KHH, Kanoni S, Zajac GJM, Ramdas S, Surakka I, Ntalla I, Vedantam S, Winkler TW, Locke AE, Marouli E, Hwang MY, Han S, Narita A, Choudhury A, Bentley AR, Ekoru K, Verma A, Trivedi B, Martin HC, Hunt KA, Hui Q, Klarin D, Zhu X, Thorleifsson G, Helgadottir A, Gudbjartsson DF, Holm H, Olafsson I, et al. [Sabater M]. The power of genetic diversity in genome-wide association studies of lipids. *NATURE*. 2021; 600(7890). DOI:10.1038/s41586-021-04064-3. PMID:34887591. IF:49,962 (Q1/D1).

• Guo YJ, Rist PM, Sabater M, de Vries P, Smith N, Ridker PM, Kurth T, Chasman DI. Association Between Hemostatic Profile and Migraine A Mendelian Randomization Analysis. *NEUROLOGY*. 2021; 96(20). DOI:10.1212/WNL.0000000000011931. PMID:33795393. IF:9,910 (Q1/D1).

• Leon X, Venegas M, Pujol A, Bulboa C, Llansana A, Casasayas M, Quer M, Camacho M. Predictive value of transcriptional expression of Kruppel-like factor-6 (KLF6) in head and neck carcinoma patients treated with radiotherapy. *Clinical & Translational Oncology*. 2021; 23(12). DOI:10.1007/s12094-021-02651-4. PMID:34061320. IF:3,405 (Q3/D7).

• Mendez KA, Rodriguez E, Sebastian D, Blanco R, Camacho M, Nan MN, Diarte E, Mato E, Lope S, Roglans N, Laguna JC, Alonso N, Mauricio D, Zorzano A, Villarroya F, Villena JA, Blanco F, Julve J. Nicotinamide Protects Against Diet-Induced Body Weight Gain, Increases Energy Expenditure, and Induces White Adipose Tissue Beiging. *MOLECULAR NUTRITION & FOOD RESEARCH*. 2021; 65(11):2100111. DOI:10.1002/mnfr.202100111. PMID:33870623. IF:5,914 (Q1/D2).

• Paloschi V, Sabater M, Middelkamp H, Vivas A, Johansson S, van der Meer A, Tenje M, Maegdefessel L. Organ-on-a-chip technology: a novel approach to investigate cardiovascular diseases. *CARDIOVASCULAR RESEARCH*. 2021; 117(14). DOI:10.1093/cvr/cvab088. PMID:33729461. IF:10,787 (Q1/D1).

• Rotllan N, Camacho M, Tondo M, Diarte E, Canyelles M, Mendez KA, Benitez S, Alonso N, Mauricio D, Escola JC, Blanco F, Julve J. Therapeutic Potential of Emerging NAD plus -Increasing Strategies for Cardiovascular Diseases. *Antioxidants*. 2021; 10(12):1939. DOI:10.3390/antiox10121939. IF:6,312 (Q1/D1).

• Sanchez D, Nus M, Navas M, Fite J, Perez B, Barros AJ, Soto B, Martinez J, Camacho M, Rodriguez C, Mallat Z, Galan M. Oxidative Stress and Inflammatory Markers in Abdominal Aortic Aneurysm. *Antioxidants*. 2021; 10(4):602. DOI:10.3390/antiox10040602. PMID:33919749. IF:6,312 (Q1/D1).

• Sanchez L, Fite J, Peypoch O, Moreno J, Jubert Q, Carricas BS, Dilme JF, Escudero JR. Preoperative geriatric assessment, a promising tool to improve outcomes in aortic pathology interventions. *INTERNATIONAL ANGIOLOGY*. 2021; 40(4).

DOI:10.23736/S0392-9590.21.04643-5. PMID:33913311. IF:2,789 (Q3/D6).

- Small AM, Huffman JE, Klarin D, Sabater M, Lynch JA, Assimes TL, Sun YV, Miller D, Freiberg MS, Morrison AC, Rader DJ, Wilson PWF, Cho K, Tsao PS, Chang KM, Smith NL, O'Donnell CJ, de Vries PS, Damrauer SM, Cohorts Heart Aging Res Genomic &, VA Million Veteran P. Mendelian Randomization Analysis of Hemostatic Factors and Their Contribution to Peripheral Artery Disease—Brief Report. *ARTERIOSCLEROSIS THROMBOSIS AND VASCULAR BIOLOGY*. 2021; 41(1). DOI:10.1161/ATVBAHA.119.313847. PMID:32847391. IF:8,311 (Q1/D1).

- Thibord F, Song C, Pattee J, Rodriguez B, Chen MH, O'Donnell CJ, Kleber ME, Delgado GE, Guo XQ, Yao J, Taylor KD, Ozel AB, Brody JA, McKnight B, Gyorgy B, Simonsick E, Leonard HL, Carrasquilla GD, Guindo M, Silveira A, Temprano G, Yanek LR, Becker DM, Mathias RA, Becker LC, Raffield LM, Kilpelainen TO, Grarup N, Pedersen O, Hansen T, et al. [Sabater M]. FGL1 as a modulator of plasma D-dimer levels: Exome-wide marker analysis of plasma tPA, PAI-1, and D-dimer. *JOURNAL OF THROMBOSIS AND HAEMOSTASIS*. 2021; 19(8). DOI:10.1111/jth.15345. PMID:33876560. IF:5,824 (Q1/D2).

- Varona S, Puertas L, Galan M, Orriols M, Canes L, Aguilo S, Camacho M, Sirvent M, Andres V, Martinez J, Rodriguez C. Rolipram Prevents the Formation of Abdominal Aortic Aneurysm (AAA) in Mice: PDE4B as a Target in AAA. *Antioxidants*. 2021; 10(3):460. DOI:10.3390/antiox10030460. PMID:33809405. IF:6,312 (Q1/D1).

Other publications

- Salas E, Farm M, Pich S, Onelöv L, Guillen K, Ortega I, Antovic JP, Soria JM. Predictive Ability of a Clinical-Genetic Risk Score for Venous Thromboembolism in Northern and Southern European Populations. *The Open : Companion Journal To Thrombosis And Haemostasis*. 2021; 5(3):e303-e311. DOI:10.1055/s-0041-1729626. PMID:34263111.

- Soria JM. Biomarcadores de riesgo de Enfermedad Tromboembólica venosa en pacientes con cáncer. Monografía Sanofi 2021.

- Soria JM. Complicaciones Tromboembólicas de la Covid 19. Papel de la heparina. Monografía Sanofi 2021.

Communication and dissemination activities

Conferences, lectures and meetings

- José Manuel Soria, Sergi Mojal, Angel Martinez-Perez, Francisco René Acosta, Sonia López, Sara Miqueleiz, Diana Rodriguez, Maria Angeles Quijada, Antonio Cárdenas, Francisco Vidal, Angel Remacha, María Rosa Antonijoan, Juan Carlos Souto. Utilización de un algoritmo clínico-genómico para evaluar el riesgo de trombosis en pacientes con COVID19 que reciben

tromboprofilaxis. Poster XXXVII Congreso de la SETH. Oct 2021. Pamplona.

- Magdalena Ruiz, Andrés J Muñoz, Laura Ortega, Carme Font, Elia Seguí, Marta García de Herreros, Victoria E Castellón, Jaime Rubio, Ana Ferrer, Joaquina Martínez-Galán, Mercedes salgado, Ignacio García-Escobar, Isaura fernández, Eva Martinez de Castro, Vanessa Pachón, Teresa Quintanar, Inma Gras, María Carmen Viñuelas, Antonio Cárdenas, Eduardo Salas, José Manuel Soria. Comparison of different clinical risk assessment models (rams) for thrombosis in ambulatory cancer patients receiving chemotherapy from the second cohort oncothromb 12-01 study. Congress of the European Hematology Association. Virtual, June 2021

- Muñoz Martín AJ, Ruiz Zamorano M, Cárdenas Yebra A, Ortega Morán L, Ferrer Pérez AI, Rupérez Blanco AB, Rubio Pérez J, Martínez-Galán J, Font Puig C, Fernández Pérez I, Pachón Olmos V, Martínez de Castro E, Quintanar Verdúgez T, López Moreno S, Rubio Castellón V, Martínez-Pérez A, Seguí E, Salas E, Soria Fernández JM. Comparison of different clinical risk assessment models (RAMs) in ambulatory cancer patients receiving chemotherapy from Oncothromb-02 study. 10th International Conference on Thrombosis and Hemostasis issues in Cancer (ICTHIC). Bergamo 2021. Abstract PO-87. Virtual Congress April 22-26, 2021. *Thrombosis Research* 200S1 (2021) S65.

- G. Temprano-Sagrera, P.S. de Vries, M. Martín-Bórnez, S.M. Damrauer, N.L. Smith, M. Sabater-Lleal, on behalf of the CHARGE and INVENT Consortia. Multi-phenotype analysis of hemostatic factors with venous thromboembolism reveals novel genetic associations. International Society of Thrombosis and Hemostasis (ISTH) Congress. July 17-21 2021. Virtual Congress. Oral Communication. Young Award.

- Cristina Gallego-Fabrega, Gerard Temprano, Jara Cárcel-Márquez, Natalia Cullell, Elena Muiño, Laia Lluçia-Carol, Miquel Lledós, Laura Ibañez, Laura Heitsch, Jordi Jiménez-Conde, Carlos Cruchaga, Jin-Moo Lee, Joan Martí-Fabregas, Paul S. de Vries, Maria Sabater-Lleal, Israel Fernandez-Cadenas, on behalf of the CHARGE Consortium Hemostasis Working Group, GISCOME project and GODs project.

- Mendelian Randomization Analysis of Hemostatic Factors and their contribution to Stroke acute and long-term Outcome. European Stroke Conference (ESOC) 1-3 September 2021, Virtual Meeting. Oral communication.

- G. Temprano-Sagrera, P.S. de Vries, M. Martín-Bórnez, S.M. Damrauer, N.L. Smith, M. Sabater-Lleal. . Multi-phenotype analysis of hemostatic factors with venous thromboembolism reveals novel genetic associations. CHARGE fall Meeting. Virtual. <https://www.chargeconsortium.com/main>.

- Julie Hahn, Gerard Temprano-Sagrera, Nicholas L. Smith, Symen Ligthart, Abbas Dehghan, Maria Sabater-Lleal, Alanna C. Morrison, Paul S. de Vries. Bivariate genome-wide association study of circulating fibrinogen and C-reactive protein (CRP) levels. ASHG Annual Meeting. Oct 18-22 2021, Virtual Meeting.

- Técnica de Recurso En El Tratamiento Endovascular De La Arteriopatía Obliterante Con Calcificación Severa. Quim Jubert Raventós, José María Romero Carro, Olga Peypoch Pérez, Jorge Villalba Auñón, Laia Sánchez García, Jose Román Escudero Rodríguez. 66 Congreso SEACV, Sitges. Oct 2021.
 - Rubén Guerrero Vara; Jaime Dilmé; Benjamín Tintaya; Begoña Soto; Jorge Hernández; Jordi Villalba. "Uso de la técnica Sandwich modificada utilizando el stent VBX en el tratamiento de aneurismas ilíacos complejos" XVII Congreso SERVEI. Zaragoza. Oct 2021.
 - Uso de inteligencia artificial en cirugía vascular. Experimentando con bases de datos. J Moreno, Q. Jubert, O. Peypoch, J M Romero. J R Escudero. Congreso de la Societat Catalana d'Angiologia i Cirurgia Vascular i Endovascular (SCACVE). Barcelona. Jul 2021.
 - Analisis preliminar de flujo en pacientes isquémicos tratados de forma endovascular. L. Sanchez, J. Dilme, A. Hakim, J. Moreno, Q. Jubert, J R. Escudero. Congreso de la Societat Catalana d'Angiologia i Cirurgia Vascular i Endovascular (SCACVE). Barcelona. Jul 2021.
 - Tratamiento híbrido de disección aórtica tipo B con colocación intencionada de endoprótesis en la luz falsa dominante con flujo anterógrado: a propósito de un caso. Congreso de la Societat Catalana d'Angiologia i Cirurgia Vascular i Endovascular (SCACVE). Barcelona. Jul 2021. J. Moreno, J. Dilmé, A. Barros, L. Sánchez, J. Fité, J R. Escudero.
 - Reconstrucción in- situ y confección de by-pass aorto-aortico con parche de pericardio bovino tubulizado en infecciones de injertos endovasculares. A propósito de dos casos. Q. Jubert, L. Sánchez; J. Dilmé, J. Fité, J. Moreno, JR. Escudero. Congreso de la Societat Catalana d'Angiologia i Cirurgia Vascular i Endovascular (SCACVE). Barcelona. Jul 2021.
 - Organiser of the X Edición del Curso de escleroterapia en fleboestética y Patología Venosa. 28 Congreso Nacional del Capítulo Español de Flebología y Linfología. Pamplona. Oct 2021. JR Escudero.
 - Invited Lecturer at Master Programmes in Karolinska Institutet (Estocolm): MSc course "Frontiers in Molecular Medicine", i MSc course "Molecular Medicin - Cardiometabolic and Infectious diseases." M Sabater. Oct, Nov 2021.
- Outreach activities to society**
- Scientific disclosure day at Institut Isaac Albéniz. Badalona, 2021 February 18. M Sabater.
 - Participation at "Matí de la Recerca 2021". ISGlobal i ACCC. Institut Pic del Vent. Caldes de Monbui. 2021 Sept 21. M Sabater.
 - 13/07/2021. Jornadas de Prevención de Enfermedades Vasculares. Foment del Treball. Barcelona. Organizador/ Presidente del Comité Científico: JM Soria.
 - 07/07/2021 Societat Catalana de Farmacologia. Conferencia: "Score Clinic-Genetic per estratificar el risc de trombosi de pacients oncologics tractats amb quimioteràpia". JM Soria.
 - 05/11/2021 Conferencia Invitada Master de Bioquímica Clínica. "Bases Moleculares de les Malalties Complexes". JM Soria
 - 12/05/2021 Campaña de Prevenció de Malalties Vasculares a la Corporació Catalana de Mitjans Audiovisual. JM Soria.
 - 14 de setembre de 2021. Fundació Gresol. Reus (Tarragona). Conferencia: "COVID-19, trombosi i prevenció de Malalties vasculares". Ponent: JM Soria.
 - 10 d'octubre de 2021 Campaña Prevenció Malalties Vasculares DOMO. Conferencia: Factors de risc de tromboembolisme venos. Presencial i en streaming per a tots el treballadors. Ponent: JM Soria.
 - 13 d'octubre de 2021: Lección Inaurugal del Master de Epidemiología UAB. Conferencia: "De 0 a 8.000 metros: Dos maneras de investigar". JM Soria.
 - RAC1: 8 de abril de 2021
https://www.rac1.cat/programes/el-mon/20210408/493117946446/vacuna-astrazeneca-trombosi-covid-coronavirus.html?utm_source=twitter&utm_medium=social&utm_content=rac1_programes
 - TV3: Programa Mes324
<https://www.ccma.cat/tv3/alicante/mes-324/entrevista-a-jose-manuel-soria-amb-la-vacuna-dastrazeneca-la-farmacovigilancia-ha-funcionat/video/6093917/>
 - Diari Ara
https://www.ara.cat/societat/mes-frequent-risc-trombosi-anticconceptius-vacuna_1_3940941.html
 - La Vanguardia 13/10/2021
<https://www.lavanguardia.com/vida/20211013/7785206/trombosis-venosa-cenicienta-investigacion-cardiovascular.html>
 - Entrevista en EuroNews: 26/03/2021
<https://es.euronews.com/video/2021/03/25/la-trombosis-causa-al-menos-el-33-de-las-muertes-por-covid-jm-soria>
 - La Vanguardia
<https://www.lavanguardia.com/vida/20210312/6371215/foment-activatt-enfermedades-vasculares-alianza.html>



Regulatory Mechanisms of Cardiovascular Diseases

Coordinator

Rodríguez Sinovas, María Cristina IR
crodriguez@santpau.cat

Members

Aguiló Nuñez, Silvia	IR	Galan Arroyo, Maria	IR
Alonso Nieto, Judith	CIBERCV	Martinez Gonzalez, Jose	CSIC
Ballester Servera, Carme	CSIC	Puertas Umbert, Lidia	IR
Cañes Esteve, Laia	IR	Varona Alvarez, Saray	CIBERCV

Main lines of research

- Extracellular matrix remodeling in cardiovascular diseases.
- Nuclear receptors in atherosclerosis and vascular biology.
- Novel therapeutic targets in hypertensive heart disease.
- Identification of new biomarkers and therapeutic targets in peripheral artery disease and vascular dysfunction.
- Analysis of the molecular mechanisms involving nuclear receptors in the control of vascular calcification.

Scientific challenges

- Analysis of the molecular basis of abdominal aortic aneurysm: Identification of new therapeutic targets.
- Physiopathological mechanisms underlying the development of thoracic aortic aneurysm in syndromic patients.

- Identification and validation of novel pharmacological tools in cardiovascular diseases.
- Development and characterization of new animal models in cardiovascular diseases.

Collaborations

Collaborations with other IIB Sant Pau research groups

- Dr Manel Tauron; Cardiac Surgery Service

- Dr Leif Hove-Madsen: Coordinator of the Regulation of Cardiac Rhythm and Contraction group (IIB Sant Pau)
- Dr Dídac Maurici: Coordinator of the Endocrinology, Diabetes and Nutrition group (IIB Sant Pau).
- José Luis Sánchez Quesada: Leader of the Cardiovascular Biochemistry (IIB Sant Pau).
- Dr Juan Antonio Arroyo Díaz: Group of Multiorganic Damage (IIB Sant Pau).
- Dr Noemí Rotllan: Group of Metabolic Bases of Cardiovascular Risk (IIB Sant Pau).
- Dr Mercedes Camacho, Dr JR Escudero: Group of Genomics of Complex Diseases (IIB Sant Pau)

External collaborations

- Dr Francisco Vidal and Dra Irene Corrales Insa (Banc de Sang i Teixits, Barcelona, members of our CIBERCV and SGR groups).
- Dra Roxana Carare (University of Southampton).
- Dr. Thomas Braun (Max Planck Institute for Heart and Lung Research, Bad Nauheim, Germany).
- Dr. Modar Kassan (University of Tennessee, USA).
- Dr Ziad Mallat, MD, PhD (University of Cambridge).
- Dr. Vicente Andrés (Centro Nacional de Investigaciones Cardiovasculares, CNIC, Madrid).
- Dra Meritxell Nus (University of Cambridge).
- Dr. Pablo García de Frutos (Instituto de Investigaciones Biomédicas de Barcelona, CSIC).
- Dra. Anna Planas (Instituto de Investigaciones Biomédicas de Barcelona, CSIC).
- Dr A Rodríguez-Sinovas (Hospital del Valle Hebrón).
- Marc Sirvent González (Hospital Germans Tries i Pujol)
- Joan Carles Laguna Egea (Facultad de Farmàcia, UB)
- Dra Mercedes Salaices-Dra Ana Briones (Universidad Autónoma de Madrid; UAM)
- Dra Victoria Cachofeiro (Universidad Complutense de Madrid, UCM)
- Dra. Pilar Martín (Centro Nacional de Investigaciones Cardiovasculares, CNIC, Madrid).
- Dr. Francisco Sánchez Madrid (Director of Instituto de Investigación Sanitaria Hospital Universitario de La Princesa, Madrid).
- Dra María G Barderas (Hospital de Paraplégicos de Tolédo).
- Dr Sánchez-Infantes (Universidad Rey Juan Carlos, Madrid).
- Dra Gema Ruiz Hurtado (Hospital 12 de Octubre, Madrid).
- Dr. Gustavo Egea (Universidad de Barcelona; UB).
- Dr Francisco Nistal (Hospital Universitario Marqués de Valdecilla, Santander)
- Dra Dolors Serra Cucurull (Universitat de Barcelona)

Active grants

- MARIA GALAN ARROYO. Contratos Miguel Servet I 2015.. MS15/00126. Instituto de Salud Carlos III. Duration 2016-2021. 202.500,00 €
- MARIA GALAN ARROYO. Nuevas dianas terapéuticas para el tratamiento del AAA y de la cardiopatía hipertensiva:

proteínas implicadas en el estrés del retículo y en la disfunción mitocondrial.. PI17/01837. Instituto de Salud Carlos III. Duration 2018-2021. 102.000,00 €.

- MARIA CRISTINA RODRIGUEZ SINOVAS. Nuevas estrategias terapéuticas en el manejo de la enfermedad arterial periférica y el aneurisma de aorta abdominal.. PI18/00919. Instituto de Salud Carlos III. Duration 2019-2021. 152.000,00 €.
- LIDIA PUERTAS UMBERT. Contractes PFIS: Contractes Predoctorals de Formació en Recerca en Salut 2019. FI19/00331. Instituto de Salud Carlos III. Duration 2020-2023. 82.400,00 €.
- MARIA GALAN ARROYO. Descifrando los mecanismos moleculares subyacentes a la formación del aneurisma de aorta: el estrés del retículo endoplásmico y el estrés oxidativo mitocondrial como nuevas dianas terapéuticas. PI20/01004. Instituto de Salud Carlos III. Duration 2021-2023. 120.000,00 €.
- MARIA GALAN ARROYO. Contractes "Miguel Servet II" 2020. CPII20/00013. Instituto de Salud Carlos III. Duration 2021-2024. 101.250,00 €.
- MARIA CRISTINA RODRIGUEZ SINOVAS. La fosfodiesterasa PDE4B en la enfermedad arterial periférica y el aneurisma de aorta abdominal: impacto sobre la fisiopatología y el manejo clínico. SEC 2020-2. Societat Espanyola de Cardiologia. Duration 2020-2022. 15.000,00 €.
- MARIA CRISTINA RODRIGUEZ SINOVAS. Estrategias traslacionales basadas en la fosfodiesterasa PDE4B como nueva diana terapéutica en la enfermedad arterial periférica y el aneurisma de aorta abdominal. FEA 2020-1. Fundació Espanyola d'Arteriosclerosi. Duration 2021-2022. 10.909,09 €.

Note: Total amount granted to PI. It does not include indirect costs.

Other active grants

- CIBER de Enfermedades Cardiovasculares (Ref. grupo CB16/11/00257). Amount: aprox. 62.500 €/year. PI: Dr. José Martínez González
- RTI2018-094724-B-100: Mecanismos que involucran a los receptores NR4A y a LOX en la calcificación vascular. Amount: 145.200 € (2019-2021). PI: Dr José Martínez González.
- 2017 SGR 00333 (AGAUR): Grups de Recerca Reconeixuts i Finançats per la Generalitat de Catalunya. Amount: 20.000,00 €. PI: Dr José Martínez González. 2018-2021.
- 2021AEP073: Ayuda Extraordinaria del CSIC en el marco del Plan estatal de I+D+I . Amount: 40.000 €. PI: Dr. José Martínez González

- Proyecto/Beca FEA 2019 para Investigación Básica en Arteriosclerosis (I). “El receptor nuclear NOR-1 en el remodelado vascular asociado a la aterosclerosis y al aneurisma de aorta abdominal”. 2020-2021. Amount: 12.000 €. PI: Dr José Martínez González.

- Ayuda de formación de profesorado universitario (FPU). Amount: 20.243,34. Fellow: Carme Ballester Servera.

Awards

- Special mention: Investigación básica en arteriosclerosis: Biología Molecular, Bioquímica y Genética Communication: PDE4B COMO NUEVA DIANA TERAPÉUTICA EN EL ANEURISMA DE AORTA ABDOMINAL. XXXIII CONGRESO NACIONAL SEA – VIRTUAL 2021.

- Special mention: Investigación básica en arteriosclerosis: Biología Molecular, Bioquímica y Genética. Communication: Nuevos Biomarcadores Para El Pronóstico Del Aneurisma De Aorta Abdominal (AAA). XXXIII CONGRESO NACIONAL SEA – VIRTUAL 2021.

- Price to the Best Communication: High vascular expression of Lysyl Oxidase (LOX) exacerbates atherosclerosis and vascular calcification. C. Ballester-Servera, L. Cañes, J. Alonso, S. Aguiló, C. Rodríguez, J. Martínez-González. European Council for Cardiovascular Research Meeting 2021.

- Treasurer and Board Member of the Spanish Society of Atherosclerosis (J. Martínez-González).

- Board Member of the Spanish Society of Atherosclerosis (C. Rodríguez)

Doctoral theses

- Laia Cañes Esteve, El receptor nuclear NOR-1 en el remodelado cardiovascular: análisis de mecanismos fisiopatológicos y validación de nuevos modelos animales de utilidad preclínica. Universidad de Barcelona, Dr José Martínez-González/Dra Cristina Rodríguez Sinovas, 26/03/2021.

Patents

- José Martínez González, Cristina Rodríguez, Laia Cañes, Use of tyrosine hydroxylase inhibitors for the treatment of aortic aneurysm”, US17252677, International phase in USA, 16/02/2022.

- José Martínez González, Cristina Rodríguez, Laia Cañes, USE TYROSINE HYDROXYLASE INHIBITORS FOR TREATING AORTIC ANEURYSM. EP19823676, International phase in Europe, 20/01/2021.

Scientific production

- Canes L, Alonso J, Ballester C, Varona S, Escudero JR, Andres V, Rodriguez C, Martinez J. Targeting Tyrosine Hydroxylase for Abdominal Aortic Aneurysm Impact on Inflammation, Oxidative Stress, and Vascular Remodeling. *HYPERTENSION*. 2021; 78(3). DOI:10.1161/HYPERTENSIONAHA.121.17517. PMID:34304581. IF:10,190 (Q1/D1).

- Canes L, Marti I, Ballester C, Alonso J, ELENA C, Briones AM, Rodriguez C, Martinez J. High NOR-1 (Neuron-Derived Orphan Receptor 1) Expression Strengthens the Vascular Wall Response to Angiotensin II Leading to Aneurysm Formation in Mice. *HYPERTENSION*. 2021; 77(2). DOI:10.1161/HYPERTENSIONAHA.120.16078. PMID:33356402. IF:10,190 (Q1/D1).

- Jimenez T, Ballester C, Quetglas M, Morell D, Torres N, Bautista AM, Serra N, Girona E. Cryopreservation of platelets treated with riboflavin and UV light and stored at -80 degrees C for 1 year. *TRANSFUSION*. 2021; 61(4). DOI:10.1111/trf.16324. PMID:33694171. IF:3,157 (Q3/D6).

- Martinez J, Canes L, Alonso J, Ballester C, Rodriguez A, Corrales I, Rodriguez C. NR4A3: A Key Nuclear Receptor in Vascular Biology, Cardiovascular Remodeling, and Beyond. *INTERNATIONAL JOURNAL OF MOLECULAR SCIENCES*. 2021; 22(21):11371. DOI:10.3390/ijms222111371. PMID:34768801. IF:5,923 (Q1/D3).

- Muntsant A, Jimenez F, Puertas L, Jimenez E, Vila E, Gimenez L. Sex-Dependent End-of-Life Mental and Vascular Scenarios for Compensatory Mechanisms in Mice with Normal and AD-Neurodegenerative Aging. *Biomedicines*. 2021; 9(2):111. DOI:10.3390/biomedicines9020111. PMID:33498895. IF:6,081 (Q1/D2).

- Sanchez D, Nus M, Navas M, Fite J, Perez B, Barros AJ, Soto B, Martinez J, Camacho M, Rodriguez C, Mallat Z, Galan M. Oxidative Stress and Inflammatory Markers in Abdominal Aortic Aneurysm. *Antioxidants*. 2021; 10(4):602. DOI:10.3390/antiox10040602. PMID:33919749. IF:6,312 (Q1/D1).

- Souza FV, Jimenez S, Delgado B, Jurado R, Genty M, Romero A, Rodriguez C, Nieto ML, Martinez E, Cachafeiro V. The Interplay of Mitochondrial Oxidative Stress and Endoplasmic Reticulum Stress in Cardiovascular Fibrosis in Obese Rats. *Antioxidants*. 2021; 10(8):1274. DOI:10.3390/antiox10081274. PMID:34439522. IF:6,312 (Q1/D1).

- Varona S, Puertas L, Galan M, Orriols M, Canes L, Aguiló S, Camacho M, Sirvent M, Andres V, Martinez J, Rodriguez C. Rolipram Prevents the Formation of Abdominal Aortic Aneurysm (AAA) in Mice: PDE4B as a Target in AAA. *Antioxidants*. 2021; 10(3):460. DOI:10.3390/antiox10030460. PMID:33809405. IF:6,312 (Q1/D1).

Other publications

- Martinez J, Corrales I. Earth: the planet of the annexins. *Clinica e Investigacion en Arteriosclerosis*. 2021; 33(4). DOI:10.1016/j.arteri.2021.06.001. PMID:34274051.

Communication and dissemination activities

Oral communications

- Puertas L, Varona S, Galán M, Orriols M, Cañes L, Aguiló S, Camacho M, Sirvent M, Andrés V, Martínez-González J, Rodríguez C. PDE4B como nueva diana terapéutica en el aneurisma de aorta abdominal (AAA). XXXIII Congreso de la Sociedad Española de Arteriosclerosis. 7-10 June, 2021.
- Caparrós J, Arroyo JA, Tobor A, Navas-Madroñal M, Pérez-Chust E, Martínez-González J, Rodríguez C, Galán M. Inhibition of endoplasmic reticulum stress as a therapeutic strategy to limit cardiac hypertrophic remodeling associated to hypertension. 2021 Virtual Meeting of the European Council for Cardiovascular Research (ECCR). 8th-9th October 2021.
- Ballester-Servera C, Cañes L, Alonso J, Aguiló S, Rodríguez C, Martínez-González J. High vascular expression of Lysyl Oxidase (LOX) exacerbates atherosclerosis and vascular calcification. Virtual Meeting of the European Council for Cardiovascular Research (ECCR). 8th-9th October 2021.

Posters

- Galán M, Sánchez-Infantes D, Nus M, Fité J, Barros AJ, Camacho M, Pérez Fernández B, José Martínez-González J, Rodríguez C. Nuevos biomarcadores para el pronóstico del aneurisma de aorta abdominal (AAA). XXXIII Congreso Virtual de la Sociedad Española de Arteriosclerosis. 7-10 June, 2021
- Galán M, Sánchez-Infantes D, Nus M, Navas-Madroñal M, Pérez B, Camacho M, Martínez-González J, Rodríguez C, Mallat Z. Towards novel circulating markers for abdominal aortic aneurysm prognosis. Joint Meeting European Society of Hypertension (ESH) & International Society of Hypertension (ISH). April 11-14, 2021.

Conferences/Seminars

- Remodelado de la matriz extracelular en enfermedad cardiovascular. Instituto de Biología y Genética Molecular/ Universidad de Valladolid (09/04/2021). Speaker: Dra Cristina Rodríguez Sinovas.
- “Inhibidores de la tirosina hidroxilasa para tratamiento del aneurisma aórtico abdominal, alternativo a la cirugía. XX Encuentro de Cooperación Farma-Biotech (Farmaindustria – CSIC). Formato Telemático. 28 abril 2011. Speaker: Dr J Martínez-González
- Discussion panel: “Nuevos avances en el aneurisma de aorta abdominal”. Title: “El receptor nuclear NOR-1 en el remodelado vascular y el aneurisma de aorta abdominal”. Speaker: Dr José Martínez González. XXXIII Congreso Nacional de la Sociedad Española de Arteriosclerosis. Barcelona, 10/06/2021.

- Genes implicados en el remodelado de la matriz extracelular y su impacto en enfermedad cardiovascular. Fundación Teófilo Hernando/Universidad Autónoma de Madrid (23/09/2021). Speaker: Dra Cristina Rodríguez Sinovas

- Impacto del remodelado de la matriz extracelular en enfermedades cardiovasculares. Instituto de Biomedicina de la Universidad de Barcelona (IBUB; 29/11/2021). Speaker: Dra Cristina Rodríguez Sinovas

- La matriz extracelular: un elemento clave en el remodelado cardiovascular. Instituto Murciano de Investigación Biosanitaria IMIB-Arrixaca, Universidad de Murcia (16/12/2021). Speaker: Dra Cristina Rodríguez Sinovas.

Congresses organization

- XXXIII Congreso Nacional Virtual de la Sociedad Española de Arteriosclerosis (SEA). 2021 (Dr J Martínez-González).

Outreach activities:

- La triple AAA: El silenciós assassí d'Albert Einstein. Xerrades de Ciència. Aula 141; Ciència al Guinardó. Centre Cívic Navas, April 2021. Speaker: Speaker: Dra Cristina Rodríguez Sinovas.

Press release

- “Confirman el papel clave del receptor NOR-1 en la progresión del aneurisma aórtico abdominal” (1/02/2021). The information appears in several digital press media and also in written press in particular in the daily newspaper La Vanguardia.
- “Identifican una nueva diana terapéutica para frenar el avance del aneurisma aórtico abdominal” (19/04/2021). The news was published on numerous digital press media and the websites of CIBERCV, CSIC and IIB-Sant Pau.
- “Nuevos marcadores en sangre para el pronóstico del riesgo de aneurisma aórtico abdominal” (10/06/2021). The news was disclosed through the corporate websites of CIBERCV, IIB-Sant Pau and CSIC, as well as in numerous digital press media (mundodeportivo.com, consalud.es, Agenciainc.es, etc).
- “Identifican una nueva diana farmacológica para el aneurisma de aorta abdominal” (31/08/2021). The information was released through different digital mass media
- “Nuevos avances para ponerle freno a la fibrosis cardiaca en pacientes obesos” (5/10/2021). The information was released through different digital mass media
- Identifican una nueva proteína implicada en el daño vascular asociado a la hipertensión arterial” (30/11/2021). The news was published on the websites of CIBERCV and UAM, as well as LinkedIn and Facebook (UAM) and several digital mass media (Agencia Sinc, Servimedia.es, elEconomista.es)
- “Identifican un nuevo mediador implicado en el desarrollo del daño cardiovascular y metabólico asociado a la obesidad” (12/01/2022). The news was released to CIBERCV and UAM websites and several digital mass media.



Pathophysiology of Lipid-related Disease

Coordinator

Blanco Vaca, Francisco FGS
fblancova@santpau.cat

Members

Borràs Querol, Carla	IR	Perez Perez, Antonio	FGS
Canyelles Vich, Marina	IR	Revilla Senra, Giovanna	IR
Escola Gil, Juan Carlos	IR	Rivas Urbina, Andrea Patricia	IR
Farràs Mañé, Marta	IR	Roig Martínez, Rosa	FGS
Griñan González, Raquel	IR	Rotllan Vila, Noemí	IR
Julve Gil, Josep	IR	Santos Palacios, David	CIBERDEM
Martínez Figueroa, Susana	FGS	Tondo Colomer, Mireia	FGS

Main lines of research

- Molecular basis and biomarkers of cardiovascular risk, especially in relation with lipoprotein disorders and hyperhomocysteinemia.
- Molecular basis and biomarkers of the association between cholesterol metabolism dysregulation, obesity, and chronic inflammation, with endocrine-related cancer.
- Identification and impact of novel biomarkers and therapies and obesity/diabetes-related cardiometabolic complications, including nonalcoholic steatohepatitis.

Scientific challenges

- Evaluate the cholesterol efflux induced from physiological-relevant cell types by HDL, obtained from plasma or cerebrospinal fluid of well-characterized patients with cardiovascular disease or Alzheimer's disease.
- Elucidate the potential role of miRNAs as a novel therapeutic target in hyperhomocysteinemia-related atherosclerosis.
- Explore the anti-cancer mechanisms related to cholesterol metabolism, especially in breast and thyroid cancer.

- Identify lipid biomarkers informative of heart damage in the context of diabetes.
- Evaluate the cardiometabolic effects of vitamin B3 derivatives in the context of obesity.

Collaborations

Collaborations with other IIB Sant Pau research groups

- Translational Molecular Imaging for Detection of Cholesterol Entrapment in the Vasculature with ⁶⁸Ga-labeled LRP1-derived Peptides. Project funded by Fundació BBVA. 01/05/2020–01/05/2023. 199.511€. Collaborators: Drs Esther Jorge Vizuete, Juan Carlos Escola Gil; Francesc Carreras Costa; David Viladés Medel.
- Adiposity, inflammation and cholesterol deregulation in epithelial thyroid carcinoma. Evaluation of cholesterol-lowering and LXR-based therapies. Project funded by ISCIII (111.320€). (PI19/00136) 01/01/2020–31/12/2022 Collaborators: Drs Moral Duarte, Lerma Puertas, Ramón y Cajal Asensio, Fuste Chisara, Pérez García, Mato Matute, Corcoy Pla.
- Network: Enfermedades metabólicas y cáncer (RED2018-102799-T). Funded Project by Ministerio de Ciencia, Innovación y Universidades. (20.000 €). Coordinator: José Fernández Checa. Pls Josep Julve and Concepción Vicente Llorente.

External collaborations

- Drs Diego Gómez-Coronado and Miguel A. Lasunción. Hospital Ramón y Cajal y CIBEROBN, Madrid, Spain.
- Dr Alberto Dávalos. IMDEA-Food. Madrid, Spain.
- Dra Montserrat Fitó. IMIM y CIBEROBN. Barcelona, Spain.
- Dr Daniel MasPOCH. ICREA. ICN2 Severo Ochoa Institute
- Drs Annabel F. Valledor y Júlia Peinado. Universitat de Barcelona. Barcelona, Spain.
- Dr Luís Masana. Hospital Sant Joan de Reus y Universitat Rovira i Virgili y CIBERDEM. Reus, Spain.
- Dr Manuel Vázquez-Carrera. Universitat de Barcelona y CIBERDEM. Barcelona, Spain.
- Dr Joan Carles Laguna. Universitat de Barcelona. Barcelona, Spain.
- Dr Jose Luís Martín-Ventura. Fundación Jimenez-Díaz y CIBERCV, Madrid, Spain.
- Dr Jesús Vázquez. CNIC y CIBERCV, Madrid, Spain.
- Drs Isabel Moreno y Francisco Tinahones. Biomedical Research Institute of Málaga (IBIMA). University Hospital of Málaga y CIBEROBN, Málaga, Spain.
- Drs Antonio Zorzano y David Sebastian. Institute for Research in Biomedicine (IRB) y CIBERDEM. Barcelona, Spain.
- Drs Fernando Civeira y Ana Cenarro. Hospital Clínico Universitario Miguel Servet y CIBERCV. Madrid, Spain.
- Dr Ignacio Fita. IBMB-CSIC. Barcelona, Spain
- Dr Petri Kovanen. Wihuri Research Institute. Helsinki, Finland.
- Dr Matti Jauhiainen. National Institute for Health and Welfare. Helsinki, Finland.

- Dr Srinu Reddy. Department of Medicine, UCLA. CA, USA
- Dr Ricardo Cassaroli. Universitat de Barcelona y IDIBABS. Barcelona, Spain.
- Dr Miquel Hueso Val. Hospital Bellvitge. Barcelona, Spain.
- Dr César Martín. Instituto de Biofísica. Universidad Pais Vasco, Spain.
- Dr Carlos Fernández-Hernando. Yale University, USA.

Active grants

- JOSEP JULVE GIL. Lipotoxicity and microvascular disease: contribution to myocardial damage in clinical and experimental models of diabetes.. MARATO 201602.31. Fundació La Marató de TV3. Duration 2017–2021. 108.000,00 €.
- ANDREA PATRICIA RIVAS URBINA. Ajuts predoctorals de formació en recerca en salut 2017.. FI17/00031. Instituto de Salud Carlos III. Duration 2018–2021. 82.400,00 €.
- MARTA FARRAS MAÑE. Contractes postdoctorals “Sara Borrell” 2017.. CD17/00233. Instituto de Salud Carlos III. Duration 2018–2021. 80.598,00 €.
- JOSEP JULVE GIL. Contribución de especies lipídicas bioactivas (esfingosina-1-fosfato) asociadas a HDL sobre la disfunción miocárdica en pacientes con diabetes mellitus tipo 2 y efecto del control glicémico.. PI17/00232. Instituto de Salud Carlos III. Duration 2018–2022. 121.000,00 €.
- FRANCISCO BLANCO VACA. Grup de Recerca d'Estructura de Lipoproteïnes, Dislipèemies i altres factors de risc de l'Arteriosclerosi.. 2017 SGR 01149. Agència de Gestió d'Ajuts Universitaris i de Recerca. Duration 2017–2021. 0,00 €.
- NOEMI ROTLLAN VILA. Subprograma Contratos Ramón y Cajal 2017.. RYC-2017-22879. Ministeri de Ciència, Innovació i Universitats. Duration 2019–2024. 168.600,00 €.
- FRANCISCO BLANCO VACA. TMAO y gammaBB y su relación con la disfuncionalidad de HDL y el riesgo de enfermedad coronaria en pacientes con hipercolesterolemia familiar y diabetes.. PI18/00164. Instituto de Salud Carlos III. Duration 2019–2021. 102.000,00 €.
- JOSEP JULVE GIL. Diabetes y obesidad: biomarcadores, fisiopatología y efectos de nuevas terapias.. CPII18/00004. Instituto de Salud Carlos III. Duration 2019–2022. 91.125,00 €.
- NOEMI ROTLLAN VILA. Proyecto asociado al contrato Ramón y Cajal.. RYC-2017-22879(P). Ministeri de Ciència, Innovació i Universitats. Duration 2019–2023. 40.000,00 €.
- JUAN CARLOS ESCOLA GIL. Adiposidad, inflamación y la desregulación del colesterol en el carcinoma de tiroides. Evaluación de estrategias terapéuticas basadas en la reducción

del colesterol y la activación de LXR.. PI19/00136. Instituto de Salud Carlos III. Duration 2020-2022. 92.000,00 €.

- GIOVANNA REVILLA SENRA. TMAO y su relación con la disfuncionalidad de HDL y el riesgo de enfermedad coronaria en pacientes con hipercolesterolemia familiar y diabetes tipo 2.. FI19/00007. Instituto de Salud Carlos III. Duration 2020-2023. 82.400,00 €.

- NOEMI ROTLLAN VILA. Potenciales microRNAs como nuevas dianas terapéuticas en la arteriosclerosis relacionada con hiperhomocisteinemia.. PID2019-104367RB-I00. Ministeri de Ciència, Innovació i Universitats. Duration 2020-2022. 80.000,00 €.

- MARINA CANYELLES VICH. Contractes Rio Hortega 2020.. CM20/00033. Instituto de Salud Carlos III. Duration 2021-2022. 53.732,00 €.

- GIOVANNA REVILLA SENRA. Alteraciones en las funcionalidades de las lipoproteínas y su relación con el desarrollo de cáncer de tiroides.. MV20/00013. Instituto de Salud Carlos III. Duration 2021-2021. 17.710,00 €.

- NOEMI ROTLLAN VILA. Papel del miR-590, miR-21 y/o miR-30d como dianas terapéuticas en la arteriosclerosis relacionada con hiperhomocisteinemia.. FEA 2020-2. Fundació Espanyola d'Arteriosclerosi. Duration 2021-2022. 10.909,09 €.

Note: Total amount granted to PI. It does not include indirect costs.

Other active grants

- PI21/00140 - Blanco Vaca, Francisco i Tondo Colomer, Mireia. 2021-2024 159.720 €.
- PI21/00770 - Julve, Josep. 2021-2024. 120.100 €.
- FPU20/07440 - Carla Borràs Querol

Scientific production

- Amaro AB, Curco AS, Garcia E, Julve J, Rives J, Benitez S, Cortes VL. Apolipoprotein and LRP1-Based Peptides as New Therapeutic Tools in Atherosclerosis. *Journal of Clinical Medicine*. 2021; 10(16):3571. DOI:10.3390/jcm10163571. PMID:34441867. IF:4,241 (Q1/D3).

- Arroyo JA, Julve J, Vlachos B, Corcoy R, Ponte P, Roman E, Navas E, Llauro G, Franch J, Domingo P, Mauricio D. Previous Vitamin D Supplementation and Morbidity and Mortality Outcomes in People Hospitalised for COVID19: A Cross-Sectional Study. *Frontiers in Public Health*. 2021; 9:758347. DOI:10.3389/fpubh.2021.758347. PMID:34631653. IF:3,709 (Q1/D2).

- Bellido V, Perez A. COVID-19 and Diabetes. *Journal of Clinical Medicine*. 2021; 10(22):5341. DOI:10.3390/jcm10225341. PMID:34830623. IF:4,241 (Q1/D3).

- Bellido V, Perez A. Inpatient Hyperglycemia Management and COVID-19. *Diabetes Therapy*. 2021; 12(1):121-132. DOI: 10.1007/s13300-020-00966-z. PMID: 33278017. IF:2,945 (Q3/D8).

- Bonaterra A, Fernandez S, Rivas A, Puig N, Benitez S, Pancorbo O, Rodriguez D, Pujadas F, Freijo MD, Tur S, Martinez M, Portela PC, Vera R, Lebrato L, Arenillas JF, Perez S, Montaner J, Sanchez JL, Hernandez M. Comparison of Plasma Lipoprotein Composition and Function in Cerebral Amyloid Angiopathy and Alzheimer's Disease. *Biomedicines*. 2021; 9(1):72. DOI:10.3390/biomedicines9010072. PMID:33445800. IF:6,081 (Q1/D2).

- Canyelles M, Garcia A, Junza A, Yanes O, Puig N, Ordonez J, Sionis A, Sans J, Alquezar A, Santos D, Rotllan N, Julve J, Tondo M, Escola JC, Blanco F. The Capacity of APOB-Depleted Plasma in Inducing ATP-Binding Cassette A1/G1-Mediated Macrophage Cholesterol Efflux-But Not Gut Microbial-Derived Metabolites-Is Independently Associated with Mortality in Patients with ST-Segment Elevation Myocardial Infarction. *Biomedicines*. 2021; 9(10):1336. DOI:10.3390/biomedicines9101336. PMID:34680453. IF:6,081 (Q1/D2).

- Carbo JM, Leon TE, Font J, De la Rosa JV, Castrillo A, Picard FR, Staudenraus D, Huber M, Cedo L, Escola JC, Campos L, Bakiri L, Wagner EF, Caelles C, Stratmann T, Van JA, Valledor AF. Pharmacologic Activation of LXR Alters the Expression Profile of Tumor-Associated Macrophages and the Abundance of Regulatory T Cells in the Tumor Microenvironment. *CANCER RESEARCH*. 2021; 81(4). DOI:10.1158/0008-5472.CAN-19-3360. PMID:33361391. IF:12,701 (Q1/D1).

- Castelblanco E, Hernandez M, Ortega E, Amigo N, Real J, Granada M, Minambres I, Lopez C, Lecube A, Bermudez M, Alonso N, Julve J, Mauricio D. Outstanding improvement of the advanced lipoprotein profile in subjects with new-onset type 1 diabetes mellitus after achieving optimal glycemic control. *DIABETES RESEARCH AND CLINICAL PRACTICE*. 2021; 182:109145. DOI:10.1016/j.diabres.2021.109145. PMID:34785302. IF:5,602 (Q1/D3).

- Chiva G, Pena E, Cubedo J, Garcia M, Pane A, Gil PA, Perez A, Ortega E, Padro T, Badimon L. Molecular mapping of platelet hyperreactivity in diabetes: the stress proteins complex HSPA8/Hsp90/CSK2 alpha and platelet aggregation in diabetic and normal platelets. *Translational Research*. 2021; 235. DOI:10.1016/j.trsl.2021.04.003. PMID:33887528. IF:7,012 (Q1/D1).

- Colom C, Rull A, Sanchez JL, Perez A. Cardiovascular Disease in Type 1 Diabetes Mellitus: Epidemiology and Management of Cardiovascular Risk. *Journal of Clinical Medicine*. 2021; 10(8):1798. DOI:10.3390/jcm10081798. PMID:33924265. IF:4,241 (Q1/D3).

- Daban F, Garcia-Subirats I, Porthe V, Lopez M, de-Eyto B, Pasarin MI, Borrell C, Artazcoz L, Perez A, Diez E. Improving mental health and wellbeing in elderly people isolated at home due to architectural barriers: A community health intervention. *Atencion Primaria*. 2021;53(5):102020. DOI:10.1016/j.aprim.2021.102020. PMID: 33774346. IF: 1,137 (Q4/D8).

- Delk SC, Chattopadhyay A, Escola JC, Fogelman AM, Reddy ST. Apolipoprotein mimetics in cancer. *SEMINARS IN CANCER BIOLOGY*. 2021; 73. DOI:10.1016/j.semcancer.2020.11.002. PMID:33188891. IF:15,707 (Q1/D1).
- Escola JC, Rotllan N, Julve J, Blanco F. Reverse Cholesterol Transport Dysfunction Is a Feature of Familial Hypercholesterolemia. *Current Atherosclerosis Reports*. 2021; 23(6):29. DOI:10.1007/s11883-021-00928-1. PMID:33914189. IF:5,113 (Q1/D3).
- Farras M, Almanza E, Hernaez A, Agusti N, Julve J, Fito M, Castaner O. Beneficial effects of olive oil and Mediterranean diet on cancer physio-pathology and incidence. *SEMINARS IN CANCER BIOLOGY*. 2021; 73. DOI:10.1016/j.semcancer.2020.11.011. PMID:33249203. IF:15,707 (Q1/D1).
- Fernandez ME, Daimiel L, Villa G, Pavon MV, Busto R, Escola JC, Platt FM, Lasuncion MA, Martinez J, Gomez D. Selective estrogen receptor modulators (SERMs) affect cholesterol homeostasis through the master regulators SREBP and LXR. *BIOMEDICINE & PHARMACOTHERAPY*. 2021; 141:111871. DOI:10.1016/j.biopha.2021.111871. PMID:34225017. IF:6,529 (Q1/D1).
- Fernandez S, Pedret A, Catalan U, Valls RM, Farras M, Rubio L, Castaner O, Macia A, Fito M, Motilva MJ, Covas MI, Giera M, Remaley AT, Sola R. Virgin Olive Oil Phenolic Compounds Modulate the HDL Lipidome in Hypercholesterolaemic Subjects: A Lipidomic Analysis of the VOHF Study. *MOLECULAR NUTRITION & FOOD RESEARCH*. 2021; 65(9):2001192. DOI:10.1002/mnfr.202001192. PMID:33561904. IF:5,914 (Q1/D2).
- Fuster VP, Perez AP, Gomez JC, Pedragos AC, Gomez R, Perez P. Executive summary: Updates to the dietary treatment of prediabetes and type 2 diabetes mellitus. *Endocrinologia Diabetes y Nutricion*. 2021; 68(4). DOI:10.1016/j.endinu.2020.10.009. PMID:33593709. IF:1,417 (Q4/D9).
- Genua I, Puig N, Minambres I, Benitez S, Gil P, Grau M, Rivas A, Balague C, Fernandez S, Garcia A, Perez A, Sanchez JL. Changes in the Composition and Function of Lipoproteins after Bariatric Surgery in Patients with Severe Obesity. *Journal of Clinical Medicine*. 2021; 10(8):1716. DOI:10.3390/jcm10081716. PMID:33923393. IF:4,241 (Q1/D3).
- Genua I, Tuneu L, Ramos A, Stantonoyonge N, Caimari F, Balague C, Fernandez-Ananin S, Sanchez-Quesada JL, Perez A, Miñambres I. Effectiveness of Bariatric Surgery in Patients with the Metabolically Healthy Obese Phenotype. *OBESITY SURGERY*. 2021;31(2):517-522. DOI:10.1007/s11695-020-04967-6. PMID:32915359. IF: 4,129 (Q1/D2).
- Gimeno JA, Rodriguez L, Anguita M, Barrios V, Muniz J, Perez A. Association of the KDIGO Risk Classification with the Prevalence of Heart Failure in Patients with Type 2 Diabetes. *Journal of Clinical Medicine*. 2021; 10(20):4634. DOI:10.3390/jcm10204634. PMID:34682756. IF:4,241 (Q1/D3).
- Goedeke L, Canfran A, Rotllan N, Chaube B, Thompson BM, Lee RG, Cline GW, McDonald JG, Shulman GI, Lasuncion MA, Suarez Y, Fernandez C. MMAB promotes negative feedback control of cholesterol homeostasis. *Nature Communications*. 2021; 12(1):6448. DOI:10.1038/s41467-021-26787-7. PMID:34750386. IF:14,919 (Q1/D1).
- Granado M, Martinez D, Martinez M, Doria M, Alcubierre N, Valls J, Julve J, Verdu J, Mauricio D. Psychometric Validation of the Cardiff Wound Impact Schedule Questionnaire in a Spanish Population with Diabetic Foot Ulcer. *Journal of Clinical Medicine*. 2021; 10(17):4023. DOI:10.3390/jcm10174023. PMID:34501471. IF:4,241 (Q1/D3).
- Julián MT, Pera G, Soldevila B, Caballería L, Julve J, Puig C, Morillas R, Torán P, Expósito C, Puig M, Castelblanco E, Franch J, Cusi K, Mauricio D, Alonso N. Atherogenic dyslipidemia, but not hyperglycemia, is an independent factor associated with liver fibrosis in subjects with type 2 diabetes and NAFLD: A population-based study. *EUROPEAN JOURNAL OF ENDOCRINOLOGY*. 2021; 184(4). DOI:10.1530/EJE-20-1240. PMID:33606661. IF:6,664 (Q1/D2).
- Mendez KA, Rodriguez E, Sebastian D, Blanco R, Camacho M, Nan MN, Diarte E, Mato E, Lope S, Roglans N, Laguna JC, Alonso N, Mauricio D, Zorzano A, Villarroya F, Villena JA, Blanco F, Julve J. Nicotinamide Protects Against Diet-Induced Body Weight Gain, Increases Energy Expenditure, and Induces White Adipose Tissue Beiging. *MOLECULAR NUTRITION & FOOD RESEARCH*. 2021; 65(11):2100111. DOI:10.1002/mnfr.202100111. PMID:33870623. IF:5,914 (Q1/D2).
- Minambres I, Sanchez J, Cuixart G, Sanchez A, Sarroca J, Perez A. Characterization of the hypertriglyceridemic waist phenotype in patients with type 2 diabetes mellitus in Spain: an epidemiological study. *REVISTA CLINICA ESPANOLA*. 2021; 221(10). PMID:34839890. IF:1,556 (Q3/D7).
- Nan MN, Roig R, Martinez S, Rives J, Urgell E, Espinos JJ, Tirado M, Carreras G, Aulinas A, Webb SM, Corcoy R, Blanco F, Tondo M. Comprehensive Genetic Testing of CYP21A2: A Retrospective Analysis in Patients with Suspected Congenital Adrenal Hyperplasia. *Journal of Clinical Medicine*. 2021; 10(6):1183. DOI:10.3390/jcm10061183. PMID:33809035. IF:4,241 (Q1/D3).
- Oyaguez I, Gomez F, Artola S, Carrasco FJ, Carretero J, Garcia J, Gomez R, Merino JF, Perez A. Cost Analysis of FreeStyle Libre(R) 2 System in Type 2 Diabetes Mellitus Population. *Diabetes Therapy*. 2021; 12(9). DOI:10.1007/s13300-021-01064-4. PMID:33948909. IF:2,945 (Q3/D8).
- Papotti B, Escola JC, Julve J, Poti F, Zanotti I. Impact of Dietary Lipids on the Reverse Cholesterol Transport: What We Learned from Animal Studies. *Nutrients*. 2021; 13(8):2643. DOI:10.3390/nu13082643. PMID:34444804. IF:5,717 (Q1/D2).
- Revilla G, Cedo L, Tondo M, Moral A, Perez JI, Corcoy R, Lerma E, Fuste V, Reddy TS, Blanco F, Mato E, Escola JC. LDL, HDL

and endocrine-related cancer: From pathogenic mechanisms to therapies. *SEMINARS IN CANCER BIOLOGY*. 2021; 73. DOI:10.1016/j.semcancer.2020.11.012. PMID:33249202. IF:15,707 (Q1/D1).

- Ribo S, Sanchez D, Martinez L, Garcia I, Ramon M, Tondo M, Arning E, Nofrarias M, Osorio O, Fernandez A, Gonzalez P, Cebria J, Gavalda A, Chenoll E, Isganaitis E, Villarroya F, Vallejo M, Segales J, Jimenez JC, Bottiglieri T, Demerath EW, Fields DA, Collado MC, Lerin C. Increasing breast milk betaine modulates Akkermansia abundance in mammalian neonates and improves long-term metabolic health. *Science Translational Medicine*. 2021; 13(587):eabb0322. DOI:10.1126/scitranslmed.abb0322. PMID:33790021. IF:17,956 (Q1/D1).

- Rodriguez J, Cerro I, Lindholt JS, Bonzon E, Martinez D, Roldan R, Escola JC, Michel JB, Blanco LM, Vazquez J, Suraz A, Martin JL. Malondialdehyde-modified HDL particles elicit a specific IgG response in abdominal aortic aneurysm. *FREE RADICAL BIOLOGY AND MEDICINE*. 2021; 174. DOI:10.1016/j.freeradbiomed.2021.08.004. PMID:34364980. IF:7,376 (Q1/D2).

- Rojo MI, Castelblanco E, Real J, Hernandez M, Falguera M, Amigo N, Julve J, Alonso N, Franch J, Granado M, Mauricio D. Advanced Quantitative Lipoprotein Characteristics Do Not Relate to Healthy Dietary Patterns in Adults from a Mediterranean Area. *Nutrients*. 2021; 13(12):4369. DOI:10.3390/nu13124369. PMID:34959921. IF:5,717 (Q1/D2).

- Rotllan N, Camacho M, Tondo M, Diarte E, Canyelles M, Mendez KA, Benitez S, Alonso N, Mauricio D, Escola JC, Blanco F, Julve J. Therapeutic Potential of Emerging NAD plus -Increasing Strategies for Cardiovascular Diseases. *Antioxidants*. 2021; 10(12):1939. DOI:10.3390/antiox10121939. IF:6,312 (Q1/D1).

- Singh AK, Chaube B, Zhang XB, Sun J, Citrin KM, Canfran A, Aryal B, Rotllan N, Varela L, Lee RG, Horvath TL, Price NL, Suarez Y, Fernandez C. Hepatocyte-specific suppression of ANGPTL4 improves obesity-associated diabetes and mitigates atherosclerosis in mice. *JOURNAL OF CLINICAL INVESTIGATION*. 2021; 131(17):e140989. DOI:10.1172/JCI140989. PMID:34255741. IF:14,808 (Q1/D1).

- Teis A, Cediel G, Amigo N, Julve J, Aranyo J, Andres J, Puig C, Castelblanco E, Gual F, Ferrer E, Vallejo N, Junca G, Lopez J, De Antonio M, Domingo M, Santiago E, Codina P, Mauricio D, Lupon J, Alonso N, Bayes A. Particle size and cholesterol content of circulating HDL correlate with cardiovascular death in chronic heart failure. *Scientific Reports*. 2021; 11(1):3141. DOI:10.1038/s41598-021-82861-6. PMID:33542459. IF:4,379 (Q1/D3).

- Uribe KB, Benito A, Martin C, Blanco F, Rotllan N. (r)HDL in theranostics: how do we apply HDL's biology for precision medicine in atherosclerosis management? dagger. *Biomaterials Science*. 2021; 9(9). DOI:10.1039/d0bm01838d. PMID:33949389. IF:6,843 (Q1/D2).

Other scientific publications

- Farras M, Escola JC. Special issue: Diet, lipids, and cancer: From Pathogenic mechanisms to potential therapeutic strategies. *SEMINARS IN CANCER BIOLOGY*. 2021; 73. DOI:10.1016/j.semcancer.2021.05.015. PMID:34015466. IF:15,707 (Q1/D1).

- Fuster VP, Perez AP, Gomez JC, Pedragos AC, Gomez R, Perez P. Executive summary: Updates to the dietary treatment of prediabetes and type 2 diabetes mellitus. *REVISTA CLINICA ESPANOLA*. 2021; 221(3). DOI:10.1016/j.rce.2020.10.009. PMID:33998467. IF:1,556 (Q3/D7).

- Julve J, Escola JC. High-Density Lipoproteins and Cardiovascular Disease: The Good, the Bad and the Future. *Biomedicines*. 2021; 9(8):857. DOI:10.3390/biomedicines9080857. PMID:34440061. IF:6,081 (Q1/D2).

- Julve J, Escola JC. Y High-Density Lipoproteins and Cardiovascular Disease: The Good, the Bad, and the Future. *INTERNATIONAL JOURNAL OF MOLECULAR SCIENCES*. 2021; 22(14):7488. DOI:10.3390/ijms22147488. PMID:34299108. IF:5,923 (Q1/D3).

Other publications

- Fuster VP, Perez AP, Gomez JC, Pedragos AC, Gomez R, Perez P. Executive summary: Updates to the dietary treatment of prediabetes and type 2 diabetes mellitus. *Clinica e Investigacion en Arteriosclerosis*. 2021; 33(2). DOI:10.1016/j.arteri.2020.11.005. PMID:33612315.

Communication and dissemination activities

Media relations

- Interview at Dr. Antonio Pérez, president of the Sociedad Española de Diabetes ¿Por qué han aumentado tanto los casos de diabetes en España?

<https://www.rtve.es/play/videos/mejor-contigo/aumentado-casos-diabetes-espana/6201406/>

Press releases

- Una forma de la vitamina B3 actúa como “quemagrasas” y protege contra el desarrollo de obesidad

<https://www.ciberdem.org/noticias/una-forma-de-la-vitamina-b3-actua-como-quemagrasas-y-protege-contra-el-desarrollo-de-obesidad>

- Una reducción en la función de las lipoproteínas que llevan el colesterol ‘bueno’ predice el riesgo de muerte en pacientes con infarto de miocardio

<https://www.ciberdem.org/noticias/una-reduccion-en-la-funcion-de-las-lipoproteinas-que-llevan-el-colesterol-bueno-predice-el-riesgo-de-muerte-en-pacientes-con-infarto-de-miocardio>

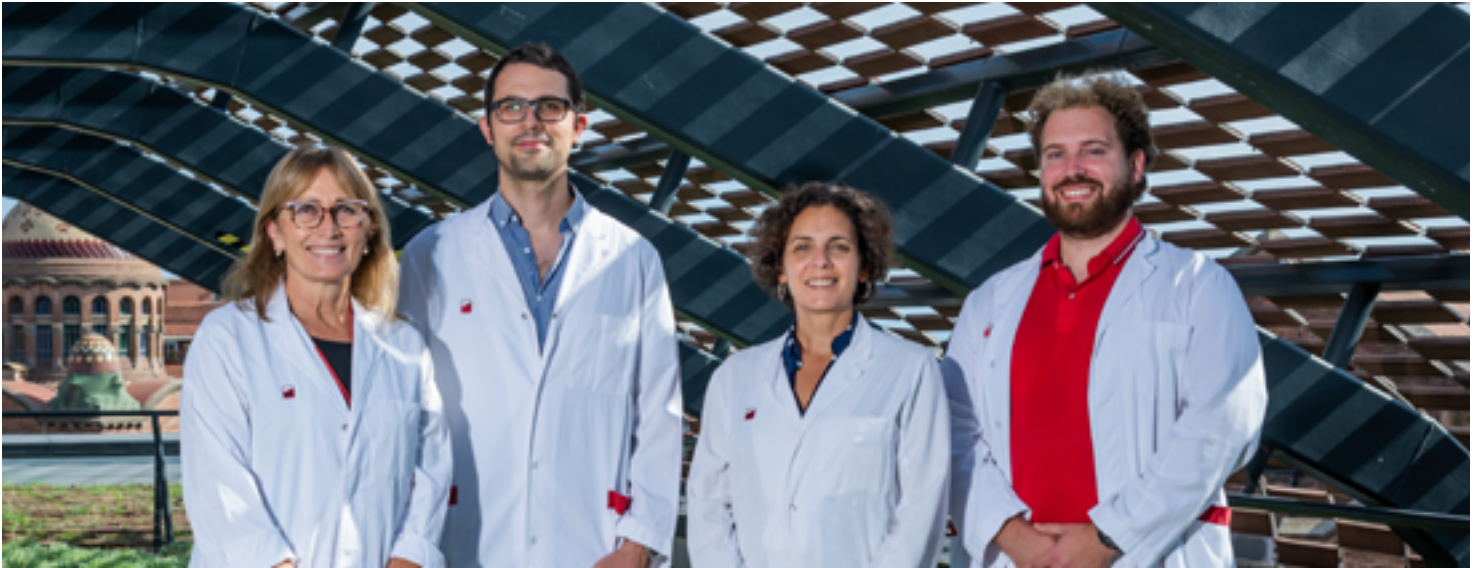
Outreach activities to society

- Dr Noemi Rotllan joined the European Researchers Night with the talk “Referents Femenins de la Recerca” (<https://youtu.be/FsSYnl6l0c0>).

- Dr Noemi Rotllan participated at the Biomedicine Talks organised by the IIB Sant Pau at Centre Civic Navas. Title: En Què Consisteix La Carrera Científica? I Quin Paper Te La Dona En La Recerca?

- Dra Mireia Tondo participated in a Radio Programme to talk about Alzheimer’s Disease diagnostic.

<https://www.infobioquimica.com/new/2021/03/17/espacio-colabiocli-entrevista-con-la-dra-mireia-tondo-i-colomer-espana-deteccion-del-alzheimer/>



Clinical Research in Transfusion Medicine

Coordinator

Salinas Argente, Ramón BST
rsalinas@bst.cat

Members

Bosch Llobet, M. Alba	BST	Medina Marrero, Laura	BST
Casanovas López, Enric Ll.	BST	Olivera Sumire, Pavel Eduardo	BST
Ene, Gabriela Simona	BST	Subirà Casellas, Maricel	BST
Ferrer Garrido, Gonzalo J.	BST		

Main lines of research

- Antithrombotic therapy.
- Thrombotic pathology and cardiovascular risk.
- Platelets and bleeding disorders.
- Clinical Transfusion and Adverse events.
- Patient Blood Management.
- Systems supporting Safe Transfusion.
- Blood products: quality management / overall quality, regulatory knowledge and improved patient safety.
- Cellular Therapies.
- Enlighthening studies in Theapeutic apheresis: therapeutic plasma exchange, cell exchange, extracorporeal photopheresis, LDL-apheresis, and therapeutic cytapheresis.

Scientific challenges

- Enhance cooperation with other groups in the framework of transfusion and cellular therapy research.
- Progress as a productive translational research group in the field of blood transfusion and cellular therapy.
- Analyze the effective use of blood transfusion and the main causes of its variability.

Scientific production

- Avendano C, Ramos A, Munez E, Ruiz B, de Molina RM, Torres F, Fernandez A, Calderon J, Payares C, de Santiago AD, Romera I, Pintos I, Lora J, Mancheno M, Paciello ML, Martinez AL, Vidan J, Nunez MJ, Saez MI, Porras ML, Jarilla MC, Villares P, de Oteyza JP, Ramos A, Blanco L, Madrigal ME, Rubio M, Velasco A, Pano JR, Moreno JA, Muniz E, et al. [Bösch A]. A multicenter randomized open-label clinical trial for convalescent plasma in patients hospitalized with COVID-19 pneumonia. *JOURNAL OF CLINICAL INVESTIGATION*. 2021; 131(20):e152740. DOI:10.1172/JCI152740. PMID:34473652. IF:14,808 (Q1/D1).
- Del Barrio BV, Maya S, Rodriguez JJ, Suris CC, Llobet AB, Lopez MA. Neonatal Immune Neutropenia due to Isoantibodies against the Granulocyte Receptor Fc gamma RIIIb. *TRANSFUSION MEDICINE AND HEMOTHERAPY*. 2021; 48(4). DOI:10.1159/000514488. PMID:34539322. IF:3,747 (Q2/D5).
- Demelo P, Farfan AI, Pedrajas JM, Llamas P, Siguenza P, Jaras MJ, Quintana M, Fernandez C, Bickdeli B, Jimenez D, Monreal M, Olivera PE, RIETE I. Bleeding risk in hospitalized patients with COVID-19 receiving intermediate- or therapeutic doses of thromboprophylaxis. *JOURNAL OF THROMBOSIS AND HAEMOSTASIS*. 2021; 19(8). DOI:10.1111/jth.15400. PMID:34018658. IF:5,824 (Q1/D2).
- Fernandez J, Azqueta C, Valdivia E, Martorell L, Medina L, Martinez N, Torrents S, Codinach M, Canals C, Elorza I, Parody R, Martino R, Trabazo M, de Heredia CD, Ferra C, Valcarcel D, Linares M, Ancochea A, Garcia E, Garcia N, Medina L, Castillo N, Carreras E, Villa J, Querol S. Cryopreservation of unrelated donor hematopoietic stem cells: the right answer for transplantations during the COVID-19 pandemic?. *BONE MARROW TRANSPLANTATION*. 2021; 56(10). DOI:10.1038/s41409-021-01367-x. PMID:34127808. IF:5,483 (Q1/D3).
- Muniz E, Llopis J, Parra R, Roig I, Ferrer G, Grifols J, Millan A, Ene G, Ramiro L, Maglio L, Garcia N, Pinacho A, Jaramillo A, Pero A, Artaza G, Valles R, Sauleda S, Puig L, Contreras E. Relationship between the ABO blood group and COVID-19 susceptibility, severity and mortality in two cohorts of patients. *Blood Transfusion*. 2021; 19(1). DOI:10.2450/2020.0256-20. PMID:33196417. IF:3,443 (Q2/D5).

Communication and dissemination activities

Outreach activities to society

- Presentation of the "Pla de seguretat transfusional a l'Hospital de Sant Pau" to Direcció Hospitalària and Comissió Hospitalària de Transfusió. June 2021. Ignasi Bolibar and Laura Medina.

Scientific dissemination

Courses

- CONEIXEMENTS BÀSICS DE LABORATORI DE TRANSFUSIÓ SANGUÍNIA. Hospital Althaia de Manresa (Double sessions on 26, 28 January and 9, 11 February 2021):
 - Conceptes bàsics d'immunoematologia. Gonzalo Ferrer (30 min).
 - Grup ABO. Discrepància globular-sèrica. Gonzalo Ferrer. 26th Jan 2021. Carme Samsó. 9th Feb 2021 (30 min)
 - Grup Rh. Rh feble. Enric Casanovas (20 min).
 - Altres grups sanguinis d'importància transfusional. Enric Casanovas-28 gener, Carme Samsó-11 febrer (30 min).
 - Proves de compatibilitat transfusional. Laura Medina (30 min).
 - Coombs directe. Malaltia hemolítica del fetus i del nadó. Gonzalo Ferrer (30 min).
 - Transfusions especials. Gonzalo Ferrer (30 min).

Seminars and scientific sessions

- Acadèmia de Ciències Mèdiques de Catalunya i Balears. Barcelona. Alba Bosch coordinator and moderator of the online sessions of the Societat Catalano-Balear de Transfusió Sanguínia (SCBTS) in 2021:
 - Bon ús de la Sang : A qui transfonem i com? 24/02/2021. Talks: Estudi Epidemiològic de Transfusió a Catalunya 2019: Maricel Subirà BST- HSagrat Cor.BCN; and Hemorràgia massiva: com actuar? Dra Ana Maria Gomez Caro. S. Anestesia Hospital Sant Pau.
 - Transfusió Plaquetes en pediatria. Dra Verònica Pons: BST Vall Hebron. Barcelona
 - Transfusió apropiada en un hospital de 3er nivell Dra Carolina Requeijo. Epidemiologia Hospital Sant Pau.
 - Hemovigilància a Catalunya i presentació de casos clínics 2021/01/27
 - Post covid Lessons in Transfusion medicine and Blood and Tissue Bank. 2021/05/4:
 - Púrpura trombocitopènica trombòtica. Recomanacions actuals de diagnòstic, tractament i seguiment. Ponent: Dr Joan Cid HClínic. Lliçó ricardo Castillo: Sessió Conjunta: Societats Catalano-Balear de Transfusió Sanguínia i Catalana d'Hematologia 2021/10/5.

Communications in conferences

- Poster at SEHH y SETH 2021: EVALUACIÓN DEL TEST DE COOMBS DIRECTO EN PACIENTES INGRESADOS POR LA INFECCIÓN POR SARS-COV-2 Garcia Roulston Kevin Martín¹, Gómez Pérez Lucía¹, Serra Ferrer Marta², Ferrer Garrido Gonzalo³, Léoz Allegretti M Pilar², Casanovas López Enric Luis³, Martínez Martínez Brisa³, Medina Marrero Laura³, Remacha Sevilla Ángel F2 ¹Servicio de Hematología, Hospital de la Santa Creu i Sant Pau, Barcelona; ²CSUR Eritropatología Hereditaria (Hospital Sant Joan de Déu – Hospital de la Santa Creu i Sant Pau), Barcelona; ³Banc de Sang i Teixits (BST), Sant Pau, Barcelona.

- Posters at SETS 2021:

- PO-018 - Estudio inmunohematológico en un caso de anti-Landsteiner-Wiener (LWa) en una paciente con discordancia entre el fenotipo LW(a-) y el genotipo LW(a+) Salgado Font,

M.; Moreno Morales, I.; Casanovas López, E.; González Santisteban, C.; Boto Ruiz, N.; Rodríguez Aliberas, M.; Ferrer Garrido, G.; Canals Suris, C.; Nogués Galvez, N.; Medina Marrero, L.; Muñiz Díaz, E. Banc de Sang i Teixits, Barcelona, España.

- PO-001 - ¿Temor o ansiedad en la hemodonación? (Revisión NANDA-NICNOC para el manejo rápido del temor y la ansiedad en la donación de hemocomponentes según patrones funcionales) Samsó Martí, C.; Masip Clarà, M.; Sánchez García, I.; Vargas Cevallos, S.; Sánchez Hernández, S.; Martínez Muñoz, A.; Garces Muntalt, N.; Ferrer Garrido, G.J.; Casanovas Lopez, E.; Medina Marrero, L.; Montero Pardillo, A.; Dalmau Verger, C. Banc de Sang i Teixits. Hospital de la Santa Creu i Sant Pau, Barcelona, España.

A.2. Onco-hematological diseases



Clinical Oncology

Coordinator

Barnadas Molins, Agusti FGS
 abarnadasm@santpau.cat

Members

Alfonso Ruiz, Rosa	IR	Llobet Busquets, Mireia	IR
Anguera Palacios, Georgia	FGS	Lopez Pousa, Antonio	FGS
Arqueros Nuñez, Cristina	FGS	Lopez Sanmartin, Consuelo	FGS
Barba Joaquín, Andrés	FGS	Majem Tarruella, Margarita	FGS
Bell Ramirez, Olga Lidia	IR	Maroto Rey, Jose Pablo	FGS
Boronat Ruiz, Laia	FGS	Martin Lorente, Cristina	FGS
Calero Pérez, Pilar	IR	Martin Richard, Marta	FGS
Calvo Verges, Nuria	FGS	Menendez Cuervo, Dulce Maria	IR
Casanova Bombardo, Claudia	IR	Molina Bayona, Sílvia	IR
Castells Tello, Diana	IR	Molto Valiente, Consolació	FGS
Cerda Serda, Paula	FGS	Moreno Gómez, Laura	IR
Escuin Borrás, Daniel	IR	Paez Lopez-Bravo, David	FGS
Gallego Rubio, Oscar Salvador	FGS	Pelegrín Mateo, Francisco J.	FGS
Garcia Belinchon, Merce	IR	Pérez Gorrini, Tiziana Giselle	IR
García Rodríguez, Laura	IR	Ramon Y Cajal Asensio, Teresa	FGS
Gisbert Beamud, Alexandra	IR	Ribas Carbonell, Romina	IR
Gutiérrez Arias, Heidi Nayire	IR	Roca Solà, Marc	IR
Hernández García, Ricardo	IR	Salazar Blanco, Juliana	IR
Ibañez Batlle, Laura	IR	Sebio Garcia, Ana	FGS
Juan Linares, Eva	FGS	Serra López, Jorgina	FGS
Lavernia Rosell, Laia	IR	Sullivan , Ivana Gabriela	FGS
Layana Antepara, Michelle E.	IR	Teres Lleida, Raúl	FGS
		Tibau I Martorell, Ariadna	FGS
		Tijeras Pérez, Sandra	IR
		Vañó Sempere, Lourdes C.	IR
		Virgili Manrique, Anna Cristina	FGS

Main lines of research

Clinical Research

- Development of new therapeutic strategies.
- Studies to improve tumour staging.
- Studies to detect residual disease.

Translational Research

- Personalized anticancer therapy.
- Studies of predictive and prognostic molecular markers

Scientific challenges

- Consolidate clinical research into cancer.
- Foster translational research into cancer in cooperation with other internal and external research groups.
- Consolidate the bank of tumours, DNA and serum for patients with cancer diagnosed and treated in our hospital.
- Develop new early-stage drugs (phase 1 studies).

Collaborations

Collaborations with other IIB Sant Pau research groups

- Oncogenesis and antitumorals drugs group – Dr. R Mangues
- Inflammatory diseases group – Dra. S Vidal
- Ear, Nose and Throat Cancers group – Dr. M Quer
- Molecular Pathology group – Dr. E Lerma
- Lipids and cardiovascular pathology group – Dra V LLorente

External collaborations

- Signalling and cell cycle laboratory group. Dr A Nebreda. IRB Barcelona
- Growth control and metastasis group. Dr R Gomis. IRB Barcelona
- Farmacogenetic group. Dr MJ Arranz Hospital Mutua de Terrassa. Terrassa
- Timoma and neuroendocrine tumors group. Dr D Planchard. Gustave Rousy Institute. Paris
- Medical Oncology Group. Dr J Albanell. IMIM. Hospital Parc Salut Mar. Barcelona
- CIBERONC. Breast Cancer Programme. Instituto de Salud Carlos III. Madrid.

Active grants

- ANA SEBIO GARCIA. Evaluación de las alteraciones de la distrofina y proteínas afines como factores pronósticos en pacientes afectos de leiomiomas. PI17/00143. Instituto de Salud Carlos III. Duration 2018–2021. 61.500,00 €.
- AGUSTI BARNADAS MOLINS. Grup de recerca clínica en oncologia.. 2017 SGR 01084. Agència de Gestió d'Ajuts Universitaris i de Recerca. Duration 2017–2021. 0,00 €.

- ANTONIO LOPEZ POUSA. Desarrollo clínico nuevo sistema de liberación local de fármacos. RTC-2017-6347-1. Ministeri d'Economia i Competitivitat. Duration 2018–2021. 132.186,25 €.
- DANIEL ESCUIN BORRAS. Investigación del papel de los miRNAs y snoRNAs circulantes como marcadores surrogados del estatus de los ganglios linfáticos en pacientes con cáncer de mama. PI19/00362. Instituto de Salud Carlos III. Duration 2020–2022. 109.000,00 €.

- ANDRES BARBA JOAQUIN. Estudio prospectivo en búsqueda de marcadores genéticos predictivos de respuesta y/o toxicidad a quimioterapia y radioterapia en carcinoma de pulmón de célula pequeña. SCBO 2019. Societat Catalano-Balear d'Oncologia. Duration 2019–2022. 5.454,55 €.

- JORGINA SERRA LOPEZ. Impacto de una intervención enfermera en el manejo de pacientes con cáncer de pulmón en curso de tratamiento con inmunoterapia. PR-405/2020. Fundació Infermeria i Societat. Duration 2021–2023. 3.900,00 €.

- JOSE PABLO MAROTO REY. Projecte de recerca Institut de Recerca - Llegat Sr. Mas Viladot.. LLEGAT FP2018 - CANCER PROSTATATA. Fundació Privada Hospital de la Santa Creu i Sant Pau. Duration 2019–2021. 155.901,90 €.

Note: Total amount granted to PI. It does not include indirect costs.

Doctoral theses

- Cristina Arqueros NUñez, Tumoral microambient, prognostic and predictive influence in breast cancer HER2-negative, Universitat Autònoma de Barcelona, Dr A Barnadas Molins and Dr Juliana Salazar Blando, 01/07/2021.
- Consolacio Moltó Valiente, Clinical benefit of antineoplastic drugs approved by regulatory agencies, Universitat Autònoma de Barcelona, Dr A Barnadas Molins and DR A Tibau Martorell, 07/07/2021.
- Mariona Riudavets Melia, Immune-related side adverse events and the association with the immunotherapy efficacy in patients with solid tumors. Universitat Autònoma de Barcelona, Margarita Majem Tarruella, 22/07/2021.

Scientific production

- Aguado C, Teixido C, Román R, Reyes R, Giménez-Capitán A, Marin E, Cabrera C, Viñolas N, Castillo S, Muñoz S, Arcocha A, López-Vilaró L, Sullivan I, Aldeguer E, Rodríguez S, Moya I, Viteri S, Cardona AF, Palmero R, Sainz C, Mesa-Guzmán M, Lozano MD, Aguilar-Hernández A, Martínez-Bueno A, González-Cao M, Gonzalvo E, Leenders WPJ, Rosell R, et al. Multiplex RNA-based detection of clinically relevant MET alterations in advanced non-small cell lung cancer. *Molecular Oncology*. 2021;15(2):350-363. DOI:10.1002/1878-0261.12861. PMID: 33236532. IF:6,603 (Q1/D3).

- Alvarez F, Jimenez P, Carmona A, Arrazubi V, Hernandez R, Cano JM, Custodio A, Pijaume CP, Aguado G, Lago NM, Canovas MS, Lavin DC, Visa L, Martinez A, Arias A, Lopez F, Limon ML, Tocino RV, Montes AF, Alsina M, Pimentel P, Reguera P, Carnicero AM, Ramchandani A, Granja M, Azkarate A, Richard MM, Serra O, Perez CH, Hurtado A, Gil A, Sauri T, et al. Is advanced esophageal adenocarcinoma a distinct entity from intestinal subtype gastric cancer? Data from the AGAMENON-SEOM Registry. *Gastric Cancer*. 2021; 24(4). DOI:10.1007/s10120-021-01169-6. PMID:33651195. IF:7,370 (Q1/D2).
- Aparicio J, García Del Muro X, Maroto P, Terrasa J, Castellano D, Bastús R, Gumà J, Sagastibeltza N, Durán I, Ochenduszko S, Meana JA, García-Sánchez J, Arranz JA, Gironés R, Germà JR. Patterns of relapse and treatment outcome after active surveillance or adjuvant carboplatin for stage I seminoma: a retrospective study of the Spanish Germ Cell Cancer Group. *Clinical & Translational Oncology*. 2021;23(1):58-64. DOI:10.1007/s12094-020-02393-9. PMID: 32462393. IF:3,405 (Q3/D7).
- Arranz MJ, Gallego C, Martin A, Soler J, Elices M, Dominguez E, Salazar J, Vega D, Briones L, Pascual JC. A genome-wide methylation study reveals X chromosome and childhood trauma methylation alterations associated with borderline personality disorder. *Translational Psychiatry*. 2021; 11(1):5. DOI:10.1038/s41398-020-01139-z. PMID:33414392. IF:6,222 (Q1/D2).
- Arranz MJ, Salazar J, Hernandez MH. Pharmacogenetics of antipsychotics: Clinical utility and implementation. *BEHAVIOURAL BRAIN RESEARCH*. 2021; 401:113058. DOI:10.1016/j.bbr.2020.113058. PMID:33316324. IF:3,332 (Q2/D4).
- Bancroft EK, Page EC, Brook MN, Thomas S, Taylor N, Pope J, McHugh J, Jones AB, Karlsson Q, Merson S, Ong KR, Hoffman J, Huber C, Maehle L, Grindedal EM, Stormorken A, Evans DG, Rothwell J, Laloo F, Brady AF, Bartlett M, Snape K, Hanson H, James P, McKinley J, Mascarenhas L, Syngal S, Ukaegbu C, Side L, Thomas T, Barwell J, et al. [Cajal TRY]. A prospective prostate cancer screening programme for men with pathogenic variants in mismatch repair genes (IMPACT): initial results from an international prospective study. *LANCET ONCOLOGY*. 2021; 22(11). DOI:10.1016/S1470-2045(21)00522-2. PMID:34678156. IF:41,316 (Q1/D1).
- Bellmunt J, Esteban E, del Muro XG, Sepulveda JM, Maroto P, Gallardo E, del Alba AG, Etxaniz O, Guix M, Larriba JLG, Arranz JA, Redrado M, Calvo A. Pazopanib as Second-line Antiangiogenic Treatment in Metastatic Renal Cell Carcinoma After Tyrosine Kinase Inhibitor (TKI) Failure: A Phase 2 Trial Exploring Immune-related Biomarkers for Testing in the Post-immunotherapy/TKI Era. *European Urology Oncology*. 2021; 4(3). DOI:10.1016/j.euo.2019.07.014. PMID:31477526. IF:7,479 (Q1/D1).
- Bjartell A, Lumen N, Maroto P, Paiss T, Gomez F, Birtle A, Kramer G, Kalinka E, Spaeth D, Feyerabend S, Matveev V, Lefresne F, Lukac M, Wapenaar R, Costa L, Chowdhury S. Real-World Safety and Efficacy Outcomes with Abiraterone Acetate Plus Prednisone or Prednisolone as the First- or Second-Line Treatment for Metastatic Castration-Resistant Prostate Cancer: Data from the Prostate Cancer Registry. *Targeted Oncology*. 2021; 16(3). DOI:10.1007/s11523-021-00807-4. PMID:33826036. IF:4,493 (Q2/D5).
- Blackhall F, Jao K, Greillier L, Cho BC, Penkov K, Reguart N, Majem M, Nackaerts K, Syrigos K, Hansen K, Schuette W, Cetnar J, Cappuzzo F, Okamoto I, Erman M, Langer SW, Kato T, Groen H, Sun ZW, Luo Y, Tanwani P, Caffrey L, Komarnitsky P, Reinmuth N. Efficacy and Safety of Rovalpituzumab Tesirine Compared With Topotecan as Second-Line Therapy in DLL3-High SCLC: Results From the Phase 3 TAHOE Study. *Journal of Thoracic Oncology*. 2021; 16(9). DOI:10.1016/j.jtho.2021.02.009. PMID:33607312. IF:15,609 (Q1/D1).
- Caamano AG, Vicente A, Maroto P, Antolin AR, Sanz J, Gonzalez M, Climent MA. Management of Localized Muscle-Invasive Bladder Cancer from a Multidisciplinary Perspective: Current Position of the Spanish Oncology Genitourinary (SOGUG) Working Group. *Current Oncology*. 2021; 28(6). DOI:10.3390/curroncol28060428. PMID:34940067. IF:3,677 (Q3/D6).
- Canto E, Faba OR, Zamora C, Mulet M, Garcia MS, Palomino A, Anguera G, Breda A, Maroto P, Vidal S. Immunological Status of Bladder Cancer Patients Based on Urine Leukocyte Composition at Radical Cystectomy. *Biomedicines*. 2021; 9(9):1125. DOI:10.3390/biomedicines9091125. PMID:34572311. IF:6,081 (Q1/D2).
- Casarrubios M, Cruz A, Nadal E, Insa A, Campelo MDG, Lazaro M, Domine M, Majem M, Rodriguez D, Martinez A, de Castro J, Cobo M, Lopez G, Del Barco E, Caro RB, Vinolas N, Aranda IB, Viteri S, Massuti B, Barquin M, Laza R, Sierra B, Parra ER, Sanchez B, Rocha P, Kadara H, Wistuba II, Romero A, Calvo V, Provencio M. Pretreatment Tissue TCR Repertoire Evenness Is Associated with Complete Pathologic Response in Patients with NSCLC Receiving Neoadjuvant Chemoimmunotherapy. *CLINICAL CANCER RESEARCH*. 2021; 27(21). DOI:10.1158/1078-0432.CCR-21-1200. PMID:34376534. IF:12,531 (Q1/D1).
- Cortellini A, Ricciuti B, Facchinetti F, Alessi JVM, Venkatraman D, Dall'Olio FG, Cravero P, Vaz VR, Ottaviani D, Majem M, Piedra A, Sullivan I, Lee KA, Lamberti G, Hussain N, Clark J, Bolina A, Barba A, Benitez JC, Gorria T, Mezquita L, Hoton D, Nana FA, Besse B, Awad MM, Pinato DJ. Antibiotic-exposed patients with non-small-cell lung cancer preserve efficacy outcomes following first-line chemo-immunotherapy. *ANNALS OF ONCOLOGY*. 2021; 32(11). DOI:10.1016/j.annonc.2021.08.1744. PMID:34400292. IF:32,976 (Q1/D1).
- Dabush DR, Shepshelovich D, Shochat T, Tibau A, Amir E, Goldvaser H. The impact of radiological assessment schedules on progression-free survival in metastatic breast cancer: A systemic review and meta-analysis. *CANCER TREATMENT REVIEWS*. 2021; 100:102293. DOI:10.1016/j.ctrv.2021.102293. PMID:34543860. IF:12,111 (Q1/D1).

- Del Alba AG, Mendez MJ, Vazquez S, Castro E, Climent MA, Gallardo E, Gonzalez E, Lorente D, Maroto JP, Arranz JA. SEOM clinical guidelines for the treatment of advanced prostate cancer (2020). *Clinical & Translational Oncology*. 2021; 23(5). DOI:10.1007/s12094-021-02561-5. PMID:33625671. IF:3,405 (Q3/D7).
- Elez E, Ayala F, Felip E, Campelo RG, Carbonero RG, Donas JG, del Alba AG, Flores EG, Hidalgo J, Isla D, Majem M, Lescure AR, Safont MJ, Santaballa A, Villacampa G, Vera R, Garrido P. Gender influence on work satisfaction and leadership for medical oncologists: a survey of the Spanish Society of Medical Oncology (SEOM). *ESMO Open*. 2021; 6(2):100048. DOI:10.1016/j.esmoop.2021.100048. PMID:33556897. IF:6,540 (Q1/D3).
- Escobar C, Barrios V, Lip GYH, Amin AN, Auladell A, Santero M, Salazar J, Requeijo C. Effectiveness and Safety of Dabigatran Compared to Vitamin K Antagonists in Non-Asian Patients with Atrial Fibrillation: A Systematic Review and Meta-Analysis. *CLINICAL DRUG INVESTIGATION*. 2021; 41(11). DOI:10.1007/s40261-021-01091-w. PMID:34643934. IF:2,859 (Q3/D7).
- Escuin D, Lopez L, Mora J, Bell O, Moral A, Perez I, Arqueros C, Garcia B, Cajal TRY, Lerma E, Barnadas A. Circulating microRNAs in Early Breast Cancer Patients and Its Association With Lymph Node Metastases. *Frontiers in Oncology*. 2021; 11:627811. DOI:10.3389/fonc.2021.627811. PMID:34513655. IF:6,244 (Q2/D3).
- Esteve A, Alameda F, Carrato C, Pineda E, Arpi O, Martinez M, Mallo M, Gut M, Dabad M, Tortosa A, Del Barco S, Capellades J, Puig J, Gallego O, Pujol T, Oleaga L, Gil M, de Quintana C, Valduvico I, Martinez A, Bellosillo B, Munoz AM, Esteve A, Domenech M, Camins A, Craven J, Villa S, Marruecos J, Domenech S, de la Iglesia N, et al. [Bagué S]. RNA sequencing and Immunohistochemistry Reveal ZFN7 as a Stronger Marker of Survival than Molecular Subtypes in G-CIMP-negative Glioblastoma. *CLINICAL CANCER RESEARCH*. 2021; 27(2). DOI:10.1158/1078-0432.CCR-20-2141. PMID:33106291. IF:12,531 (Q1/D1).
- Garrido P, Paz L, Majem M, Moran T, Trigo JM, Bosch J, Garcia R, Gonzalez JL, Sanchez JM, Isla D, Vinolas N, Camps C, Insa A, Juan O, Massuti B, Paredes A, Artal A, Lopez M, Palacios J, Felip E. LungBEAM: A prospective multicenter study to monitor stage IV NSCLC patients with EGFR mutations using BEAMing technology. *Cancer Medicine*. 2021; 10(17). DOI:10.1002/cam4.4135. PMID:34296539. IF:4,452 (Q2/D5).
- Gil MJ, Bellet M, Bergamino M, Morales S, Barnadas A, Manso L, Saura C, Fernandez A, Garcia E, Martinez N, Mele M, Villagrasa P, Celiz P, Martin XP, Ciruelos E, Pernas S. Long-Term Cardiac Safety and Survival Outcomes of Neoadjuvant Pegylated Liposomal Doxorubicin in Elderly Patients or Prone to Cardiotoxicity and Triple Negative Breast Cancer. Final Results of the Multicentre Phase II CAPRICE Study. *Frontiers in Oncology*. 2021; 11:645026. DOI:10.3389/fonc.2021.645026. PMID:34307126. IF:6,244 (Q2/D3).
- Gimenez A, Bracht J, Garcia JJ, Jordana N, Garcia B, Garzon M, Mayo C, Viteri S, Martinez A, Aguilar A, Sullivan IG, Johnson E, Huang CY, Gerlach JL, Warren S, Beechem JM, Teixido C, Rosell R, Reguart N, Molina MA. Multiplex Detection of Clinically Relevant Mutations in Liquid Biopsies of Cancer Patients Using a Hybridization-Based Platform. *CLINICAL CHEMISTRY*. 2021; 67(3). DOI:10.1093/clinchem/hvaa248. PMID:33439966. IF:8,327 (Q1/D1).
- Gronchi A, Miah AB, Dei Tos AP, Abecassis N, Bajpai J, Bauer S, Biagini R, Bielack S, Blay JY, Bolle S, Bonvalot S, Boukovinas I, Bovee JVMG, Boye K, Brennan B, Brodowicz T, Buonadonna A, DeAlava E, Del Muro XG, Dufresne A, Eriksson M, Fagioli F, Fedenko A, Ferraresi V, Ferrari A, Frezza AM, Gasperoni S, Gelderblom H, Gouin F, et al. [Lopez A]. Soft tissue and visceral sarcomas: ESMO-EURACAN-GENTURIS Clinical Practice Guidelines for diagnosis, treatment and follow-up. *ANNALS OF ONCOLOGY*. 2021; 32(11). DOI:10.1016/j.annonc.2021.07.006. PMID:34303806. IF:32,976 (Q1/D1).
- Guigay J, Auperin A, Fayette J, Saada E, Lafond C, Taberna M, Geoffrois L, Martin L, Capitain O, Cupissol D, Castanie H, Vansteene D, Schafhausen P, Johnson A, Even C, Sire C, Duplomb S, Evrard C, Delord JP, Laguerre B, Zanetta S, Chevassus C, Fraslin A, Louat F, Sinigaglia L, Keilholz U, Bourhis J, Mesia R, Gallego O, López A, Vazquez S. Cetuximab, docetaxel, and cisplatin versus platinum, fluorouracil, and cetuximab as first-line treatment in patients with recurrent or metastatic head and neck squamous-cell carcinoma (GORTEC 2014-01 TPEXtreme): a multicentre, open-label, randomised, phase 2 trial. *LANCET ONCOLOGY*. 2021; 22(4). DOI:10.1016/S1470-2045(20)30755-5. PMID:33684370. IF:41,316 (Q1/D1).
- Hitt R, Iglesias L, Lopez-Pousa A, Berrocal-Jaime A, Grau JJ, Garcia-Giron C, Martínez-Trufero J, Guix M, Lambea-Sorrosal J, Del Barco-Morillo E, Leon-Vintro X, Cunqueiro-Tomas AJ, Baste N, Ocaña A, Cruz-Hernández JJ; the Spanish Head and Neck Cancer Cooperative Group (TTCC). Long-term outcomes of induction chemotherapy followed by chemoradiotherapy vs chemoradiotherapy alone as treatment of unresectable head and neck cancer: follow-up of the Spanish Head and Neck Cancer Group (TTCC) 2503 Trial. *Clinical & Translational Oncology*. 2021;23(4):764-772. DOI:10.1007/s12094-020-02467-8. PMID: 32797376. IF:3,405 (Q3/D7).
- Iglesias P, Peiro I, Biagetti B, Paja M, Cobo DA, Gomez CG, Mateu M, Genua I, Majem M, Riudavets M, Gavira J, Lamas C, Pombo AF, Guerrero F, Villabona C, Agricola JMC, Webb SM, Diez JJ. Immunotherapy-induced isolated ACTH deficiency in cancer therapy. *ENDOCRINE-RELATED CANCER*. 2021; 28(12). DOI:10.1530/ERC-21-0228. PMID:34609950. IF:5,678 (Q1/D3).
- Isla D, de Castro J, García-Campelo R, Majem M, Vicente D, Juan-Vidal O. Treatment strategy optimization for patients with non-small-cell lung cancer harboring EGFR mutation: a Delphi consensus. *Clinical & Translational Oncology*. 2021;23(7):1304-1313. DOI:10.1007/s12094-020-02518-0. PMID: 33210237. IF: 3,405 (Q3/D7).
- Jimenez P, Carmona A, Martinez A, Alsina M, Custodio A, Serra O, Lavin DC, Limon ML, Sauri T, Lopez F, Visa L, Granja M, Lago NM, Arrazubi V, Tocino RV, Hernandez R, Aguado G,

Cano JM, Carnicero AM, Mangas M, Pimentel P, Montes AF, Declara IM, Longo F, Ramchandani A, Richard MM, Hurtado A, Azkarate A, Perez CH, Serrano R, Gallego J. External validity of clinical trials with diverse trastuzumab-based chemotherapy regimens in advanced gastroesophageal adenocarcinoma: data from the AGAMENON-SEOM registry. *Therapeutic Advances in Medical Oncology*. 2021; 13:17588359211019672. DOI:10.1177/17588359211019672. PMID:34211587. IF:8,168 (Q1/D2).

- Jimenez P, Pacheco V, Cebria A, Galvez F, Obispo B, Paez D, Quilez A, Quintanar T, Ramchandani A, Remon J, Rogado J, Sanchez DA, Sanchez M, Sanz E, Sesma A, Tarazona N, Cotes A, Gonzalez E, Bosch J, Fernandez A, Felip E, Vera R, Rodriguez A, Elez E. Identifying and preventing burnout in young oncologists, an overwhelming challenge in the COVID-19 era: a study of the Spanish Society of Medical Oncology (SEOM). *ESMO Open*. 2021; 6(4):100215. DOI:10.1016/j.esmoop.2021.100215. PMID:34325108. IF:6,540 (Q1/D3).

- Jimenez-Fonseca P, Carmona-Bayonas A, Martínez de Castro E, Custodio A, Pericay Pijaume C, Hernandez R, Aguado G, Castro Unanua N, Cano JM, López F, Garrido M, Fernández Montes A, Visa L, Sánchez Cánovas M, Limón ML, Martínez Lago N, Pimentel P, Hurtado A, Azkarate A, Longo F, Diez M, Arias-Martinez A, Sauri T, et al. [Martín Richard M]. External validity of docetaxel triplet trials in advanced gastric cancer: are there patients who still benefit? *Gastric Cancer*. 2021 Mar;24(2):445-456. DOI:10.1007/s10120-020-01116-x. PMID: 32970266; IF:7,370 (Q1/D2).

- Kim SJ, Lubinski J, Huzarski T, Moller P, Armel S, Karlan BY, Senter L, Eisen A, Foulkes WD, Singer CF, Tung N, Bordeleau L, Neuhausen SL, Olopade OI, Eng C, Weitzel JN, Fruscio R, Narod SA, Kotsopoulos J, Cajal TR, Trister R. Weight Gain and the Risk of Ovarian Cancer in BRCA1 and BRCA2 Mutation Carriers. *CANCER EPIDEMIOLOGY BIOMARKERS & PREVENTION*. 2021; 30(11). DOI:10.1158/1055-9965.EPI-21-0296. PMID:34426412. IF:4,254 (Q1/D3).

- Laza R, Cruz A, Nadal E, Insa A, Garcia MD, Huidobro G, Domine M, Majem M, Rodriguez D, Martinez A, Carpeno JD, Cobo M, Vivanco GL, Del Barco E, Caro RB, Vinolas N, Aranda IB, Viteri S, Massuti B, Casarrubios M, Sierra B, Tarin C, Garcia A, Haymaker C, Wistuba II, Romero A, Franco F, Provencio M. Blood biomarkers associated to complete pathological response on NSCLC patients treated with neoadjuvant chemoimmunotherapy included in NADIM clinical trial. *Clinical and Translational Medicine*. 2021; 11(7):e491. DOI:10.1002/ctm2.491. PMID:34323406. IF:11,492 (Q1/D1).

- Lewis JH, Gelderblom H, van de Sande M, Stacchiotti S, Healey JH, Tap WD, Wagner AJ, Lopez-Pousa A, Druta M, Lin CC, Baba HA, Choi Y, Wang Q, Shuster DE, Bauer S. Pexidartinib Long-Term Hepatic Safety Profile in Patients with Tenosynovial Giant Cell Tumors. *Oncologist*. 2021;26(5):e863-e873. DOI:10.1002/onco.13629. PMID: 33289960. IF:5,025 (Q2/D3).

- Majem M, Cobo M, Isla D, Marquez D, Rodriguez D, Casal J, Moran T, Bernabe R, Perez D, Ruiz P, Arroyo MM, Paz L. PD-(L)1 Inhibitors as Monotherapy for the First-Line Treatment of Non-Small-Cell Lung Cancer Patients with High PD-L1 Expression: A Network Meta-Analysis. *Journal of Clinical Medicine*. 2021; 10(7):1365. DOI:10.3390/jcm10071365. PMID:33810441. IF:4,241 (Q1/D3).

- Majem M, Manzano JL, Marquez I, Mujika K, Munoz E, Perez E, de la Cruz L, Espinosa E, Gonzalez M, Berrocal A. SEOM clinical guideline for the management of cutaneous melanoma (2020). *Clinical & Translational Oncology*. 2021; 23(5). DOI:10.1007/s12094-020-02539-9. PMID:33651321. IF:3,405 (Q3/D7).

- Majem M, Sullivan I, Viteri S, Lopez G, Cobo M, Sanchez JM, Garcia J, Garde J, Sampayo M, Martrat G, Malfettone A, Karachaliou N, Molina MA, Rosell R. First-line osimertinib in patients with epidermal growth factor receptor-mutant non-small-cell lung cancer and with a coexisting low allelic fraction of Thr790Met. *EUROPEAN JOURNAL OF CANCER*. 2021; 159. DOI:10.1016/j.ejca.2021.09.039. PMID:34763195. IF:9,162 (Q1/D2).

- Maroto P, del Muro XG, Valverde C, Pinto A, Sanchez A, Guma J, Alonso T, del Prado PM, Vazquez S, Mellado B, Aparicio J, Fernandez A, Girones R, Terrasa J. Incidence and clinical pattern of contralateral synchronous and metachronous germ cell testicular cancer. *UROLOGIC ONCOLOGY-SEMINARS AND ORIGINAL INVESTIGATIONS*. 2021; 39(2). DOI:10.1016/j.urolonc.2020.11.004. PMID:33189529. IF:3,498 (Q2/D4).

- Martin J, Lopez M, Moura DS, Ramos R, Collini P, Romagosa C, Bague S, Renne SL, Barisella M, Velasco V, Coindre JM, Lopez D, Dopazo J, Gambarotti M, Braglia L, Merlo DF, Palmerini E, Stacchiotti S, Quagliuolo VL, Lopez A, Grignani G, Blay JY, Brunello A, Gutierrez A, Valverde C, Hindi N, Dei AP, Picci P, Casali PG, Gronchi A. Predictive Value of MRP-1 in Localized High-Risk Soft Tissue Sarcomas: A Translational Research Associated to ISG-ST5 1001 Randomized Phase III Trial. *MOLECULAR CANCER THERAPEUTICS*. 2021; 20(12). DOI:10.1158/1535-7163.MCT-21-0315. PMID:34552008. IF:6,261 (Q1/D3).

- Martin J, Pousa AL, Brohl AS, Van BA, Powers B, Stacchiotti S, Blay JY, Hu JS, Oakley GJ, Wang H, Szpurka AM, Levy DE, Mo G, Ceccarelli M, Jones RL. Circulating Tumor Cells and Biomarker Modulation with Olaratumab Monotherapy Followed by Olaratumab plus Doxorubicin: Phase Ib Study in Patients with Soft-Tissue Sarcoma. *MOLECULAR CANCER THERAPEUTICS*. 2021; 20(1). DOI:10.1158/1535-7163.MCT-20-0441. PMID:33177152. IF:6,261 (Q1/D3).

- Martin M, Tobena M. First-Line Maintenance Treatment in Metastatic Colorectal Cancer (mCRC): Quality and Clinical Benefit Overview. *Journal of Clinical Medicine*. 2021; 10(3):470. DOI:10.3390/jcm10030470. PMID:33530547. IF:4,241 (Q1/D3).

- Martinez J, De Sande LM, Luna P, Martin J, Alvarez R, Marquina G, Diaz R, Poveda A, Cano JM, Cruz J, Pousa AL, Salgado M, Valverde CM, Sevilla I, Martinez J, Rubio J, De Juan A, Carrasco

JA, Moura DS, Gurruchaga I, Gutierrez A. A Growth Modulation Index-Based GEISTRA Score as a New Prognostic Tool for Trabectedin Efficacy in Patients with Advanced Soft Tissue Sarcomas: A Spanish Group for Sarcoma Research (GEIS) Retrospective Study. *Cancers*. 2021; 13(4):792. DOI:10.3390/cancers13040792. PMID:33672857. IF:6,639 (Q1/D3).

- Mezquita L, Preeshagul I, Auclin E, Saravia D, Hendriks L, Rizvi H, Park W, Nadal E, Martin P, Ruffinelli JC, Ponce S, Audigier C, Carnio S, Blanc F, Bironzo P, Tabbo F, Reale ML, Novello S, Hellmann MD, Sawan P, Girshman J, Plodkowski AJ, Zalcman G, Majem M, Charrier M, Naigeon M, Rossoni C, Mariniello A, Paz L, Dingemans AM, Planchard D, et al. Predicting immunotherapy outcomes under therapy in patients with advanced NSCLC using dNLR and its early dynamics. *EUROPEAN JOURNAL OF CANCER*. 2021; 151. DOI:10.1016/j.ejca.2021.03.011. PMID:34022698. IF:9,162 (Q1/D2).

- Moreno V, Greil R, Yachnin J, Majem M, Wermke M, Arkenau HT, Basque JR, Nidamarthy PK, Kapoor S, Cui XM, Giovannini M. Pharmacokinetics and safety of capmatinib with food in patients with MET-dysregulated advanced solid tumors. *CLINICAL THERAPEUTICS*. 2021; 43(6). DOI:10.1016/j.clinthera.2021.04.006. PMID:34053700. IF:3,393 (Q3/D6).

- Motzer R, Alekseev B, Rha SY, Porta C, Eto M, Powles T, Grunwald V, Hutson TE, Kopyltsov E, Mendez MJ, Kozlov V, Alyasova A, Hong SH, Kapoor A, Gordo TA, Merchan JR, Winkquist E, Maroto P, Goh JC, Kim M, Gurney H, Patel V, Peer A, Procopio G, Takagi T, Melichar B, Rolland F, De Giorgi U, Wong S, Bedke J, Schmidinger M, Dutcus CE, et al. Lenvatinib plus Pembrolizumab or Everolimus for Advanced Renal Cell Carcinoma. *NEW ENGLAND JOURNAL OF MEDICINE*. 2021; 384(14). DOI:10.1056/NEJMoa2035716. PMID:33616314. IF:91,245 (Q1/D1).

- Osuna R, Arqueros C, Galano C, Mulet M, Zamora C, Barnadas A, Vidal S. Effector Mechanisms of CD8+HLA-DR+ T Cells in Breast Cancer Patients Who Respond to Neoadjuvant Chemotherapy. *Cancers*. 2021; 13(24):6167. DOI:10.3390/cancers13246167. PMID:34944786. IF:6,639 (Q1/D3).

- Palmero R, Taus A, Viteri S, Majem M, Carcereny E, Garde J, Felip E, Nadal E, Malfettone A, Sampayo M, Riva F, Nagy RJ, Lanman RB, Faull I, Dix D, Karachaliou N, Rosell R. Biomarker Discovery and Outcomes for Comprehensive Cell-Free Circulating Tumor DNA Versus Standard-of-Care Tissue Testing in Advanced Non-Small-Cell Lung Cancer. *JCO Precision Oncology*. 2021; 5. DOI:10.1200/PO.20.00241. PMID:34994593. IF:4,853 (Q2/D4).

- Powles T, Carroll D, Chowdhury S, Gravis G, Joly F, Carles J, Flechon A, Maroto P, Petrylak D, Rolland F, Cook N, Balar AV, Sridhar SS, Galsky MD, Grivas P, Ravaud A, Jones R, Cosaert J, Hodgson D, Kozarewa I, Mather R, McEwen R, Mercier F, Landers D. An adaptive, biomarker-directed platform study of durvalumab in combination with targeted therapies in advanced

urothelial cancer. *NATURE MEDICINE*. 2021; 27(5). DOI:10.1038/s41591-021-01317-6. PMID:33941921. IF:53,440 (Q1/D1).

- Provencio M, Gallego JMM, Calles A, Antonanzas M, Pangua C, Rubio XM, Nadal E, Castro RL, Lopez A, Del Barco E, Domine M, Franco F, Diz P, Sandoval C, Girona ES, Sullivan I, Sala MA, Ledo GG, Cucurull M, Mosquera J, Martinez M, Chara LE, Arriola E, Herrera BE, Jarabo JR, Alvarez RA, Baena J, Cao MG. Lung cancer patients with COVID-19 in Spain: GRAVID study. *LUNG CANCER*. 2021; 157. DOI:10.1016/j.lungcan.2021.05.014. PMID:34016490. IF:5,705 (Q1/D3).

- Provencio M, Majem M, Guirado M, Massuti B, de Las Penas R, Ortega AL, Domine M, Marse R, Sala MA, Paredes A, Moran T, Vazquez S, Coves J, Larriba JLG, Sanchez JM, Vicente D, Farre N, Fornos LF, Zapata I, Franco F, Serna R, Romero A, Isla D. Phase II clinical trial with metronomic oral vinorelbine and tri-weekly cisplatin as induction therapy, subsequently concomitant with radiotherapy (RT) in patients with locally advanced, unresectable, non-small cell lung cancer (NSCLC). Analysis of survival and value of ctDNA for patient selection. *LUNG CANCER*. 2021; 153. DOI:10.1016/j.lungcan.2021.01.005. PMID:33453470. IF:5,705 (Q1/D3).

- Provencio M, Terrasa J, Garrido P, Campelo RG, Aparisi F, Diz P, Aguiar D, Garcia C, Hidalgo J, Aguado C, Gonzalez JG, Esteban E, Gomez L, Moran T, Juan O, Chara LE, Marti JL, Castro RL, Ortega AL, Moreno EM, Coves J, Pena A, Bosch J, Gastaldo AS, Nunez NF, del Barco E, Cobo M, Isla D, Majem M, Navarro F, Calvo V. Osimertinib in advanced EGFR-T790M mutation-positive non-small cell lung cancer patients treated within the Special Use Medication Program in Spain: OSIREX-Spanish Lung Cancer Group. *BMC CANCER*. 2021; 21(1):230. DOI:10.1186/s12885-021-07922-5. PMID:33676426. IF:4,430 (Q2/D5).

- Redondo A, Guerra E, Manso L, Martin C, Martinez J, Perez JA, Varela MQ, Rubio MJ, Barretina MP, Gonzalez A. SEOM clinical guideline in ovarian cancer (2020). *Clinical & Translational Oncology*. 2021; 23(5). DOI:10.1007/s12094-020-02545-x. PMID:33515422. IF:3,405 (Q3/D7).

- Redondo A, Oaknin A, Rubio MJ, Barretina MP, de Juan A, Manso L, Romero I, Martin C, Poveda A, Gonzalez A. Management of advanced ovarian cancer in Spain: an expert Delphi consensus. *Journal of Ovarian Research*. 2021; 14(1):72. DOI:10.1186/s13048-021-00816-x. PMID:34039386. IF:4,234 (Q1/D2).

- Ribelles N, Alvarez I, Arcusa A, Chacon JI, de la Haba J, Garcia J, Garcia J, Jara C, Jerez JM, Lazaro M, Leon L, Ramirez N, Tibau A, Garcia A. Electronic health records and patient registries in medical oncology departments in Spain. *Clinical & Translational Oncology*. 2021; 23(10). DOI:10.1007/s12094-021-02614-9. PMID:33864619. IF:3,405 (Q3/D7).

- Riera P, Paez D. Elucidating the role of pharmacogenetics in irinotecan efficacy and adverse events in metastatic colorectal cancer patients. *Expert Opinion on Drug Metabolism*

& Toxicology. 2021; 17(10). DOI:10.1080/17425255.2021.1974397. PMID:34486919. IF:4,481 (Q1/D3).

- Riudavets M, Bosch J, Cabezon L, Tain PD, Hernandez A, Alonso M, Blanco R, Galvez E, Insa A, Mielgo X, Moran T, Ponce S, Roa D, Sanchez JM, Majem M. Efficacy of nintedanib plus docetaxel in patients with refractory advanced epidermal growth factor receptor mutant lung adenocarcinoma. *Clinical & Translational Oncology*. 2021; 23(12). DOI:10.1007/s12094-021-02661-2. PMID:34292495. IF:3,405 (Q3/D7).

- Riudavets M, Sullivan I, Abdayem P, Planchard D. Targeting HER2 in non-small-cell lung cancer (NSCLC): a glimpse of hope? An updated review on therapeutic strategies in NSCLC harbouring HER2 alterations. *ESMO Open*. 2021; 6(5). DOI:10.1016/j.esmoop.2021.100260. PMID:34479034. IF:6,540 (Q1/D3).

- Rofes P, Gonzalez S, Navarro M, Moreno JM, Solanes A, Darder E, Carrasco E, Iglesias S, Salinas M, Gomez C, Velasco A, Tuset N, Varela M, Llort G, Cajal TRY, Grau E, Duenas N, Merlano ND, Matias X, Rivera B, Balmana J, Pineda M, Brunet J, Capella G, del Valle J, Lazaro C. Paired Somatic-Germline Testing of 15 Polyposis and Colorectal Cancer-Predisposing Genes Highlights the Role of APC Mosaicism in de Novo Familial Adenomatous Polyposis. *JOURNAL OF MOLECULAR DIAGNOSTICS*. 2021; 23(11). DOI:10.1016/j.jmoldx.2021.07.024. PMID:34454113. IF:5,568 (Q1/D2).

- Romero A, Jantus-Lewintre E, García-Peláez B, Royuela A, Insa A, Cruz P, Collazo A, Pérez Altozano J, Vidal OJ, Diz P, Cobo M, Hernández B, Vázquez Estevez S, Benítez G, Guirado M, Majem M, Bernabé R, Ortega AL, Blasco A, Bosch-Barrera J, Jurado JM, García González J, Viteri S, Garcia Giron C, Massutí B, Lopez Martín A, et al. Comprehensive cross-platform comparison of methods for non-invasive EGFR mutation testing: results of the RING observational trial. *Molecular Oncology*. 2021;15(1):43-56. DOI:10.1002/1878-0261.12832. PMID: 33107189. IF:6,603 (Q1/D3).

- Rubio J, Algaba F, Gallardo E, Marcos JA, Climent MA, Maroto P, Arranz JÁ. Recent Advances in the Management of Patients with Non-Muscle-Invasive Bladder Cancer Using a Multidisciplinary Approach: Practical Recommendations from the Spanish Oncology Genitourinary (SOGUG) Working Group. *Cancers*. 2021; 13(19):4762. DOI:10.3390/cancers13194762. PMID:34638247. IF:6,639 (Q1/D3).

- Salazar J, Perez J, Salas K, Antequera A, Auladell A, Dorantes R, Meade AG, Quintana MJ, Requeijo C, Rodriguez G, Santero M, Acosta R, Sola I, Urrutia G, Cosp XB, Systemic Treatments Adv D. Efficacy of systemic oncological treatments in patients with advanced pancreatic cancer at high risk of dying in the short or medium-term: overview of systematic reviews. *EUROPEAN JOURNAL OF CANCER*. 2021; 154. DOI:10.1016/j.ejca.2021.05.034. PMID:34252759. IF:9,162 (Q1/D2).

- Santero M, Perez J, Acosta R, Meade AG, Antequera A, Auladell A, Quintana MJ, Requeijo C, Rodriguez G, Salas K, Dorantes R, Salazar J, Sola I, Urrutia G, Cosp XB. Efficacy of systemic

oncological treatments in patients with advanced esophageal or gastric cancers at high risk of dying in the middle and short term: an overview of systematic reviews. *BMC CANCER*. 2021; 21(1):712. DOI:10.1186/s12885-021-08330-5. PMID:34134661. IF:4,430 (Q2/D5).

- Santos M, Lanillos J, Roldan JM, Caleiras E, Montero C, Cascon A, Climent MA, Anguera G, Hernando S, Lainez N, Robledo M, Robles L, de Velasco G, Garcia J, Rodriguez C. Prevalence of pathogenic germline variants in patients with metastatic renal cell carcinoma. *GENETICS IN MEDICINE*. 2021; 23(4). DOI:10.1038/s41436-020-01062-0. PMID:33442023. IF:8,822 (Q1/D1).

- Sierra B, Cruz A, Nadal E, Garitaonandia Y, Insa A, Mosquera J, Casal J, Domine M, Majem M, Rodriguez D, Martinez A, Carpeno JD, Cobo M, Vivanco GL, Del Barco E, Caro RB, Vinolas N, Aranda IB, Viteri S, Massuti B, Laza R, Casarrubios M, Garcia A, Romero A, Franco F, Provencio M. Clinical and molecular parameters associated to pneumonitis development in non-small-cell lung cancer patients receiving chemoimmunotherapy from NADIM trial. *Journal for ImmunoTherapy of Cancer*. 2021; 9(8):e002804. DOI:10.1136/jitc-2021-002804. PMID:34446577. IF:13,751 (Q1/D1).

- Stacchiotti S, Miah AB, Frezza AM, Messiou C, Morosi C, Caraceni A, Antonescu CR, Bajpai J, Baldini E, Bauer S, Biagini R, Bielack S, Blay JY, Bonvalot S, Boukovinas I, Bovee JVMG, Boye K, Brodowicz T, Callegaro D, De Alava E, Deoras M, Dufresne A, Eriksson M, Errani C, Fedenko A, Ferraresi V, Ferrari A, Fletcher CDM, Del Muro XG, Gelderblom H, et al. [Pousa AL]. Epithelioid hemangioendothelioma, an ultra-rare cancer: a consensus paper from the community of experts. *ESMO Open*. 2021; 6(3):100170. DOI:10.1016/j.esmoop.2021.100170. PMID:34090171. IF:6,540 (Q1/D3).

- Stjepanovic N, Lubinski J, Moller P, Armel SR, Foulkes WD, Tung N, Neuhausen SL, Kotsopoulos J, Sun P, Sun S, Eisen A, Narod SA, Cajal TR, Bordeleau LJ. Breast cancer risk after age 60 among BRCA1 and BRCA2 mutation carriers. *BREAST CANCER RESEARCH AND TREATMENT*. 2021; 187(2). DOI:10.1007/s10549-020-06072-9. PMID:33423179. IF:4,872 (Q2/D4).

- Strauss SJ, Frezza AM, Abecassis N, Bajpai J, Bauer S, Biagini R, Bielack S, Blay JY, Bolle S, Bonvalot S, Boukovinas I, Bovee JVMG, Boye K, Brennan B, Brodowicz T, Buonadonna A, de Álava E, Dei AP, Garcia del Muro X, Dufresne A, Eriksson M, Fagioli F, Fedenko A, Ferraresi V, Ferrari A, Gaspar N, Gasperoni S, Gelderblom H, Gouin F, et al. [López A]. Bone sarcomas: ESMO-EURACAN-GENTURIS-ERN PaedCan Clinical Practice Guideline for diagnosis, treatment and follow-up ?. *ANNALS OF ONCOLOGY*. 2021; 32(12). DOI:10.1016/j.annonc.2021.08.1995. PMID:34500044. IF:32,976 (Q1/D1).

- Vidal J, Casadevall D, Bellosillo B, Pericay C, Garcia R, Losa F, Layos L, Alonso V, Capdevila J, Gallego J, Vera R, Salud A, Martin M, Nogue M, Cillan E, Maurel J, Faull I, Raymond V, Fernandez C, Montagut C. Clinical Impact of Presurgery Circulating Tumor DNA after Total Neoadjuvant Treatment in Locally Advanced

Rectal Cancer: A Biomarker Study from the GEMCAD1402 Trial. *CLINICAL CANCER RESEARCH*. 2021; 27(10). DOI:10.1158/1078-0432.CCR-20-4769. PMID:33727257. IF:12,531 (Q1/D1).

- Vokinger KN, Hwang TJ, Daniore P, Lee CC, Tibau A, Grischott T, Rosemann TJ, Kesselheim AS. Analysis of Launch and Postapproval Cancer Drug Pricing, Clinical Benefit, and Policy Implications in the US and Europe. *JAMA Oncology*. 2021; 7(9):e212026. DOI:10.1001/jamaoncol.2021.2026. PMID:34196656. IF:31,777 (Q1/D1).
- Wilson BE, Desnoyers A, Nadler MB, Tibau A, Amir E. Fragility of randomized trials supporting cancer drug approvals stratified by approval pathway and review designations. *Cancer Medicine*. 2021; 10(16). DOI:10.1002/cam4.4029. PMID:34323019. IF:4,452 (Q2/D5).
- Wu YL, Tsuboi M, John T, Grohe C, Majem M, Goldman JW, Laktionov K, Kim SW, Kato T, Vu HV, Lu S, Lee KY, Akewanlop C, Yu CJ, de Marinis F, Bonanno L, Domine M, Shepherd FA, Zeng LM, Hodge R, Atasoy A, Rukazenzov Y, Herbst RS. A plain language summary of results from the ADAURA study: osimertinib after surgery for patients who have early-stage EGFR-mutated non-small cell lung cancer. *Future Oncology*. 2021; 17(35). DOI:10.2217/fon-2021-0752. PMID:34723634. IF:3,404 (Q3/D7).
- Zamora C, Riudavets M, Anguera G, Alserawan L, Sullivan I, Barba A, Serra J, Ortiz MA, Gallardo P, Perea L, Gavira J, Barnadas A, Majem M, Vidal S. Circulating leukocyte-platelet complexes as a predictive biomarker for the development of immune-related adverse events in advanced non-small cell lung cancer patients receiving anti-PD-(L)1 blocking agents. *CANCER IMMUNOLOGY IMMUNOTHERAPY*. 2021; 70(6). DOI:10.1007/s00262-020-02793-4. PMID:33388994. IF:6,968 (Q1/D2).

Communications in conferences

- Tibau A, Martinez MT, Ramos-Vazquez M, Dela Cruz L, Santaballa A, et al. Quality of life with Fulvestrant/Palbociclib versus Fulvestrant/Placebo in postmenopausal women with HR+/HER2- endocrine sensitive advanced breast cancer. Results from GEICAM/2014-12 (FLIPPER) study. ESMO Breast Conference Virtual meeting. Poster. April 2021.
- Tapia JC, Bujosa A, Molto C, Templeton AJ, Shepelovich D, Goldvater H, Gich I, Barnadas A, Amir E, Tibau A. Overall survival and quality of life and magnitude of clinical benefit of breast cancer drugs over the last 25 years. ASCO virtual meeting. June 2021. Poster #6571.
- Calvo N, Moreno A, Teres R, Lopez C, Jimenez E, Borrell M, Alfonso R, Cornet M, Gallardo P, Martin B, Gisbert A, Barnadas A, Ramon y Cajal T. Características y rentabilidad diagnóstica del estudio de ADN germinal en individuos sanos de familias con sospecha de cáncer hereditario. Congreso Sociedad Española de Oncología Médica. SEOM virtual. Comunicación oral CO-14. October 2021.
- Maroto P, Gallardo P, Anguera G, Algaba F, Breda A, Martin C. Tratamiento adyuvante en pacientes con seminoma testicular estadio I. Resultados de seguimiento con Carboplatino 1 ciclo y carboplatino dos ciclos. Congreso Sociedad Española de Oncología Médica. SEOM virtual. Comunicación oral CO-34. October 2021.

Communication and dissemination activities

Courses

- Visión multidisciplinar del cáncer renal: de la enfermedad localizada al paciente metastásico. Coorganised by Fundacion Puigvert and Medical Oncology Service, Hospital Santa Creu i Sant Pau. Barcelona, 4th and 11th March 2021.
- I Jornada multidisciplinar en tumores neuroendocrinos. Organised by Medical Oncology Service, Hospital Santa Creu i Sant Pau. Barcelona, 2nd June 2021.
- Vision multidisciplinar del cáncer de prostata: controversias. Organised by Medical Oncology Service, Radiotherapy Oncology Service, and Fundación Puigvert. Barcelona, 10th and 17th June 2021.



Oncogenesis and Antitumour Drugs

Coordinator

Mangues Bafalluy, Ramon IR
rmangues@santpau.cat

Members

Alamo Vargas, Patricia Virginia	CIBERBBN	Medina Gutierrez, Esperanza	IR
Alba Castellón, Lorena	IR	Navas Jimenez, Luis Carlos	IR
Carrasco Díaz, Luís Miguel	IR	Núñez Amela, Yaiza	IR
Casanova Rigat, Isolda	CIBERBBN	Rioja Blanco, Elisa	IR
Falgas Comamala, Aida	IR	Seira Oriach, Clara	IR
Garcia Leon, Annabel	IR	Unzueta Elorza, Ugutz	IR
Imedio Iribarren, Laura	IR		

Main lines of research

- Development of novel animal models of disseminated disease in solid tumours and haematological neoplasms for the mechanistic study of metastases and preclinical drug development.
- Development of protein-only nanoparticles or drug-nanoconjugates for targeted delivery of anticancer agents, aiming at the selective killing of metastasis stem cells and induction of antimetastatic effect in the absence of systemic toxicity.
- Development of protein-based drug delivery systems for the sustained release of cell-targeted polypeptidic nanoparticles and nanoconjugates.

Scientific challenges

- Obtain funding to ensure stable employment of senior researchers, attract postdoctoral fellows and reinforce current collaborations with clinicians.
- Develop molecular markers for therapeutic decision-making and personalized medicine.
- Develop anticancer drugs selectively targeted to cancer stem cells to achieve antitumor activity and antimetastatic effect in chemotherapy-resistant tumors in solid tumors and haematological neoplasias.
- Enhance international collaboration and participation in EU networks and industrial projects.

Collaborations

Collaborations with other IIB Sant Pau research groups

- Collaboration between the Medical Oncology Department (Drs. Antonio Lopez-Pousa and David Paez), the Pharmacy Department (Dr. Pau Riera) and the Pathology Department (Dr. Alberto Gallardo) of the Hospital Sant Pau with the GOA group (Drs. Ugutz Unzueta and Lorena Alba-Castellón, and Elisa Rioja and Esperanza Medina) in the ISCIII project PI20/00400, led by Dr. Ugutz Unzueta.

- Collaboration between the Otorhology Department and Research Group (Drs. Xavier León, Jacinto García, Montserrat Lopez-Vilas) and the Pathology Department (Drs. Alberto Gallardo, Silvia Bagué and K Majercakova) of the Hospital de Sant Pau and the GOA group (Drs. Patricia Álamo, Rita Sala, Ugutz Unzueta, Elisa Rioja and Luis Carlos Navas) in the ISCIII project PI17/00584., led by Dr. Miquel Quer.

- Collaboration between the Clinical Hematology Department and Research Group of the Hospital Sant Pau (Drs. Jordi Sierra, Anna Garrido and Montserrat Hoyos) and the GOA group (Drs. Isolda Casanova, Aïda Falgàs and Ugutz Unzueta) in the ISCIII project PI17/01246 and the Marató 517C/20190318/1330 project, led by Dr. Jordi Sierra.

- Collaboration between the Otorhology Department and Research Group (Drs. Xavier León, Jacinto García, Montserrat Lopez-Vilas) and the Pathology Department (Drs. Alberto Gallardo and Majercakova K) of the Hospital de Sant Pau and the GOA group (Drs. Patricia Álamo and Elisa Rioja) in the ISCIII project PI19/01661, led by Dr. Xavier León.

- Collaboration between the Department of Pathology of the Hospital Sant Pau (Dr. Alberto Gallardo) and the GOA Group (Drs. Ugutz Unzueta and Lorena Alba-Castellón) GOA group within the MICIN RETOS project RTC-2017-6125-1 project, PI (Ramon Mangués, IIB Sant Pau), in collaboration with Nanoligent, led by Dr Manuel Rodríguez Mariscal.

- Collaboration between the Medical Oncology Department and Research Group (Drs. Antonio López Pousa and Dr. David Páez) and the Pathology Department (Dr. Victoria Fusté) of the Hospital de Sant Pau and the GOA group (Drs. Patricia Álamo, Iosolda Casanova, SAïda Falgàs and Ugutz Unzueta) Rita Sala, Ugutz Unzueta, in the ISCIII project PI18/00650, led by Dr. Ramon Mangués.

External collaborations

National collaborations

- Antonio Villaverde, Departament de Microbiologia Aplicada, Universitat Autònoma de Barcelona (UAB)
- Esther Vázquez, Nanobiotechnology Group, Institut de Biotecnologia i Biomedicina, UAB
- Manuel Rodríguez-Mariscal and Mtserrat Cano, Nanoligent SL
- Eduard Batlle, Biomedical Research Institute (IRB) and

Barcelona Scientific Park (PCB).

- Ramon Mangués is a Member of the Executive Committee and Coordinator of Clinical Translation of the
- Lourdes Farré, Institut Català d'Oncologia - IDIBELL Institut d'Investigació Biomèdica de Bellvitge
- Network Consortium for Biomedical Research in Biomaterials, Bioengineering and Nanomedicine (CIBER-BBN)
- Ramon Mangués es Panelista de la Comisión Científico-Técnica de Biotecnología de la Agencia Estatal de Investigación de España
- OncoCat. Member of the Catalan Cancer Research Network. Xarxa ConnectEU, Biocat, Generalitat de Catalunya.
- NanoBioMed. Member of the Catalan Network on Nanobiotechnology, Xarxa Connect-EU. Biocat.

International collaborations

- Jason P. Holland, Department of Chemistry, University of Zurich, Switzerland
- Jan Paul Medema, University of Amsterdam, Center for Experimental and Molecular Medicine and OncoCode Institute, Amsterdam, Netherlands
- Arne Östman, Cancer Center Karolinska, Karolinska Institutet, Stockholm (Sweden).
- Alberto Bardelli, University of Torino, Medical School, Turin (Italy).
- Our group is a Member of the COST Action CA17140. Nano2Clinic. Cancer Nanomedicine - from the bench to the bedside (Nano2Clinic) (<http://www.cost.eu/actions/CA17140>)
- Ramon Mangués collaborates with the French Institut National du Cancer (INCa). He is a Member of the Scientific Evaluation Committee of the Translational Cancer Research Programme (PRT-K) since 2016, Ministry of Health (DGOS)
- ATMP-EATRIS, European Union. Member of the Working Group on Advanced therapies and biologicals of ATMP (Advanced Therapy Medicinal Products), EATRIS (European Infrastructure for Translational Medicine) Network.
- ETP Nanomedicine, European Union, Member of the European Technology Platform on Nanomedicine.
- TME-AACR member. Member of the Tumor Microenvironment Working Group, American Association for Cancer Research (AACR).

Active grants

- RAMON MANGUES BAFALLUY. Grup d'Oncogènesi i Antitumorals (GOA).. 2017 SGR 865. Agència de Gestió d'Ajuts Universitaris i de Recerca. Duration 2017-2021. 35.200,00 €.
- RAMON MANGUES BAFALLUY. NANOTRAC. Desarrollo de un nuevo medicamento selectivo con potente actividad antimetastática.. RTC-2017-6125-1. Ministeri d'Economia i Competitivitat. Duration 2018-2021. 220.063,21 €.
- RAMON MANGUES BAFALLUY. Émbolos tumorales circulantes hCXCR4/SerpinE1 en el pronóstico del cáncer de cabeza y

cuello.. PI17/00584. Instituto de Salud Carlos III. Duration 2018-2021. 90.000,00 €.

- RAMON MANGUES BAFALLUY. Implicación de la vía CXCR4/CXCL12/CXCR7 en la resistencia, recidiva y fenotipo de célula madre de la leucemia mieloide aguda.. PI17/01246. Instituto de Salud Carlos III. Duration 2018-2021. 108.000,00 €.

- RAMON MANGUES BAFALLUY. Nanopartículas Dirigidas en Combinación para la Eliminación Selectiva de Células Madre Mestatóticas y Fibroblastos Asociados a Metástasis en Cáncer Colorectal.. PI18/00650. Instituto de Salud Carlos III. Duration 2019-2021. 225.750,00 €.

- ELISA RIOJA BLANCO. Papel de CXCR4 en la diseminación metastásica del carcinoma escamoso de cabeza y cuello.. 2018 FI_B 00320. Agència de Gestió d'Ajuts Universitaris i de Recerca. Duration 2018-2021. 66.189,92 €.

- UGUTZ UNZUETA ELORZA. Improved colorectal cancer therapy by targeting the CXCR4 receptor using functional protein nanoparticles with enhanced cytosolic release.. CP19/00028. Instituto de Salud Carlos III. Duration 2020-2024. 202.500,00 €.

- LUIS MIGUEL CARRASCO DIAZ. Nanopartículas dirigidas en combinación para la eliminación selectiva de células madre mestatóticas CXCR4+ en Cáncer Colorectal.. FI19/00148. Instituto de Salud Carlos III. Duration 2020-2023. 82.400,00 €.

- UGUTZ UNZUETA ELORZA. Improved colorectal cancer therapy by targeting the CXCR4 receptor using functional protein nanoparticles with enhanced cytosolic release.. CP19/00028(P). Instituto de Salud Carlos III. Duration 2020-2023. 40.000,00 €.

- UGUTZ UNZUETA ELORZA. Conjugación dirigida de nanomedicinas proteicas inteligentes para la mejora de la terapia selectiva del cáncer metastásico de colon.. PI20/00400. Instituto de Salud Carlos III. Duration 2021-2023. 142.000,00 €.

- RAMON MANGUES BAFALLUY. Humanized nanomedicines selectively killing CXCR4+ cancer cells for Acute Myeloid Leukemia therapy.. MARATO 201941-30. Fundació La Marató de TV3. Duration 2020-2023. 144.924,35 €.

- LORENA ALBA CASTELLON. Cancer-Associated Fibroblast-Targeted Nanoparticles to Improve Antimetastatic Therapy in Colorectal Cancer.. POSTDOC AECC 2020. Associació Espanyola Contra el Càncer. Duration 2020-2022. 85.000,00 €.

Note: Total amount granted to PI. It does not include indirect costs.

Other active grants

- PI19/01661 XAVIER LEÓN VINTRÓ. 2020.2022. 125.840€
- FI21/00012 - RUEDA MATAS, ARIANA. 2021 - 2024. 119.657€

- FIJC P/AG2021. AÍDA FALGÀS COMAMALA. 2021-2022. 38.500€
- PFIS FI18/00268 YAIZA NUÑEZ AMELA. 2019-2021. 82.400€

Awards

- 8/11/2021. Admission as Corresponding Academician in the Royal Academy of Pharmacy of Catalonia

Doctoral Theses

- Esperanza Medina Gutiérrez , Actividad antineoplásica de nanotoxinas dirigidas a células CXCR4+ en un nuevo modelo murino de cáncer de endometrio avanzado , Programa de Doctorado en Biología Celular, Universidad Autónoma de Barcelona, Dr. Raamon Mangues y María Virtudes Céspedes, 11/10/2021
- Aïda Falgàs Comamala, Avaluació de l'activitat antitumoral de nous nanoconjugats dirigits al receptor CXCR4 en Limfoma Difús de Cèl·lules Grans B, Programa de Biologia molecular i cel·lular del càncer. Universitat de Barcelona (UB), Drs. Ramon Mangues i Isolda Casanova, 16/02/2021
- Rita Sala Faig, Targeted drug delivery for the selective elimination of CXCR4+ cancer cells in metastatic colorectal cancer model. International Doctoral Research, Universitat Autònoma de Barcelona, Ramon Mangues Bafalluy, 12/01/2021

Patents

- VILLAVERDE CORRALES ANTONIO; VÁZQUEZ GÓMEZ ESTHER; LÓPEZ LAGUNA HÉCTOR; SÁNCHEZ JULIETA MARÍA; MANGUES BAFALLUY RAMÓN; ALAMO PATRICIA, Protein nano- or microparticles as artificial inclusion bodies, AU2020271957 (A1), National Phase Entry, 11/04/2021
- Esther Vazquez, Ugutz Unzueta, Neus Ferrer, Antonio P Villaverde, María Virtudes Céspedes, Isolda Casanova, Ramon Mangues METHODS AND REAGENTS FOR EFFICIENT AND TARGETED DELIVERY OF THERAPEUTIC MOLECULES TO CXCR4 CELLS, US2021008154 (A1) 2021-01-14 , National Phase ENtry, 14/01/2021
- Antonio Villaverde, Esther Vázquez, Ugutz Unzueta, Ramon Mangues, María Virtudes Céspedes, Isolda Casanova, THERAPEUTIC NANOCONJUGATES AND USES THEREOF, CN113597318 (A), National Phase Entry, 02/11/2021.

- Ester Vázquez, Antonio Villaverde, Naroa Serna, Juan Cedano, Olivia Cano, Ugutz Unzueta, Ramon Mangues, Patricia Álamo, SCAFFOLD PROTEINS AND THERAPEUTIC NANOCONJUGATES BASED ON NIDOGEN, W02021130390 (A1), National Phase Entry, 01/07/2021

- Antonio Villaverde Esther Vázquez, Naroa Serna, Laura Sánchez García, Ugutz Unzueta, Ramon Mangués, María Virtudes Céspedes Isolda Casanova, Nanostructured Proteins and uses thereof, P6461USPC03, National Entry Phas, 08/06/2021

Transfer products

- 27/08/2021, Ioannis Trantakis, Rafarm. Interested in the drug delivery technology developed from the Patent "Protein nano- or microparticles as artificial inclusion bodies"

- 12/11/2021. Foundation Fournier-Majole (France) Jerome Majoie. Interest in the patented nanostructured proteins and nanoconjugates for the treatment of cancer.

- 23/08/2021. Meeting with Alessandro Toniolo. Italian Business Angels for Growth. Interest in the nanoparticle platform as a nanomedicine-based targeted drug delivery.

- 2/02/2021. Meeting with Micronoma and Oncodesign (USA) that are interested in the development of nanomedicines for targeted drug delivery in cancer.

Scientific production

- Alamo P, Cedano J, Conchillo O, Cano O, Alba L, Serna N, Avino A, Carrasco LM, Sanchez A, Martinez C, Gallardo A, Cano M, Eritja R, Villaverde A, Mangués R, Vazquez E, Unzueta U. Rational engineering of a human GFP-like protein scaffold for humanized targeted nanomedicines. *Acta Biomaterialia*. 2021; 130. DOI:10.1016/j.actbio.2021.06.001. PMID:34116228. IF:8,947 (Q1/D2).

- Alamo P, Parlade E, Lopez H, Volta E, Unzueta U, Vazquez E, Mangués R, Villaverde A. Ion-dependent slow protein release from in vivo disintegrating micro-granules. *DRUG DELIVERY*. 2021; 28(1). DOI:10.1080/10717544.2021.1998249. PMID:34747685. IF:6,419 (Q1/D1).

- Cano O, Alamo P, Sanchez L, Falgas A, Sanchez A, Serna N, Parlade E, Unzueta U, Roldan M, Volta E, Casanova I, Villaverde A, Mangués R, Vazquez E. Biparatomic Protein Nanoparticles for the Precision Therapy of CXCR4(+) Cancers. *Cancers*. 2021; 13(12):2929. DOI:10.3390/cancers13122929. PMID:34208189. IF:6,639 (Q1/D3).

- Falgas A, Pallares V, Unzueta U, Nunez Y, Sierra J, Gallardo A, Alba L, Mangués MA, Alamo P, Villaverde A, Vazquez E, Mangués R, Casanova I. Specific Cytotoxic Effect of an Auristatin Nanoconjugate Towards CXCR4(+) Diffuse Large B-Cell Lymphoma Cells. *International Journal of Nanomedicine*. 2021; 16 DOI:10.2147/IJN.S289733. PMID:33716502. IF:6,400 (Q1/D1).

- Lopez H, Parlade E, Alamo P, Sanchez JM, Volta E, Serna N, Sanchez L, Cano O, Sanchez A, Villaverde A, Mangués

- R, Unzueta U, Vazquez E. In Vitro Fabrication of Microscale Secretary Granules. *ADVANCED FUNCTIONAL MATERIALS*. 2021; 31(21):2100914. DOI:10.1002/adfm.202100914. IF:18,808 (Q1/D1).

- Lopez H, Sanchez JM, Carratala JV, Rojas M, Sanchez L, Parlade E, Sanchez A, Volta E, Serna N, Cano O, Flores S, Ferrer N, Nolan V, de Marco A, Roher N, Unzueta U, Vazquez E, Villaverde A. Biofabrication of functional protein nanoparticles through simple His-tag engineering. *ACS Sustainable Chemistry & Engineering*. 2021; 9(36). DOI:10.1021/acssuschemeng.1c04256. PMID:34603855. IF:8,198 (Q1/D1).

- Pallares V, Nunez Y, Sanchez L, Falgas A, Serna N, Unzueta U, Gallardo A, Alba L, Alamo P, Sierra J, Villaverde A, Vazquez E, Casanova I, Mangués R. Antineoplastic effect of a diphtheria toxin-based nanoparticle targeting acute myeloid leukemia cells overexpressing CXCR4. *JOURNAL OF CONTROLLED RELEASE*. 2021; 335. DOI:10.1016/j.jconrel.2021.05.014. PMID:34004204. IF:9,776 (Q1/D1).

- Sanchez JM, Lopez H, Serna N, Unzueta U, Clop PD, Villaverde A, Vazquez E. Engineering the Performance of Artificial Inclusion Bodies Built of Catalytic beta-Galactosidase. *ACS Sustainable Chemistry & Engineering*. 2021; 9(6). DOI:10.1021/acssuschemeng.0c08345. IF:8,198 (Q1/D1).

- Sanchez L, Volta E, Parlade E, Mazzega E, Sanchez A, Serna N, Lopez H, Mitstorfer M, Unzueta U, Vazquez E, Villaverde A, de Marco A. Self-Assembled Nanobodies as Selectively Targeted, Nanostructured, and Multivalent Materials. *ACS Applied Materials & Interfaces*. 2021; 13(25). DOI:10.1021/acsaami.1c08092. PMID:34129336. IF:9,229 (Q1/D2).

- Serna N, Carratala JV, Conchillo O, Martinez C, Unzueta U, Mangués R, Ferrer N, Daura X, Vazquez E, Villaverde A. Antibacterial Activity of T22, a Specific Peptidic Ligand of the Tumoral Marker CXCR4. *Pharmaceutics*. 2021; 13(11):1922. DOI:10.3390/pharmaceutics13111922. PMID:34834337. IF:6,321 (Q1/D2).

- Volta E, Serna N, Sanchez L, Avino A, Sanchez JM, Lopez H, Cano O, Casanova I, Mangués R, Eritja R, Vazquez E, Villaverde A, Unzueta U. Design and engineering of tumor-targeted, dual-acting cytotoxic nanoparticles. *Acta Biomaterialia*. 2021; 119. DOI:10.1016/j.actbio.2020.11.018. PMID:33189955. IF:8,947 (Q1/D2).

Other scientific production

- Esteve R, Climent F, Pineyro D, Domingo E, Davalos V, Encuentra M, Rea A, Espejo N, Soler M, Lopez M, Ortiz V, Tapia G, Navarro JT, Cid J, Farre L, Villanueva A, Casanova I, Mangués R, Santamarina P, Fernandez AF, Fraga MF, Piris MA, Kol N, Avrahami C, Moshitch S, Rechavi G, Sureda A, Esteller M. Epigenetic loss of m(1) A RNA demethylase ALKBH3 in Hodgkin lymphoma targets collagen, conferring poor clinical outcome. *BLOOD*. 2021; 137(7). DOI:10.1182/blood.2020005823. PMID:32915956. IF:22,113 (Q1/D1).

Communication and dissemination activities

- 08/11/2021. 4th Edition of Webinar on Nanotechnology. Ugutz Unzueta, Héctor López-Laguna^{3, 4}, Eric Voltà-Durán, Naroa Serna, Julieta M. Sánchez, Laura Sánchez-García, Patricia Alamo, Maria Virtudes Cepedes, Victor Pallarès, Isolda Casanova, Ramon Mangues, Antonio Villaverde, Esther Vázquez. Multivalent protein nanomaterials controlled through divalent cations.
- 26/11/2021. Antitumoral nanoparticles with multiple activities, a close reality. Eric Voltà-Durán, Naroa Serna, Laura Sánchez-García, Anna Aviñó, Julieta M. Sánchez, Héctor López-Laguna,

Olivia Cano-Garrido, Isolda Casanova, Ramón Mangues, Ramon Eritja, Esther Vázquez, Antonio Villaverde, Ugutz Unzueta . 6th Scientific Meeting of BCN-b PhD Students 2021, JPhD2021, UAB Campus

- 14/10/2021. Ramon Mangues. Panelist in a Session organized by the Fundació Catalana per la Recerca i la Innovació (FCRI) on Entrepreneurial Challenges in nanotechnology: Innovation and impact on Health.
- 17/12/2021. SLSiWide webinars Mangues. Keynote Speaker. Antineoplastic effect of a CXCR4-targeted auristatin nanoconjugate against diffuse large B-cell lymphoma. v-Nanotech2021. 3rd Edition of Nanotechnology and Nanomaterials Virtual.



Haematological Diagnosis

Coordinator

Nomdedeu Guinot, Josep Francesc FGS
jnomdedeu@santpau.cat

Members

Blanco, Maria Laura	FGS	Martinez Valverde, Clara Maria	FGS
Brell Martinez, Albert	FGS	Ortin Quilez, Rosa	FGS
Bussaglia Petrillo, Elena Mart	FGS	Pratcorona Canela, Marta	FGS
Carricondo Morcillo, Maite	FGS	Remacha Sevilla, Angel Francisco	FGS
Espadaler Pare, Montserrat	FGS	Sánchez García, Jana	FGS
Fernandez Rosales, Maria Nieves	FGS	Serra Ferrer, Marta	FGS
Fuentes Hernandez, Francisca	FGS	Ubeda Rodenas, Jose	FGS
Martinez Sanchez, Elisabeth	FGS		

Main lines of research

- Hematologic malignancies: diagnostic using morphology, cytogenetics, flow cytometry, and molecular techniques (NGS).
- RNA-based methods (digital PCR, RNAseq) in hematology. New resequencing platforms.
- Molecular characterization of acute myeloid leukemia. Biologic and prognostic relevance of driver mutations.
- Age-related clonal hematopoiesis. Molecular characterization of good and bad responders to inflammatory challenges (Covid-19).
- Familial leukemias: predisposing alleles.
- WT1 in hematology: from basic mechanisms to diagnostic applications.
- Metabolic alterations in leukemic cells.
- IgVH mutations in CLL.

Scientific challenges

- Development of technical tools to study metabolic alterations in leukemic cells.

- Application of machine learning approaches to malignant and non-malignant hematologic disorders.
- CRISPR-Cas9 and other genetic resources applied to leukemic-cell models.
- Animal models in hematology.

Collaborations

Collaborations with other IIB Sant Pau research groups

- Immunology (PI: Silvia Vidal).
- Core facilities at the IIB (Elena Serrano and Matilde Parreño).
- Oncology / Haematology and Transplantation (PI: Jordi Sierra).
- Molecular Bases of Disease (PI: Pablo Fuentes).

External collaborations

- Dr. G. Saglio. Torino University. Italy.
- Dr. G. Gaidano. Novara University. Italy.
- Dr. C. Mecucci. Perugia University. Italy.
- Dr. Patrice Dubreuil. Université Marseille/Aix-en-Provence. France.
- Prof. Ginés Morata. CSIC. Madrid.
- Prof. Antonio Zorzano. Universitat de Barcelona.
- Dr. Anna Bigas. IMIM Hospital del Mar.
- Dr. Luciano di Croce. CRG. Barcelona.
- Dr. Pablo Menéndez. Josep Carreras Foundation (Hospital Clínic).
- Dr. Alberto Villanueva. IDIBELL-Bellvitge Biomedical Research Institute.
- Dr. G. Vassiliou. University of Cambridge. Jeffrey Cheah Biomedical Centre. Cambridge. UK
- Dr. J. Fitzgibbon. Cancer Research UK Barts Centre. London. UK

Active grants

- JOSEP FRANCESC NOMDEDEU GUINOT. Grup de Diagnòstic Hematològic.. 2017 SGR 00999. Agència de Gestió d'Ajuts Universitaris i de Recerca. Duration 2017-2021. 0,00 €.
- JOSEP FRANCESC NOMDEDEU GUINOT. Nuevas aproximaciones al análisis molecular de WT1 en neoplasias mieloides. Utilidad del estudio de célula única. PI20/00867. Instituto de Salud Carlos III. Duration 2021-2023. 56.000,00 €. Note: Total amount granted to PI. It does not include indirect costs.

Scientific production

- De la Guardia RD, Velasco T, Gutierrez F, Roca H, Molina O, Nombela C, Bataller A, Fuster JL, Anguita E, Vives S, Zamora L, Nomdedeu J, Gomez MT, Ramirez M, Lapillonne H, Ramos V, Rodriguez JC, Bueno C, Lopez B, Menendez P. Engraftment characterization of risk-stratified AML in NSGS mice. *Blood Advances*. 2021; 5(23). DOI:10.1182/bloodadvances.2020003958. PMID:34470043. IF:6,686 (Q1/D2).

- Martin I, Villamon E, Abellan R, Calasanz MJ, Irigoyen A, Sanz G, Such E, Mora E, Gutierrez M, Collado R, Garcia R, Vara M, Blanco ML, Oiartzabal I, Alvarez S, Bernal T, Granada I, Xicoy B, Jerez A, Calabuig M, Diez R, Gil A, Diez M, Solano C, Tormo M. Myelodysplastic syndromes with 20q deletion: incidence, prognostic value and impact on response to azacitidine of ASXL1 chromosomal deletion and genetic mutations. *BRITISH JOURNAL OF HAEMATOLOGY*. 2021; 194(4). DOI:10.1111/bjh.17675. PMID:34296432. IF:6,998 (Q1/D2).

- Payan S, Llobet AR, Sevilla A, Egido J, Castan J, Moreno JA. Sick cell nephropathy. Clinical manifestations and new mechanisms involved in kidney injury. *NEFROLOGIA*. 2021; 41(4). DOI:10.1016/j.nefro.2020.10.012. PMID:33714630. IF:2,033 (Q3/D8).

- Payan S, Perez LG, Sevilla A, Gil JS, Canales SN. Absolute Lymphocytes, Ferritin, C-Reactive Protein, and Lactate Dehydrogenase Predict Early Invasive Ventilation in Patients With COVID-19. *LABORATORY MEDICINE*. 2021; 52(2). DOI:10.1093/labmed/Imaa105. PMID:33336243. IF:1,525 (Q4/D8).

- Pich O, Cortes A, Muinos F, Pratcorona M, Gonzalez A, Lopez N. The evolution of hematopoietic cells under cancer therapy. *Nature Communications*. 2021; 12(1):4803. DOI:10.1038/s41467-021-24858-3. PMID:34376657. IF:14,919 (Q1/D1).

- Vega N, Perez S, Esperanza E, Vicente C, Torredadell M, Jimenez A, Ortega M, Llop M, Abad L, Vagace JM, Minguela A, Pratcorona M, Sanchez J, Garcia CB, Gomez MT, Martin E, Escudero A, Martinez MR, Munoz L, Velasco MR, Garcia M, Catala A, Pascual A, Velasco P, Fernandez JM, Lassaletta A, Fuster JL, Badell I, Molinos A, Molines A, Guerra P, et al. Measurable Residual Disease Assessed by Flow-Cytometry Is a Stable Prognostic Factor for Pediatric T-Cell Acute Lymphoblastic Leukemia in Consecutive SEHOP Protocols Whereas the Impact of Oncogenetics Depends on Treatment. *Frontiers in Pediatrics*. 2021; 8:614521. DOI:10.3389/fped.2020.614521. PMID:33614543. IF:3,418 (Q1/D2).

Other scientific production

- Acha P, Hoyos M, Pratcorona M, Fuster F, Palomo L, Ortega E, Zamora L, Vives S, Granada I, Montoro J, Garcia A, Arnan M, Cervera M, Canet M, Gallardo D, Arenillas L, Esteve J, Baragay J, Salamero O, Motllo C, Ortin X, Sierra J, Sole F. Genetic characterization of acute myeloid leukemia patients with mutations in IDH1/2 genes. *LEUKEMIA RESEARCH*. 2021; 101:106492. DOI:10.1016/j.leukres.2020.106492. PMID:33494038. IF:3,156 (Q3/D6).

- Bosch R, Mora A, Cuellar C, Ferrer G, Gorlatov S, Nomdedeu J, Montserrat E, Sierra J, Rai KR, Chiorazzi N, Moreno C. Fc gamma RIIb-BCR co-ligation inhibits B-cell receptor signaling in chronic lymphocytic leukemia. *HAEMATOLOGICA-THE HEMATOLOGY JOURNAL*. 2021; 106(1). DOI:10.3324/haematol.2019.245795. PMID:32336680. IF:9,941 (Q1/D2).

- Krishnevskaya E, Payan-Pernía S, Hernandez-Rodriguez I, Remacha Sevilla AF, Ancochea Serra A, Morales-Indiano C,

Serra Ferrer M, Vives-Corróns JL. Distinguishing iron deficiency from beta-thalassemia trait by new generation flow cytometry. *International Journal of Laboratory Hematology*. 2021;43(2):e58–e60. DOI:10.1111/ijlh.13362. PMID: 33089959. IF:2,877 (Q3/D7).

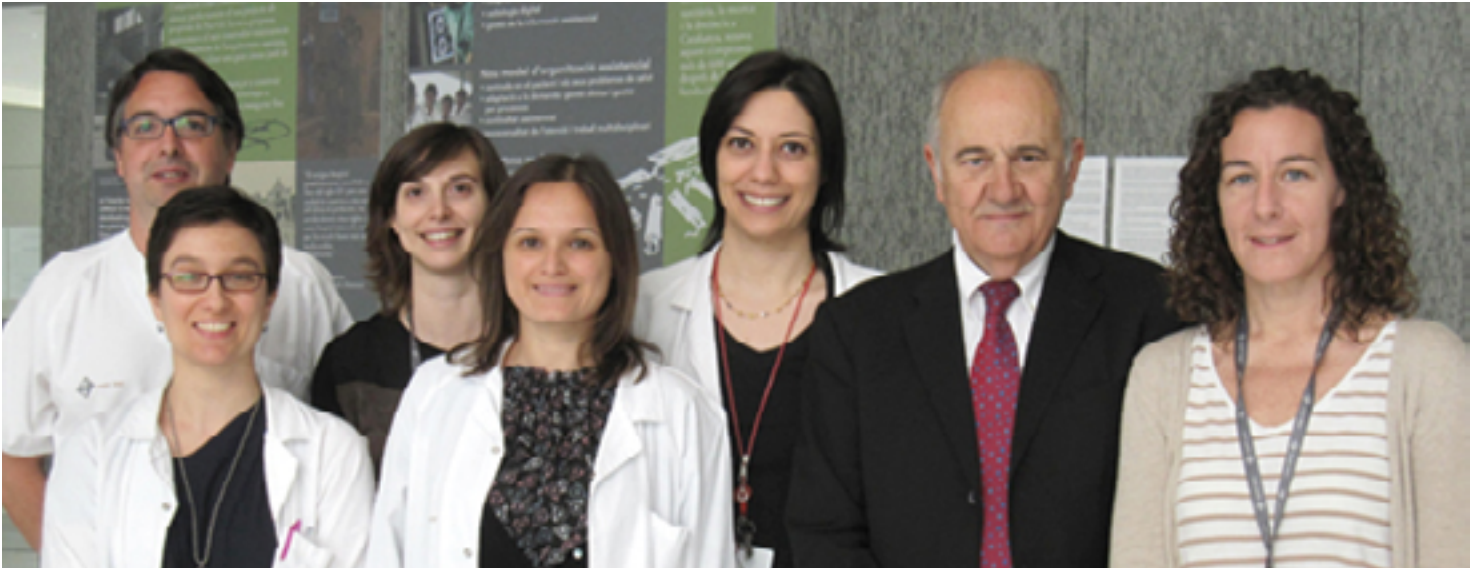
• Sierra J, Nomdedeu JF. CEBPA bZip mutations: just a single shot. *BLOOD*. 2021; 138(13). DOI:10.1182/blood.2021011263. PMID:34591099. IF:22,113 (Q1/D1).

Other publications

• Albiol N, Novelli S, Mozos A, Pratcorona M, Martino R, Sierra J. Venetoclax in relapsed/refractory blastic plasmacytoid dendritic cell neoplasm with central nervous system involvement: a case report and review of the literature. *Journal Of Medical Case Reports*. 2021; 15(1):326. DOI:10.1186/s13256-021-02939-7. PMID:34172079.

Communication and dissemination activities

• MASTER IN ADVANCED GENETICS COURSE 2020-2021. Reference ranges of WT1 mRNA levels in long-term remission acute leukemia. Setting the usefulness in minimal residual studies. Miriam Pérez Olmedo. Director J. Nomdedeu.



Molecular Pathology of Gynaecologic Cancer

Coordinator

Lerma Puertas, Enrique FGS
 elerma@santpau.cat

Members

Bague Rosell, Silvia	FGS	López Vilaró, Laura	FGS
Clua González, Agustín	FGS	Mozos Rocafort, Ana	FGS
Fusté Chimisana, Victoria	FGS	Orellana Fernández, Ruth J.	FGS
Gallardo Alcañiz, Alberto	FGS	Sánchez Güerri, Ignacio	FGS
Gonzalez Vidal, Alan	FGS	Szafranska, Justyna	FGS

Main lines of research

- Pathogenic mechanisms of gynaecological cancer (endometrial/ovarian cancer).
- Molecular mechanisms of stromal response and immunosuppression in endometrial cancer.
- Clinical application of prognostic factors in common cancers (endometrial, ovarian, etc).
- Clinical application of tumour markers.
- Molecular biology of uterine and extra-uterine sarcomas.

Scientific challenges

- Progress as a productive translational gynaecological cancer research group, capable of competing with other highly visible groups in Barcelona that publish regular articles in reputable journals.
- Cooperate with other groups at the national and international levels.

Collaborations

Collaborations with other IIB Sant Pau research groups

- Metabolic bases of cardiovascular risk Group. Collaborator: Dr Victòria Fusté.
- Project: PI19/00136 Adiposity, inflammation and cholesterol deregulation in epithelial

thyroid carcinoma. Evaluation of cholesterol-lowering and LXR-based therapies.

- Oncogenesis and antitumour drugs group. Collaborator: Dr Alberto Gallardo.

- Project: PI20/00400. Site-directed conjugation of smart protein nanomedicines to improve targeted therapy of metastatic colorectal cancer. Ugutz Unzueta Elorza (IIB-SANT PAU. INSTITUTO DE INVESTIGACIÓN HOSPITAL SANTA CREU I SANT PAU). 01/01/2021-01/01/2023.

- FIS 2019. Evaluation of nanoparticles in targeted therapy against CXCR4+ cells in vitro and mouse models of Head and Neck Squamous Cell Carcinoma.

- 2014 PROD 00055. Producte. Desenvolupament d'un nanoconjugat antimetastàtic dirigit a cèl·lules mare metastàtiques CXCR4+, l'obtenció de prototipus i a la valorització i transferència dels resultats d'investigació generada per equips de recerca de Catalunya (PRODUCTE). AGAUR.

- Marató 416/C/2013-2030. Projecte coordinat. Genotoxic Nanoparticles targeting colorectal cancer stem cells.

- Neuromuscular diseases group. Collaborator: Dr. Alberto Gallardo.

- Chronic respiratory diseases group. Collaborator: Dr Laura López Vilaró.

- Clinical Oncology. Collaborators: Dr Enrique Lerma, Dr Laura López, Dr Alberto Gallardo.

- Ear, nose and throat cancer group. Collaborators: Dr Laura López, Dr Alberto Gallardo, Dr Justyna Szafranska.

- PI19/01661. Evaluation of nanoparticles for targeted drug delivery against CXCR4+ cancer cells in vitro and mouse models of Head and Neck Squamous Cell Carcinoma. Xavier León Vintró. 01/01/2020 - 01/12/2022

- Cancer predisposition and DNA repair syndromes group.

Scientific production

- Aguado C, Teixido C, Román R, Reyes R, Gimenez-Capitan A, Marin E, Cabrera C, Viñolas N, Castillo S, Muñoz S, Arcocha A, Lopez-Vilaro L, Sullivan I, Aldeguer E, Rodriguez S, Moya I, Viteri S, Cardona AF, Palmero R, Sainz C, Mesa-Guzman M, Lozano MD, Aguilar-Hernandez A, Martinez-Bueno A, Gonzalez-Cao M, Gonzalvo E, Leenders WPJ, Rosell R, et al. Multiplex RNA-based detection of clinically relevant MET alterations in advanced non-small cell lung cancer. *Molecular Oncology*. 2021;15(2):350-363. DOI:10.1002/1878-0261.12861. PMID: 33236532. IF:6,603 (Q1/D3).

- Alamo P, Cedano J, Conchillo O, Cano O, Alba L, Serna N, Avino A, Carrasco LM, Sanchez A, Martinez C, Gallardo A, Cano M, Eritja R, Villaverde A, Mangués R, Vazquez E, Unzueta U. Rational engineering of a human GFP-like protein scaffold for humanized targeted nanomedicines. *Acta Biomaterialia*. 2021; 130. DOI:10.1016/j.actbio.2021.06.001. PMID:34116228. IF:8,947 (Q1/D2).

- Campos MC, Tubau C, Segura S, Gonzalez M, Iglesias M, Fernandez MT, Garcia MP, Mozos A. Oral submucous fibrosis presenting with histopathological lichenoid changes as predominant feature: Report of five cases and review of the literature. *JOURNAL OF CUTANEOUS PATHOLOGY*. 2021; 48(11). DOI:10.1111/cup.14084. PMID:34151457. IF:1,587 (Q4/D8).

- Castillo D, Barril S, Rodrigo A, Millan P, Suarez G, Alonso A, Franquet T, Lopez L, Castellvi I, Plaza V, Sibila O. EARLY HOSPITAL READMISSION INCREASES SHORT AND LONG - TERM MORTALITY IN PATIENTS WITH INTERSTITIAL LUNG DISEASE. *SARCOIDOSIS VASCULITIS AND DIFFUSE LUNG DISEASES*. 2021; 38(2):e2021021. DOI:10.36141/svdl.v38i2.10709. PMID:34316260. IF:0,670 (Q4/10D).

- D'Angelo E, Espinosa I, Cipriani V, Szafranska J, Barbareschi M, Prat J. Atypical Endometrial Hyperplasia, Low-grade "Much ADO About Nothing". *AMERICAN JOURNAL OF SURGICAL PATHOLOGY*. 2021; 45(7). DOI:10.1097/PAS.0000000000001705. PMID:34105519. IF:6,394 (Q1/D1).

- Escuin D, Lopez L, Mora J, Bell O, Moral A, Perez I, Arqueros C, Garcia B, Cajal TRY, Lerma E, Barnadas A. Circulating microRNAs in Early Breast Cancer Patients and Its Association With Lymph Node Metastases. *Frontiers in Oncology*. 2021; 11:627811. DOI:10.3389/fonc.2021.627811. PMID:34513655. IF:6,244 (Q2/D3).

- Esteve A, Alameda F, Carrato C, Pineda E, Arpi O, Martinez M, Mallo M, Gut M, Dabad M, Tortosa A, Del Barco S, Capellades J, Puig J, Gallego O, Pujol T, Oleaga L, Gil M, de Quintana C, Valduviego I, Martinez A, Bellosillo B, Munoz AM, Esteve A, Domenech M, Camins A, Craven J, Villa S, Marruecos J, Domenech S, de la Iglesia N, Balana C, Bague S, Aldecoa I. RNA sequencing and Immunohistochemistry Reveal ZFN7 as a Stronger Marker of Survival than Molecular Subtypes in G-CIMP-negative Glioblastoma. *CLINICAL CANCER RESEARCH*. 2021; 27(2). DOI:10.1158/1078-0432.CCR-20-2141. PMID:33106291. IF:12,531 (Q1/D1).

- Falgas A, Pallares V, Unzueta U, Nunez Y, Sierra J, Gallardo A, Alba L, Mangués MA, Alamo P, Villaverde A, Vazquez E, Mangués R, Casanova I. Specific Cytotoxic Effect of an Auristatin Nanoconjugate Towards CXCR4(+) Diffuse Large B-Cell Lymphoma Cells. *International Journal of Nanomedicine*. 2021; 16. DOI:10.2147/IJN.S289733. PMID:33716502. IF:6,400 (Q1/D1).

- Iznardo H, Baselga E, Mozos A, Szafranska J, Orellana R, Roe E. Net-like superficial lymphatic malformation. *PEDIATRIC DERMATOLOGY*. 2021; 38(2). DOI:10.1111/pde.14526. PMID:33486776. IF:1,588 (Q3/D8).

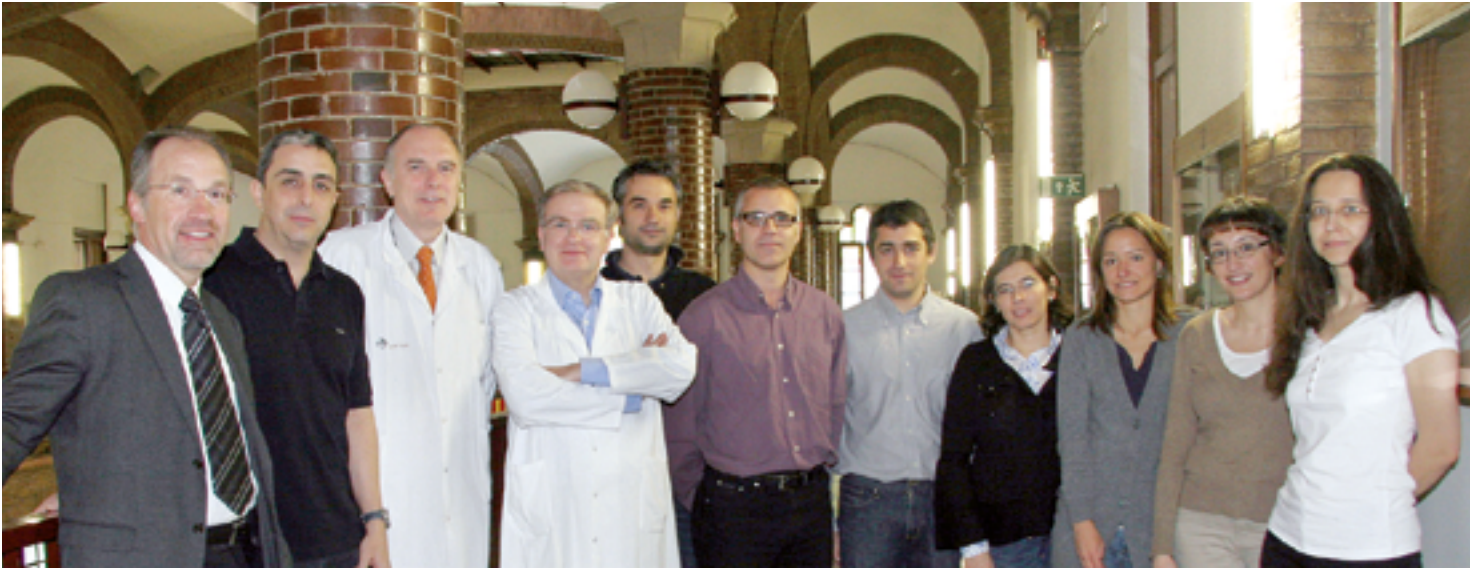
- Lopez C, Falla LM, Roe E, Arostegui JI, Mozos A, Bernal S, Iznardo H, Baselga E. Excellent response to secukinumab in an infant with severe generalized pustular psoriasis. *JOURNAL OF DERMATOLOGY*. 2021; 48(6). DOI:10.1111/1346-8138.15673. PMID:33543522. IF:4,005 (Q2/D3).
- Martin J, Lopez M, Moura DS, Ramos R, Collini P, Romagosa C, Bague S, Renne SL, Barisella M, Velasco V, Coindre JM, Lopez D, Dopazo J, Gambarotti M, Braglia L, Merlo DF, Palmerini E, Stacchiotti S, Quagliuolo VL, Lopez A, Grignani G, Blay JY, Brunello A, Gutierrez A, Valverde C, Hindi N, Dei AP, Picci P, Casali PG, Gronchi A. Predictive Value of MRP-1 in Localized High-Risk Soft Tissue Sarcomas: A Translational Research Associated to ISG-ST5 1001 Randomized Phase III Trial. *MOLECULAR CANCER THERAPEUTICS*. 2021; 20(12). DOI:10.1158/1535-7163.MCT-21-0315. PMID:34552008. IF:6,261 (Q1/D3).
- Moura DS, Diaz J, Bague S, Orellana R, Sebio A, Mondaza JL, Salguero C, Rojo F, Hindi N, Fletcher CDM, Martin J. A Novel NFIX-STAT6 Gene Fusion in Solitary Fibrous Tumor: A Case Report. *INTERNATIONAL JOURNAL OF MOLECULAR SCIENCES*. 2021; 22(14):7514. DOI:10.3390/ijms22147514. PMID:34299133. IF:5,923 (Q1/D3).
- Moura DS, Pena M, Varela J, Alvarez R, Agra C, Izquierdo F, Ramos R, Ortega L, Martin F, Castilla C, Hernandez CN, Romagosa C, Salgado M, Lavernia J, Bague S, Mayodormo E, Vicioso L, Barcelo J, Rubio J, de Juan A, Fiano MC, Hindi N, Lopez M, Lacerenza S, Dopazo J, Gutierrez A, Alvarez R, Valverde C, Martinez J, Martin J. A DNA damage repair gene-associated signature predicts responses of patients with advanced soft-tissue sarcoma to treatment with trabectedin. *Molecular Oncology*. 2021; 15(12). DOI:10.1002/1878-0261.12996. PMID:33983674. IF:6,603 (Q1/D3).
- Pallares V, Nunez Y, Sanchez L, Falgas A, Serna N, Unzueta U, Gallardo A, Alba L, Alamo P, Sierra J, Villaverde A, Vazquez E, Casanova I, Mangués R. Antineoplastic effect of a diphtheria toxin-based nanoparticle targeting acute myeloid leukemia cells overexpressing CXCR4. *JOURNAL OF CONTROLLED RELEASE*. 2021; 335. DOI:10.1016/j.jconrel.2021.05.014. PMID:34004204. IF:9,776 (Q1/D1).
- Revilla G, Cedo L, Tondo M, Moral A, Perez JI, Corcoy R, Lerma E, Fuste V, Reddy TS, Blanco F, Mato E, Escola JC. LDL, HDL and endocrine-related cancer: From pathogenic mechanisms to therapies. *SEMINARS IN CANCER BIOLOGY*. 2021; 73. DOI:10.1016/j.semcan.2020.11.012. PMID:33249202. IF:15,707 (Q1/D1).
- Vieites B, Lopez MA, Martin MD, Ramirez CL, Rezola R, Sancho M, Lopez L, Villardell F, Burgues O, Fernandez B, Alfaro L, Peg V. Predictive and prognostic value of total tumor load in sentinel lymph nodes in breast cancer patients after neoadjuvant treatment using one-step nucleic acid amplification: the NEOVATTL study. *Clinical & Translational Oncology*. 2021; 23(7). DOI:10.1007/s12094-020-02530-4. PMID:33517542. IF:3,405 (Q3/D7).

Other scientific production

- Fajardo J, Nunez E, Szafranska J, Poca M, Lobo D, Martin B, Hernandez D, Roig C, Huerta A, Corominas H, Sanchez S, Soriano G. We report a patient who presented intrahepatic cholangitis and cholecystitis after SARS-CoV-2 infection. *JOURNAL OF GASTROENTEROLOGY AND HEPATOLOGY*. 2021; 36(8). DOI:10.1111/jgh.15537. PMID:34105805. IF:4,029 (Q2/D5).
- Garcia C, Cubiro X, Tubau C, Mozos A, Munoz C, Puig L. Erythematous plaques with zosteriform distribution in a patient treated with TNF-alpha inhibitor adalimumab for psoriasis. *INTERNATIONAL JOURNAL OF DERMATOLOGY*. 2021; 60(11). DOI:10.1111/ijd.15710. PMID:34138480. IF:2,736 (Q3/D6).
- Nieto EP, Zhou JHY, Blanco MR, Cabus SS, Szafransky J. Unclassifiable pancreatic tumour. A case report. *Gastroenterologia y Hepatologia*. 2021; 44(8). DOI:10.1016/j.gastrohep.2021.02.008. PMID:33746027. IF:2,102 (Q4/D10).

Other publications

- Albiol N, Novelli S, Mozos A, Pratcorona M, Martino R, Sierra J. Venetoclax in relapsed/refractory blastic plasmacytoid dendritic cell neoplasm with central nervous system involvement: a case report and review of the literature. *Journal Of Medical Case Reports*. 2021; 15(1):326. DOI:10.1186/s13256-021-02939-7. PMID:34172079.



Ear, Nose and Throat Cancer

Coordinator

Quer Agusti, Miquel
mquer@santpau.cat

FGS

Members

Casasayas Plass, Maria

FGS

De Juan Beltran, Julia

FGS

Gras Cabrerizo, Juan Ramon

FGS

Kolanczak, Katarzyna Alicja

FGS

Leon Vintro, Xavier

FGS

Lopez Vilas, Montserrat

FGS

Montserrat Gili, Joan Ramon

FGS

Orus Dotu, Cesar

FGS

Pujol Olmo, Albert

FGS

Venegas Pizarro, Maria Del Prado

FGS

Main lines of research

- Genetic and molecular predictors of response to head and neck cancer (with the Oncogenesis and Antitumour Drugs group).
- Molecular mechanisms of inflammation in head and neck cancer (with the Genomics of Complex Diseases group).
- Nasosinal endoscopic surgery: innovations in skull base techniques.
- Internal ear: aspects related to severe deafness, cochlear implants and otoneurological surgery of tumours.

Scientific challenges

- Promote clinical and translational research into head and neck cancer with a very large database of head and neck cancers.
- Study relevant clinical issues in depth (second- third neoplasms, staging concerns, prognostic factors, etc) and investigate translational aspects such as genetic and molecular predictors.

Collaborations

Collaborations with other IIB Sant Pau research groups

- Oncogenesis and antitumour drugs.
Dr Ramon Mangues
- Genomics of Complex Diseases.
Dr Mercedes Camacho

External collaborations

- Epidemiology Service ICO. Dr Alemany.
- Universitat Rovira i Virgili. Dr Francesc Xavier Aviles.
- Memorial Sloan Kettering Group, USA. Dr Patel.

Active grants

• MIQUEL QUER AGUSTI. Émbolos tumorales circulantes hCXCR4/SerpinE1 en el pronóstico del cáncer de cabeza y cuello. PI17/00584. Instituto de Salud Carlos III. Duration 2018-2021. 2.000,00 €.

• XAVIER LEON VINTRO. Evaluación de nanopartículas para la entrega dirigida de fármacos contra células tumorales CXCR4+ en modelos in vitro y murinos de Carcinoma Escamoso de Cabeza y Cuello. PI19/01661. Instituto de Salud Carlos III. Duration 2020-2022. 104.000,00 €.

Note: Total amount granted to PI. It does not include indirect costs.

Doctoral Theses

- Maria CASASAYAS PLASS, Factores de riesgo de la aparición de fístulas faringocutáneas tras una laringectomía total, UAB, Dr. Xavier León, Dr. Jacinto García, Dra. Beatriz Gomez-Anson. 26/04/2021
- Ignacio VIZA PUIGROS, Correlación de la tomografía de alta resolución con la audiometría en la otosclerosis. UAB, Miquel Quer, Cèsar Orús, Esther Granell, 16/07/2021

Scientific production

- Aibar JA, Munoz F, Asencio C, Montserrat J, Gras JR, Mirapeix RM. Intracavernous Branches of the Internal Carotid Artery Through an Endoscopic Endonasal Approach: Anatomical Study and Review of the Literature. *World Neurosurgery*. 2021; 151. DOI:10.1016/j.wneu.2021.04.046. PMID:33887498. IF:2,104 (Q3/6D).
- Asimakopoulos P, Shaha AR, Nixon IJ, Shah JP, Randolph GW, Angelos P, Zafereo ME, Kowalski LP, Hartl DM, Olsen KD, Rodrigo JP, Vander V, Makitie AA, Sanabria A, Suarez C, Quer M, Civantos FJ, Robbins KT, Guntinas O, Hamoir M, Rinaldo A, Ferlito A. Management of the Neck in Well-Differentiated Thyroid Cancer. *Current Oncology Reports*. 2021; 23(1):1. DOI:10.1007/s11912-020-00997-6. PMID:33190176. IF:5,075 (Q2/D4).
- Avilés-Jurado FX, Muñoz C, Meler C, Flores JC, Gumà J, Benaiges E, Mora J, Camacho M, León X, Vilaseca I, Terra X. Circulating microRNAs modulating glycolysis as non-invasive prognostic biomarkers of HNSCC. *EUROPEAN ARCHIVES OF OTO-RHINO-LARYNGOLOGY*. 2021;278(5):1585-1594. DOI:10.1007/s00405-020-06240-z. PMID: 32737645. IF:2,503 (Q2/D4).

• Cobiella R, Quinones S, Aragones P, Leon X, Abramovic A, Vazquez T, Sanudo JR, Maranillo E, Olewnik L, de Blas CS, Parkin I, Kanschake M. Anatomic mapping of the collateral branches of the external carotid artery with regard to daily clinical practice. *ANNALS OF ANATOMY-ANATOMISCHER ANZEIGER*. 2021; 238:151789. DOI:10.1016/j.aanat.2021.151789. PMID:34214605. IF:2,698 (Q1/D3).

• Cobiella R, Quinones S, Kanschake M, Aragones P, Leon X, Vazquez T, Sanudo J, Maranillo E. The carotid axis revisited. *Scientific Reports*. 2021; 11(1):13847. DOI:10.1038/s41598-021-93397-0. PMID:34226652. IF:4,379 (Q1/D3).

• Eckel HE, Simo R, Quer M, Odell E, Paleri V, Klussmann JP, Remacle M, Sjögren E, Piazza C. European Laryngological Society position paper on laryngeal dysplasia Part II: diagnosis, treatment, and follow-up. *EUROPEAN ARCHIVES OF OTO-RHINO-LARYNGOLOGY*. 2021;278(6):1723-1732. DOI:10.1007/s00405-020-06406-9. PMID: 33058010. IF:2,503 (Q2/D4).

• Furlano M, Martinez V, Pybus M, Arce Y, Crespi J, Venegas MD, Bullich G, Domingo A, Ayasreh N, Benito S, Lorente L, Ruiz P, Gonzalez VL, Arlandis R, Cabello E, Torres F, Guirado L, Ars E, Torra R. Clinical and Genetic Features of Autosomal Dominant Alport Syndrome: A Cohort Study. *AMERICAN JOURNAL OF KIDNEY DISEASES*. 2021; 78(4). DOI:10.1053/j.ajkd.2021.02.326. PMID:33838161. IF:8,860 (Q1/D1).

• Gil LSP, Vintro XL, Fernandez SL, Garcia CV, Playa GP, Garrido MF, Ayala JM. The Effect of Perioperative Blood Transfusions on Microvascular Anastomoses. *Journal of Clinical Medicine*. 2021; 10(6):1333. DOI:10.3390/jcm10061333. PMID:33807085. IF:4,241 (Q1/D3).

• Gras JR, Rodriguez F, Gomez B, Cubero JM, Martel M, Granell E, Lopez M, Montserrat JR, Masegur H. Management of Patients With Graves Orbitopathy Using Endonasal Endoscopic Techniques. *JOURNAL OF CRANIOFACIAL SURGERY*. 2021; 32(4). DOI:10.1097/SCS.000000000000107. PMID:33170828. IF:1,046 (Q4/D9).

• Guntinas-Lichius O, Thielker J, Robbins KT, Olsen KD, Shaha AR, Mäkitie AA, de Bree R, Vander Poorten V, Quer M, Rinaldo A, Kowalski LP, Rodrigo JP, Hamoir M, Ferlito A. Prognostic role of intraparotid lymph node metastasis in primary parotid cancer: Systematic review. *HEAD AND NECK-JOURNAL FOR THE SCIENCES AND SPECIALTIES OF THE HEAD AND NECK*. 2021;43(3):997-1008. DOI:10.1002/hed.26541. PMID: 33169420. IF:3,147 (Q2/D3).

• Hitt R, Iglesias L, López-Pousa A, Berrocal-Jaime A, Grau JJ, García-Girón C, Martínez-Trufero J, Guix M, Lambea-Sorrosal J, Del Barco-Morillo E, León-Vintró X, Cunquero-Tomas AJ, Baste N, Ocaña A, Cruz-Hernández JJ; the Spanish Head and Neck Cancer Cooperative Group (TTCC). Long-term outcomes of induction chemotherapy followed by chemoradiotherapy vs chemoradiotherapy alone as treatment of unresectable head and neck cancer: follow-up of the Spanish Head and Neck Cancer Group (TTCC) 2503 Trial. *Clinical & Translational*

Oncology. 2021;23(4):764–772. DOI:10.1007/s12094-020-02467-8. PMID: 32797376. IF:3,405 (Q3/D7).

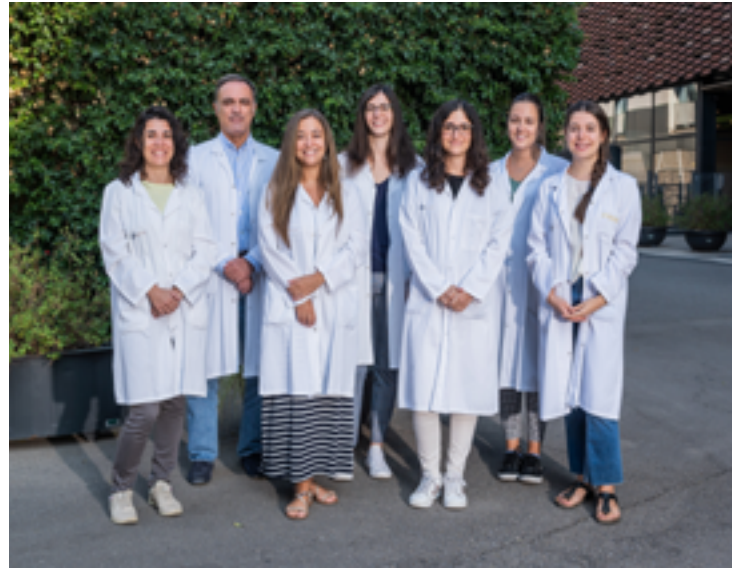
- Koller T, Kinast N, Castellanos AG, Garcia SP, Iglesias PP, Vintro XL, Arranz JM, Seto NV, Garcia MVM, Moreno AB, Aznar J, Albaladejo GE, Diaz M. Normalization of blood clotting characteristics using prothrombin complex concentrate, fibrinogen and FXIII in an albumin based fluid: experimental studies in thromboelastometry. *Scandinavian Journal of Trauma Resuscitation & Emergency Medicine*. 2021; 29(1):57. DOI:10.1186/s13049-021-00867-5. PMID:33836790. IF:2,953 (Q2/D3).
- Leon X, Orus C, Casasayas M, Neumann E, Holgado A, Quer M. Trends in disease-specific survival of head and neck squamous cell carcinoma patients treated in a single institution over a 30-year period. *ORAL ONCOLOGY*. 2021; 115:105184. DOI:10.1016/j.oraloncology.2021.105184. PMID:33581504. IF:5,337 (Q1/D1).
- Leon X, Venegas M, Pujol A, Bulboa C, Llansana A, Casasayas M, Quer M, Camacho M. Predictive value of transcriptional expression of Kruppel-like factor-6 (KLF6) in head and neck carcinoma patients treated with radiotherapy. *Clinical & Translational Oncology*. 2021; 23(12). DOI:10.1007/s12094-021-02651-4. PMID:34061320. IF:3,405 (Q3/D7).
- Martin C, Bernal M, Molina CP, Bartolome M, Orus C, Escamilla Y. Risk of contagion of SARS-CoV-2 among otorhinolaryngologists in Spain during the “Two waves”. *EUROPEAN ARCHIVES OF OTO-RHINO-LARYNGOLOGY*. 2021; 278(9). DOI:10.1007/s00405-020-06582-8. PMID:33464400. IF:2,503 (Q2/D4).
- Neumann ED, Sansa A, Casasayas M, Gutierrez A, Quer M, Leon X. Prognostic capacity of the weighted lymph node ratio in head and neck squamous cell carcinoma patients treated with salvage neck dissection. *EUROPEAN ARCHIVES OF OTO-RHINO-LARYNGOLOGY*. 2021; 278(10). DOI:10.1007/s00405-020-06598-0. PMID:33452917. IF:2,503 (Q2/D4).
- Olive J, Lopez O, Quer M, Marquez N, Kirchner H. Evidence of otitis media and mastoiditis in a Medieval Islamic skeleton from Spain and possible implications for ancient surgical treatment of the condition. *International Journal of Paleopathology*. 2021; 32. DOI:10.1016/j.ijpp.2020.10.009. PMID:33232880. IF:1,393 (Q4/D8).
- Piazza C, Paderno A, Sjogren EV, Bradley PJ, Eckel HE, Makitie A, Matar N, Paleri V, Peretti G, Puxeddu R, Quer M, Remacle M, Vander V, Vilaseca I, Simo R. Salvage carbon dioxide transoral laser microsurgery for laryngeal cancer after (chemo)radiotherapy: a European Laryngological Society consensus statement. *EUROPEAN ARCHIVES OF OTO-RHINO-LARYNGOLOGY*. 2021; 278(11). DOI:10.1007/s00405-021-06957-5. PMID:34226992. IF:2,503 (Q2/D4).
- Prats A, Tobed M, Villacampa JM, Aguero A, Garcia C, Tato JI, Rodriganez L, Holguera VD, Hernandez E, Poletti D, Simonetti G, Villarraga V, Meler C, Barrueco AS, Chiesa C, Casasayas M,

Parente P, Mata N, Rello J, Castro P, Prieto D, Vilaseca I, Aviles FX. Timing of elective tracheotomy and duration of mechanical ventilation among patients admitted to intensive care with severe COVID-19: A multicenter prospective cohort study. *HEAD AND NECK-JOURNAL FOR THE SCIENCES AND SPECIALTIES OF THE HEAD AND NECK*. 2021; 43(12). DOI:10.1002/hed.26863. PMID:34524714. IF:3,147 (Q2/D3).

- Quer M, Hernandez JC, Silver CE, Casasayas M, Simo R, Vander V, Guntinas O, Bradley PJ, Tong W, Rodrigo JP, Makitie AA, Rinaldo A, Kowalski LP, Sanabria A, de Bree R, Takes RP, Lopez F, Olsen KD, Shaha AR, Ferlito A. Current Trends and Controversies in the Management of Warthin Tumor of the Parotid Gland. *Diagnostics*. 2021; 11(8):1467. DOI:10.3390/diagnostics11081467. PMID:34441400. IF:3,706 (Q2/D3).
- Sansa A, Venegas MD, Valero C, Pardo L, Aviles FX, Terra X, Quer M, Leon X. The aspartate aminotransaminase/alanine aminotransaminase (De Ritis) ratio predicts sensitivity to radiotherapy in head and neck carcinoma patients. *HEAD AND NECK-JOURNAL FOR THE SCIENCES AND SPECIALTIES OF THE HEAD AND NECK*. 2021; 43(7). DOI:10.1002/hed.26673. PMID:33675096. IF:3,147 (Q2/D3).
- Terra X, Ceperuelo V, Merma C, Benaiges E, Bosch R, Castillo P, Flores JC, Leon X, Valduvico I, Baste N, Camara M, Lejeune M, Guma J, Vendrell J, Vilaseca I, Fernandez S, Aviles FX. Succinate Pathway in Head and Neck Squamous Cell Carcinoma: Potential as a Diagnostic and Prognostic Marker. *Cancers*. 2021; 13(7):1653. DOI:10.3390/cancers13071653. PMID:33916314. IF:6,639 (Q1/D3).

Other Publications

- Leon X, Garcia J, Lopez M, Holgado A, Llansana A, Quer M. Differential characteristics of patients with squamous cell carcinoma of the head and neck according to gender. *Acta Otorrinolaringologica Espanola*. 2021; 72(6). DOI:10.1016/j.otorri.2020.08.009. PMID:33618830.
- Leon X, Pujals G, Bulboa C, Garcia J, Lopez M, Quer M. Head and neck squamous cell carcinoma in cigar smokers. Distinctive epidemiological and prognostic characteristics. *Acta Otorrinolaringologica Espanola*. 2021; 72(4). DOI:10.1016/j.otorri.2020.05.006. PMID:34294221.



Oncology / Haematology and Transplantation

Coordinator

Sierra Gil, Jordi
jsierra@santpau.cat

FGS

Members

Abril García, Cintia	IR	Leoz Allegretti, M. Pilar	IR
Álvarez Fernández, Carmen	IR	López Pardo, Jordi	FGS
Argüello De Tomás, Miquel	IR	Martino Bofarull, Rodrigo	FGS
Artigas Baleri, Alicia	IR	Miqueleiz Alamos, Sara	IR
Briones Meijide, Javier	FGS	Montserrat Torres, Rosanna	IR
Caballero Gonzalez, Ana Carolina	FGS	Mora Raya, Alba	IR
De Dios Milla, Natalia	IR	Moreno Atanasio, Carolina	FGS
De la Riva Buissen, Antonio	IR	Núñez Amela, Yaiza	IR
De Rueda Gamboa, Maria Jessica	IR	Oñate Hospital, Guadalupe	IR
Delgado Candeo, Franco	IR	Pérez García, Núria	IR
Escriba Garcia, Laura	IR	Pujol Fernández, Paula	IR
Escudero López, Eva	IR	Regalado Artamendi, Isabel	IR
Esquirol Sanfeliu, Albert	FGS	Rodríguez Fernández, Diana	IR
Ganuja Canals, Míriam	IR	Rosal Muntadas-Prim, Maria Josefa	IR
Garcia Cadenas, Irene	FGS	Saavedra Gerosa, Silvana Daniela	FGS
Garcia Leon, Annabel	IR	Sanmartín Montserrat, Francisco J.	IR
Granell Gorrochategui, Miguel	FGS	Ujaldón Miró, Cristina	IR
Jiménez Gómez, Iñaki	IR		

Main lines of research

- Development of cellular immunotherapies: particularly focusing on AML, CLL, and aggressive lymphomas.
CART cells for hematological neoplasias.
- Study of the molecular and cellular pathophysiology of haematological cancers,
- Study of the prognostic value of clinical and biological parameters in haematological malignancies.

- Design of new modalities of chemotherapy, biotherapy and drug treatment targeting molecular mechanisms.
- Design of new modalities of haematopoietic stem-cell transplantation and cell treatments.

Scientific challenges

- Identify new prognostic parameters for risk and therapeutic stratifications.
- Molecularly characterize acute myeloid leukaemia and determine the prognostic value of known genes and other genes of uncertain significance (with the Haematology Laboratory).
- Evaluate targeted therapy in cell lines and animal models (with the Oncogenesis and Antitumour Drugs group).
- Reduce toxicity and increase availability of allogeneic transplants.
- Model leukaemia and lymphoma in animals to better understand cell physiopathology and test new drugs (with the Oncogenesis and Antitumour Drugs group).
- Preclinical (mice) and clinical studies on immunotherapy for lymphoproliferative diseases. Development of non-commercial CAR-T cell therapies.

Collaborations

Collaborations with other IIB Sant Pau research groups

- Oncogenesis and Antitumour Drugs (Dr. Ramon Mangués).
- Haematological Diagnosis (Dr. Josep Nomdedéu).
- Microbiology and Infectious Diseases (Dr. Pere Coll).

External collaborations

- European Research Initiative on Chronic Lymphocytic Leukemia (ERIC): C. Moreno, coordinator.
- Spanish lymphoma transplantation groups (GELTAMO): J. Briones, S. Novelli
- Spanish haematologic malignancies consortium (PETHEMA): J. Sierra, M. Granell, S. Brunet
- Spanish CETLAM acute myeloid leukaemia and myelodysplasia group hospitals.
- EureCart Consortium (H2020): Universities of Milan, Wurzburg, Hospital Bambino Gesù, Rome.
- Ulm University and German Austrian AML Study Group.
- Erasmus University Rotterdam and HOVON Cooperative Group.
- European Haematology Association (EHA). J. Sierra, membre of the Nomination and Scientific Working Groups Committee.
- European Blood and Marrow Transplantation Group.

Active grants

- JORDI SIERRA GIL. Red de Terapia Celular (TerCel).. RD16/0011/0028. Instituto de Salud Carlos III. Duration 2017-2021. 3.945,00 €.
- JORDI SIERRA GIL. EURE-CART European Endeavour for Chimeric Antigen Receptor Therapies.. H2020-SC1-PM09-EURE-CART. Unió Europea. Duration 2017-2021. 195.552,00 €.
- CARMEN ALVAREZ FERNANDEZ. Inmunoterapia mediante linfocitos T de memoria STEM con receptores antígeno-específicos (CARs) en linforma de Hodgkin. AIO 2017. Associació Espanyola Contra el Càncer. Duration 2017-2021. 165.000,00 €.
- JORDI SIERRA GIL. Implicación de la vía CXCR4/CXCL12/CXCR7 en la resistencia, recidiva y fenotipo de célula madre de la leucemia mieloide aguda. PI17/01246. Instituto de Salud Carlos III. Duration 2018-2021. 73.000,00 €.
- JORDI SIERRA GIL. Grup de Diagnòstic i Tractament de les Neoplàsies Hematològiques.. 2017 SGR 1395. Agència de Gestió d'Ajuts Universitaris i de Recerca. Duration 2017-2021. 35.200,00 €.
- JAVIER BRIONES MEIJIDE. Modulación farmacológica y diseño de CARs duales inmunoestimuladores para inmunoterapia con células T de memoria stem con alta eficacia antitumoral. PI18/01023. Instituto de Salud Carlos III. Duration 2019-2021. 92.000,00 €.
- YAIZA NUÑEZ AMELA. Desarrollo de nanopartículas para la entrega dirigida de fármacos a células madre leucémicas CXCR4+.. FI18/00268. Instituto de Salud Carlos III. Duration 2019-2023. 82.400,00 €.
- JAVIER BRIONES MEIJIDE. Avaluació clínica dels MTA tipus CAR-TCELL.. Convenio BST 2018. Banc de Sang i Teixits. Duration 2018-2021. 82.066,00 €.
- CAROLINA MORENO ATANASIO. Nuevas estrategias para monitorizar la enfermedad mínima residual (EMR) en la Leucemia Linfática Crónica. PI19/00753. Instituto de Salud Carlos III. Duration 2020-2022. 82.000,00 €.
- JAVIER BRIONES MEIJIDE. Generació de limfòcits T memòria "STEM" modificats amb receptors quimèrics antígen-específic (CARs) per immunoteràpia adoptiva en limfoma.. LA CAIXA 2018. Fundació La Caixa. Duration 2019-2022. 1.818.181,80 €.
- JORDI SIERRA GIL. Humanized nanomedicines selectively killing CXCR4+ cancer cells for Acute Myeloid Leukemia therapy. MARATO 201941-30. Fundació La Marató de TV3. Duration 2020-2023. 15.000,00 €.

- JAVIER BRIONES MEIJIDE. Non-invasive tumor immunoglobulin gene next generation sequencing from circulating tumor DNA in diffuse large B cell lymphoma: prognostic implications and assessment of tumor response.. GILEAD 2019-1. Gilead Sciences, S.L.U. Duration 2019-2021. 45.450,00 €.

- JAVIER BRIONES MEIJIDE. Ensayo fase I-II de inmunoterapia con células HSP-CAR30 para pacientes con linfoma de HODGKIN y linfoma T con expresión CD30 refractario o en recidiva. ICI19/00060. Instituto de Salud Carlos III. Duration 2020-2023. 1.068.229,00 €.

- JAVIER BRIONES MEIJIDE. ACCELERATING DEVELOPMENT AND IMPROVING ACCES TO CAR AND TCR ENGINEERED TC THERAPY. 945393 T2EVOLVE. Unió Europea. Duration 2021-2025. 217.048,00 €.

- JORDI SIERRA GIL. Poblaciones subclonales de LMA y células madre leucémicas identificadas mediante secuenciación de ARN de una sola célula y citometría de flujo multiparamétrica: impacto en la respuesta al tratamiento. PI20/O1621. Instituto de Salud Carlos III. Duration 2021-2023. 252.000,00 €.

- GUADALUPE OÑATE HOSPITAL. Contractes Rio Hortega 2020. CM20/00061. Instituto de Salud Carlos III. Duration 2021-2023. 53.732,00 €.

- ALBA MORA RAYA. Nuevas estrategias para monitorizar la enfermedad mínima residual (EMR) en la Leucemia Linfática Crónica. FEHH 2020. Fundació Espanyola d'Hematologia i Hemoteràpia. Duration 2021-2021. 36.000,00 €.

Note: Total amount granted to PI. It does not include indirect costs.

Scientific production

- Albiol N, Arguello M, Moreno C. The road to chemotherapy-free treatment in chronic lymphocytic leukaemia. *CURRENT OPINION IN ONCOLOGY*. 2021; 33(6). DOI:10.1097/CCO.0000000000000791. PMID:34474439. IF:3,645 (Q3/D6).

- Albiol N, Moreno C. Autoimmune Cytopenia in CLL Prognosis and Management in the Era of Targeted Therapies. *CANCER JOURNAL*. 2021; 27(4). DOI:10.1097/PP0.0000000000000537. PMID:34398555. IF:3,360 (Q3/D7).

- Alvarez C, Escriba L, Caballero AC, Escudero E, Ujaldon C, Montserrat R, Pujol P, Sierra J, Briones J. Memory stem T cells modified with a redesigned CD30-chimeric antigen receptor show an enhanced antitumor effect in Hodgkin lymphoma. *Clinical & Translational Immunology*. 2021; 10(4):e1268. DOI:10.1002/cti2.1268. PMID:33968404. IF:6,161 (Q2/D3).

- Bento L, Gutierrez A, Novelli S, Montoro J, Pinana JL, Lopez L, Cabrero M, Martin A, Gutierrez G, Ortiz M, Bastos M, Dorado N, Perez A, Hernani R, Ferra C, Parody R, Garcia I, Herrera P, Rodriguez G, Rodriguez N, Martin C, Yanez L, Zanabilli J, Varela

MR, Lopez O, Heras I, Espanol I, Martinez C, Perez JA, Solano C, Sureda A, Sierra J, Sampol A, Caballero D. Allogeneic stem cell transplantation as a curative option in relapse/refractory diffuse large B cell lymphoma: Spanish multicenter GETH/GELTAMO study. *BONE MARROW TRANSPLANTATION*. 2021; 56(8). DOI:10.1038/s41409-021-01264-3. PMID:33767400. IF:5,483 (Q1/D3).

- Bueno F, Solano C, Vazquez L, Gimenez E, de la Camara R, Albert E, Rovira M, Espigado I, Calvo CM, Lopez J, Suarez M, Chinea A, Esquirol A, Perez A, Bermudez A, Saldana R, Heras I, Gonzalez AJ, Torrado T, Batlle M, Jimenez S, Vallejo C, Barba P, Cuesta MA, Duarte R, Pinana JL, Navarro D. Assessment of the association between cytomegalovirus DNAemia and subsequent acute graft-versus-host disease in allogeneic peripheral blood stem cell transplantation: A multicenter study from the Spanish hematopoietic transplantation and cell therapy group. *Transplant Infectious Disease*. 2021; 23(4):e13627. DOI:10.1111/tid.13627. PMID:33908148. IF:2,228 (Q3/D7).

- Cid J, Monsalvo S, Castillo C, Pascual C, Moreno G, Lopez M, Andon C, Guerra L, Esquirol A, Sanchez I, Ortega S, Zalba S, Martinez C, Rovira M, Marin P, Lozano M. Addition of plerixafor to G-CSF in poor mobilizing healthy related donors overcame mobilization failure: An observational case series on behalf of the Grupo Espanol de Trasplante Hematopoyetico (GETH). *TRANSFUSION AND APHERESIS SCIENCE*. 2021; 60(2):103052. DOI:10.1016/j.transci.2021.103052. PMID:33483284. IF:1,764 (Q4/D9).

- Dickinson M, Briones J, Herrera AF, Gonzalez E, Ghosh N, Cordoba R, Rutherford SC, Bournazou E, Labriola E, Franjkovic I, Chesne E, Brouwer J, Lechner K, Brennan B, Nuesch E, DeMario M, Ruttinger D, Kornacker M, Hutchings M. Phase 1b study of the BET protein inhibitor RO6870810 with venetoclax and rituximab in patients with diffuse large B-cell lymphoma. *Blood Advances*. 2021; 5(22). DOI:10.1182/bloodadvances.2021004619. PMID:34581757. IF:6,686 (Q1/D2).

- Diefenbach C, Kahl BS, McMillan A, Briones J, Banerjee L, Cordoba R, Miall F, Burke JM, Hirata J, Jiang YW, Paulson JN, Chang YM, Musick L, Abrisqueta P. Polatuzumab vedotin plus obinutuzumab and lenalidomide in patients with relapsed or refractory follicular lymphoma: a cohort of a multicentre, single-arm, phase 1b/2 study. *Lancet Haematology*. 2021; 8(12). PMID:34826412. IF:18,959 (Q1/D1).

- Esquirol A, Pascual MJ, Kwon M, Perez A, Parody R, Ferra C, Cadenas IG, Herruzo B, Dorado N, Hernani R, Sanchez I, Torrent A, Sierra J, Martino R. Severe infections and infection-related mortality in a large series of haploidentical hematopoietic stem cell transplantation with post-transplant cyclophosphamide. *BONE MARROW TRANSPLANTATION*. 2021; 56(10). DOI:10.1038/s41409-021-01328-4. PMID:34059802. IF:5,483 (Q1/D3).

- Falgas A, Pallares V, Unzueta U, Nunez Y, Sierra J, Gallardo A, Alba L, Mangués MA, Alamo P, Villaverde A, Vazquez E, Mangués R, Casanova I. Specific Cytotoxic Effect of an Auristatin Nanoconjugate Towards CXCR4(+) Diffuse Large B-Cell

Lymphoma Cells. *International Journal of Nanomedicine*. 2021; 1D6OI:10.2147/IJN.S289733. PMID:33716502. IF:6,400 (Q1/D1).

• Fernandez J, Azqueta C, Valdivia E, Martorell L, Medina L, Martinez N, Torrents S, Codinach M, Canals C, Elorza I, Parody R, Martino R, Trabazo M, de Heredia CD, Ferra C, Valcarcel D, Linares M, Ancochea A, Garcia E, Garcia N, Medina L, Castillo N, Carreras E, Villa J, Querol S. Cryopreservation of unrelated donor hematopoietic stem cells: the right answer for transplantations during the COVID-19 pandemic?. *BONE MARROW TRANSPLANTATION*. 2021; 56(10). DOI:10.1038/s41409-021-01367-x. PMID:34127808. IF:5,483 (Q1/D3).

• Genesca E, Morgades M, Gonzalez C, Fuster F, Haferlach C, Meggendorfer M, Montesinos P, Barba P, Gil C, Coll R, Moreno MJ, Martinez D, Garcia I, Vives S, Ribera J, Gonzalez J, Diaz M, Mercadal S, Artola MT, Cladera A, Tormo M, Bermudez A, Vall F, Martinez P, Amigo ML, Monsalvo S, Novo A, Cervera M, Garcia A, Ciudad J, Cervera J, et al. Adverse prognostic impact of complex karyotype (≥ 3 cytogenetic alterations) in adult T-cell acute lymphoblastic leukemia (T-ALL). *LEUKEMIA RESEARCH*. 2021; 109:106612. DOI:10.1016/j.leukres.2021.106612. PMID:34139642. IF:3,156 (Q3/D6).

• González-Barca E, Capote FJ, Gómez-Codina J, Panizo C, Salar A, Sancho JM, López A, Briones J, Muñoz A, Encuentra M, Mercadal S, Domingo-Domenech E, de Sevilla AF; GELTAMO (Spanish Lymphoma Group) and GOTEL (Group of Oncology for Therapy and Study of Lymphomas). Long-term follow-up of a prospective phase 2 clinical trial of extended treatment with rituximab in patients with B cell post-transplant lymphoproliferative disease and validation in real world patients. *Annals of Hematology*. 2021;100(4):1023-1029. DOI:10.1007/s00277-020-04056-9. PMID: 32367180. IF:3,673 (Q2/D5).

• Granell M, Senin A, Barata A, Cibeira MT, Gironella M, Lopez J, Motillo C, Garcia A, Ben R, Abella E, Soler A, Canet M, Marti JM, Martino R, Sierra J, de Larrea CF, Oriol A, Rosinol L. Predictors of return to work after autologous stem cell transplantation in patients with multiple myeloma. *BONE MARROW TRANSPLANTATION*. 2021; 56(12). DOI:10.1038/s41409-021-01429-0. PMID:34404917. IF:5,483 (Q1/D3).

• Greil R, Tedeschi A, Moreno C, Anz B, Larratt L, Simkovic M, Gill D, Gribben JG, Flinn IW, Wang ZY, Cheung LWK, Nguyen AN, Zhou C, Styles L, Demirkan F. Pretreatment with ibrutinib reduces cytokine secretion and limits the risk of obinutuzumab-induced infusion-related reactions in patients with CLL: analysis from the iLLUMINATE study. *ANNALS OF HEMATOLOGY*. 2021; 100(7). DOI:10.1007/s00277-021-04536-6. PMID:34018029. IF:3,673 (Q2/D5).

• Iacoboni G, Villacampa G, Martinez N, Bailen R, Corral LL, Sanchez JM, Guerreiro M, Caballero AC, Mussetti A, Sancho JM, Hernani R, Abrisqueta P, Solano C, Sureda A, Briones J, Garcia AM, Kwon M, Reguera JL, Barba P. Real-world evidence of tisagenlecleucel for the treatment of relapsed or refractory

large B-cell lymphoma. *Cancer Medicine*. 2021; 10(10). DOI:10.1002/cam4.3881. PMID:33932100. IF:4,452 (Q2/D5).

• Jimenez A, De Lima M, Komanduri KV, Wang TP, Zhang MJ, Chen KR, Abdel H, Abid MB, Aljurf M, Alkhateeb H, Assal A, Bacher U, Baron F, Battiwalla M, Beitinjaneh A, Bejanyan N, Bhatt VR, Byrne M, Cahn JY, Cairo M, Castillo P, Copelan E, DeFilipp Z, Perez M, Elsayy M, Gale RP, George B, Grunwald MR, Hildebrandt GC, Hogan WJ, Kanakry CG, et al. [Martino R]. An adapted European LeukemiaNet genetic risk stratification for acute myeloid leukemia patients undergoing allogeneic hematopoietic cell transplant. A CIBMTR analysis. *BONE MARROW TRANSPLANTATION*. 2021; 56(12). DOI:10.1038/s41409-021-01450-3. PMID:34584240. IF:5,483 (Q1/D3).

• Larson RA, Mandrekar SJ, Huebner LJ, Sanford B, Laumann K, Geyer S, Bloomfield CD, Thiede C, Prior TW, Dohner K, Marcucci G, Voso MT, Klisovic RB, Galinsky I, Wei AH, Sierra J, Sanz MA, Brandwein JM, de Witte T, Niederwieser D, Appelbaum FR, Medeiros BC, Tallman MS, Krauter J, Schlenk RF, Ganser A, Serve H, Ehninger G, Amadori S, et al. Midostaurin reduces relapse in FLT3-mutant acute myeloid leukemia: the Alliance CALGB 10603/RATIFY trial. *LEUKEMIA*. 2021; 35(9). DOI:10.1038/s41375-021-01179-4. PMID:33654204. IF:11,528 (Q1/D1).

• Ljungman P, de la Camara R, Mikulska M, Tridello G, Aguado B, Al Zahrani M, Apperley J, Berceanu A, Bofarull RM, Calbacho M, Ciceri F, Lopez L, Crippa C, Fox ML, Grassi A, Jimenez MJ, Demir SK, Kwon M, Llamas CV, Lorenzo JLL, Mielke S, Orchard K, Porras RP, Vallisa D, Xhaard A, Knelange NS, Cedillo A, Kroger N, Pinana JL, Styczynski J. COVID-19 and stem cell transplantation; results from an EBMT and GETH multicenter prospective survey. *LEUKEMIA*. 2021; 35(10). DOI:10.1038/s41375-021-01302-5. PMID:34079042. IF:11,528 (Q1/D1).

• Los-Arcos I, Iacoboni G, Aguilar-Guisado M, Alsina-Manrique L, Díaz de Heredia C, Fortuny-Guasch C, García-Cadenas I, García-Vidal C, González-Vicent M, Hernani R, Kwon M, Machado M, Martínez-Gómez X, Maldonado VO, Pla CP, Piñana JL, Pomar V, Reguera-Ortega JL, Salavert M, Soler-Palacín P, Vázquez-López L, Barba P, Ruiz-Camps I. Recommendations for screening, monitoring, prevention, and prophylaxis of infections in adult and pediatric patients receiving CAR T-cell therapy: a position paper. *Infection*. 2021;49(2):215-231. DOI:10.1007/s15010-020-01521-5. PMID: 32979154. IF:3,553 (Q2/D5).

• Moreno C, Munoz C, Terol MJ, Hernandez JA, Villanueva M. Restoration of the immune function as a complementary strategy to treat Chronic Lymphocytic Leukemia effectively. *JOURNAL OF EXPERIMENTAL & CLINICAL CANCER RESEARCH*. 2021; 40(1):321. DOI:10.1186/s13046-021-02115-1. PMID:34654437. IF:11,161 (Q1/D2).

• Oriol A, Ibarra G, Abella E, Motlló C, Cibeira MT, Garcia A, Escoda L, Granell M, Ben-Azaiz R, Cervera M, Cabezudo E, Fernandez C, Rosiñol L. Impact of response to treatment in health-related quality of life patient-reported outcomes in elderly patients with relapsed multiple myeloma. *Leukemia Lymphoma*.

2021;62(1):125-135. DOI:10.1080/10428194.2020.1817439. PMID: 32933355. IF:3,280 (Q3/D6).

• Pallares V, Nunez Y, Sanchez L, Falgas A, Serna N, Unzueta U, Gallardo A, Alba L, Alamo P, Sierra J, Villaverde A, Vazquez E, Casanova I, Mangues R. Antineoplastic effect of a diphtheria toxin-based nanoparticle targeting acute myeloid leukemia cells overexpressing CXCR4. *JOURNAL OF CONTROLLED RELEASE*. 2021; 335. DOI:10.1016/j.jconrel.2021.05.014. PMID:34004204. IF:9,776 (Q1/D1).

• Payan S, Perez LG, Sevilla A, Gil JS, Canales SN. Absolute Lymphocytes, Ferritin, C-Reactive Protein, and Lactate Dehydrogenase Predict Early Invasive Ventilation in Patients With COVID-19. *LABORATORY MEDICINE*. 2021; 52(2). DOI:10.1093/labmed/lmaa105. PMID:33336243. IF:1,525 (Q4/D8).

• Ribera JM, Morgades M, Ciudad J, Montesinos P, Esteve J, Genesca E, Barba P, Ribera J, Garcia I, Moreno MJ, Martinez D, Torrent A, Martinez P, Monsalvo S, Gil C, Tormo M, Artola MT, Cervera M, Gonzalez J, Rodriguez C, Bermudez A, Novo A, Soria B, Coll R, Amigo ML, Lopez A, Fernandez R, Serrano J, Mercadal S, Cladera A, Gimenez A, et al. Chemotherapy or allogeneic transplantation in high-risk Philadelphia chromosome-negative adult lymphoblastic leukemia. *BLOOD*. 2021; 137(14). DOI:10.1182/blood.2020007311. PMID:33150388. IF:22,113 (Q1/D1).

• Ribera JM, Morgades M, Coll R, Barba P, Lopez JL, Montesinos P, Foncillas MA, Cabrero M, Gomez I, Morales MD, Varela MR, Herrera P, Garcia I, Calbacho M, Torrent A, Maluquer C, Calabuig M, Garcia A, Bautista G, Llorente L, Gil C, Artola MT, Gonzalez J, Fernandez A, Barez A, Gimenez T, Bergua J, Sanchez MJ, Mateos MC, Pinana JL. Frequency, Clinical Characteristics and Outcome of Adults With Acute Lymphoblastic Leukemia and COVID 19 Infection in the First vs. Second Pandemic Wave in Spain. *Clinical Lymphoma Myeloma & Leukemia*. 2021; 21(10). DOI:10.1016/j.clml.2021.06.024. PMID:34376375. IF:3,231 (Q3/D6).

• Ribera JM, Morgades M, Genesca E, Chapchap EC, Montesinos P, Acuna E, Gil C, Garcia I, Barba P, Gonzalez J, de Llano MPQ, Torrent A, Ribera J, Granada I, Bernal T, Diaz M, Amigo ML, Coll R, Tormo M, Vall F, Gomez I, Sanchez MJ, Soria B, Cladera A, Artola MT, Garcia A, Gimenez A, Amador ML, Martinez P, Algarra JL, Vidal MJ, Alonso N, Maluquer C, et al. Outcomes and prognostic factors of adults with refractory or relapsed T-cell acute lymphoblastic leukemia included in measurable residual disease-oriented trials. *HEMATOLOGICAL ONCOLOGY*. 2021; 39(4). DOI:10.1002/hon.2910. PMID:34405901. IF:5,271 (Q2/D3).

• Solano C, Vázquez L, Giménez E, de la Cámara R, Albert E, Rovira M, Espigado I, Calvo CM, López-Jiménez J, Suárez-Lledó M, China A, Esquirol A, Pérez A, Bermúdez A, Saldaña R, Heras I, González-Huerta AJ, Torrado T, Batlle M, Jiménez S, Vallejo C, Barba P, Cuesta MÁ, Piñana JL, Navarro D; Spanish Group of Hematopoietic Transplantation and Cell Therapy (GETH). Clinical outcomes of allogeneic hematopoietic stem cell transplant recipients developing Cytomegalovirus DNAemia prior to engraftment. *Bone Marrow Transplantation*. 2021;56(6):1281-

1290. DOI: 10.1038/s41409-020-01157-x. PMID: 33319853. IF:5,483 (Q1/D3).

• Solano C, Vázquez L, Giménez E, de la Cámara R, Albert E, Rovira M, Espigado I, Calvo CM, López-Jiménez J, Suárez-Lledó M, China A, Esquirol A, Pérez A, Bermúdez A, Saldaña R, Heras I, González-Huerta AJ, Torrado T, Bautista G, Batlle M, Jiménez S, Vallejo C, Barba P, Cuesta MÁ, Piñana JL, Navarro D. Cytomegalovirus DNAemia and risk of mortality in allogeneic hematopoietic stem cell transplantation: Analysis from the Spanish Hematopoietic Transplantation and Cell Therapy Group. *AMERICAN JOURNAL OF TRANSPLANTATION*. 2021;21(1):258-271. DOI:10.1111/ajt.16147. PMID: 32812351. IF:8,086 (Q1/D1).

• Vachon H, Mierzynska J, Taye M, Pe M, Coens C, Martinelli F, Fortpied C, Flechtner HH, Maraldo MV, Hutchings M, Meijnders P, Aleman B, Lugtenburg P, Spina M, Andre M, Hertzberg M, Briones J, Bottomley A, EORTC Quality Life Lymphoma GRPGR. Reference values for the EORTC QLQ-C30 in patients with advanced stage Hodgkin lymphoma and in Hodgkin lymphoma survivors. *EUROPEAN JOURNAL OF HAEMATOLOGY*. 2021; 106(5). DOI:10.1111/ejh.13601. PMID:33570765. IF:2,997 (Q3/D7).

• Vicent MG, de Heredia CD, de Pablo JG, Molina B, Regueiro A, Martinez AP, Palomo P, Corral LL, Garcia E, Fernandez JM, Perez A, Jimenez MJ, Guerreiro M, Vallejo C, Gallardo AI, Lopez O, Benito A, Marsal J, Duarte M, Bento L, Badell I, Pedraza A, Ubieta AJ, Gonzalez P, Centurion IG, Costilla L, Belendez C, Esquirol A, Espigado I, Lavilla E, Diaz MA. Defibrotide in hematopoietic stem cell transplantation: A multicenter survey study of the Spanish Hematopoietic Stem Cell Transplantation Group (GETH). *EUROPEAN JOURNAL OF HAEMATOLOGY*. 2021; 106(6). DOI:10.1111/ejh.13618. PMID:33713387. IF:2,997 (Q3/D7).

Other scientific production

• Montesinos P, Gli A, Sierra J. Current status of acute myeloid leukaemia in Spain: Results from a Delphi study on its epidemiology, disease management and unmet clinical needs. *MEDICINA CLINICA*. 2021; 156(11). DOI:10.1016/j.medcli.2020.04.032. PMID:32616317. IF:1,725 (Q3/D7).

• Moreno C. Autoimmune cytopenia and CLL ride together. *BLOOD*. 2021; 137(25). DOI:10.1182/blood.2021010944. PMID:34165542. IF:22,113 (Q1/D1).

• Sierra J, Nomdedeu JF. CEBPA bZip mutations: just a single shot. *BLOOD*. 2021; 138(13). DOI:10.1182/blood.2021011263. PMID:34591099. IF:22,113 (Q1/D1).

Other publications

• Albiol N, Novelli S, Mozos A, Pratcorona M, Martino R, Sierra J. Venetoclax in relapsed/refractory blastic plasmacytoid dendritic cell neoplasm with central nervous system involvement: a case report and review of the literature. *Journal Of Medical Case Reports*. 2021; 15(1):326. DOI:10.1186/s13256-021-02939-7. PMID:34172079.

- Bejanyan N, Zhang MJ, Bo K, Brunstein C, Wang HL, Warlick ED, Giralto S, Nishihori T, Martino R, Passweg J, Dias A, Copelan E, Hale G, Gale RP, Solh M, Kharfan MA, Diaz MA, Ganguly S, Gore S, Verdonck LF, Hossain NM, Kekre N, Savani B, Byrne M, Kanakry C, Cairo MS, Ciurea S, Schouten HC, Bredeson C, Munker R, Lazarus H, Cahn JY, et al. Myeloablative Conditioning for Allogeneic Transplantation Results in Superior Disease-Free Survival for Acute Myelogenous Leukemia and Myelodysplastic Syndromes with Low/Intermediate but not High Disease Risk Index: A Center for International Blood and Marrow Transplant Research Study. *Transplantation And Cellular Therapy*. 2021; 27(1). DOI:10.1016/j.bbmt.2020.09.026. PMID:33010430.
- Dohner H, Malcovati L, Ossenkoppele GJ, Hochhaus A, Vannucchi AM, Bullinger L, Cervantes F, Craddock C, de Witte T, Dohner K, Dombret H, Fenaux P, Geissler J, Germing U, Guilhot F, Harrison C, Hellstrom E, Passamonti F, Sierra J, Skoda R, Wierzbowska A. The EHA Research Roadmap: Malignant Myeloid Diseases. *Hemasphere*. 2021; 5(9):e635. DOI:10.1097/HS9.000000000000635. PMID:34476345.
- Einsele H, Briones J, Ciceri F, Cadenas IG, Falkenburg F, Bolanos N, Heemskerk HMM, Houot R, Hudecek M, Locatelli F, Morgan K, Morris EC, O'Dwyer M, Sierra JG, van den Brink M, van de Loosdrecht AA. The EHA Research Roadmap: Immune-based Therapies for Hematological Malignancies. *Hemasphere*. 2021; 5(10):e642. DOI:10.1097/HS9.000000000000642. PMID:34522844.
- Esquirol A, Pascual MJ, Garcia I, Herruzo B, Ferra C, Perez A, Torio A, Torrent A, Cuesta M, Martino R, Sierra J. Combining Three Different Pretransplantation Scores Improves Predictive Value in Patients after Haploidentical Stem Cell Transplantation with Thiotepa, Busulfan, and Fludarabine Conditioning and Post-Transplantation Cyclophosphamide. *Transplantation And Cellular Therapy*. 2021; 27(7)DOI:10.1016/j.jtct.2021.03.021. PMID:33775908.
- Heine R, Thielen FW, Koopmanschap M, Kersten MJ, Einsele H, Jaeger U, Sonneveld P, Sierra J, Smand C, Uyl CA. Health Economic Aspects of Chimeric Antigen Receptor T-cell Therapies for Hematological Cancers: Present and Future. *Hemasphere*. 2021; 5(2):e524. DOI:10.1097/HS9.000000000000524. PMID:33880433.
- Kharfan MA, Kumar A, Ayala E, Aljurf M, Nishihori T, Marsh R, Burroughs LM, Majhail N, Al AS, Al ZS, Bar M, Bertaina A, Boelens JJ, Champlin R, Chaudhury S, DeFilipp Z, Dholaria B, El A, Fanning S, Frait E, Gergis U, Giralto S, Hamilton BK, Hashmi SK, Horn B, Inamoto Y, Jacobsohn DA, Jain T, Johnston L, Kanate AS, Kansagra A, Kassim A, Kean LS, et al. [Sierra J]. Standardizing Definitions of Hematopoietic Recovery, Graft Rejection, Graft Failure, Poor Graft Function, and Donor Chimerism in Allogeneic Hematopoietic Cell Transplantation: A Report on Behalf of the American Society for Transplantation and Cellular Therapy. *Transplantation And Cellular Therapy*. 2021; 27(8). DOI:10.1016/j.jtct.2021.04.007. PMID:34304802.
- Mareque M, Montesinos P, Font P, Guinea JM, de la Fuente A, Soto J, Oyaguez I, Brockbank J, Iglesias T, Llinares J, Sierra J. Cost-Effectiveness Analysis of Gemtuzumab Ozogamicin for First-Line Treatment of Patients with Cd-33 Positive Acute Myeloid Leukaemia in Spain. *Clinicoeconomics And Outcomes Research*. 2021; 1D30I:10.2147/CEOR.S302097. PMID:33911887.
- Novelli S, Bento L, Garcia I, Prieto L, Lopez L, Gutierrez G, Hernani R, Perez A, Esquirol A, Solano C, Bastos M, Dorado N, Rodriguez N, Rodriguez G, Pinana JL, Montoro J, Herrera P, Luna A, Parody R, Martin C, Garcia E, Lopez O, Heras I, Zanabilli J, Moraleda JM, Yanez L, Gutierrez A, Zudaire T, Cordoba R, Varela R, Ferra C, Martinez J, et al. [Martino R]. Allogeneic Stem Cell Transplantation in Mature T Cell and Natural Killer/T Neoplasias: A Registry Study from Spanish GETH/GELTAMO Centers. *Transplantation And Cellular Therapy*. 2021; 27(6). DOI:10.1016/j.jtct.2021.03.014. PMID:33857447.
- Orti G, Palacio C, Garcia I, Sanchez I, Jimenez MJ, Azqueta C, Villacampa G, Ferra C, Parody R, Martino R, Bosch F, Querol S, Valcarcel D. Analysis of Cell Subsets in Donor Lymphocyte Infusions from HLA Identical Sibling Donors after Allogeneic Hematopoietic Cell Transplant. *Transplantation And Cellular Therapy*. 2021; 27(1). DOI:10.1016/j.bbmt.2020.09.024. PMID:32987150.

Communication and dissemination activities

- 63rd ASH (American Society of Hematology) Annual Meeting and Exposition. December 11-14, 2021. Georgia World Congress Center - Atlanta, GA. Poster: "Midostaurin in Patients (Pts) with Newly Diagnosed FLT3-Mutation Negative Acute Myeloid Leukemia (AML): Final Results and Measurable Residual Disease (MRD) Analyses from the Unify Trial".
- 26th Annual Congress of EHA (European Hematology Association). Virtual, June 9-17, 2021. Abstract: "Frequency of FLT3-ITD and FLT3-TKD mutations in patients with Acute Myeloid Leukemia: a systematic literature review and meta-analysis"
- LXIII Congreso Nacional de la SEHH (Sociedad Española de Hematología y Hemoterapia). Navarra, October 14-16, 2021. Ponencia: "Donante no emparentado adulto vs. Familiar haploidentico en el contexto de ciclofosfamida postrasplante". Rodrigo Martino Bofarull.
- LXIII Congreso Nacional de la SEHH (Sociedad Española de Hematología y Hemoterapia). Navarra, October 14-16, 2021. Comunicación Oral: "Capacidad pronóstica de los índices de riesgo clásicos e impacto del tipo de donante en los resultados del trasplante alogénico con dosis altas de ciclofosfamida postrasplante". J. Mora Pujades.
- LXIII Congreso Nacional de la SEHH (Sociedad Española de Hematología y Hemoterapia). Navarra, October 14-16, 2021. Comunicación Oral: "Espectro mutacional de la leucemia

mieloide aguda en pacientes mayores de 70 años: Resultados del análisis mediante NGS del crupo CETLAM". Guadalupe Oñate.

- LXIII Congreso Nacional de la SEHH (Sociedad Española de Hematología y Hemoterapia). Navarra, October 14-16, 2021. Comunicación Oral: "Factores de riesgo e impacto pronóstico del ingreso en unidades de cuidados intensivos en los pacientes con leucemia mieloide aguda en tratamiento intensivo. G Ramil López.

- XIX Congreso de la Sociedad Castellano-Manchega de Hematología y Hemoterapia. Albacete, 1-2 de Octubre 2021. Conferencia invitada: "Nuevos CARTs para neoplasias hematológicas". J. Briones.

- Lymphoma Challenges 2021 Meeting. BMS-Celgene. Ponencia: "Major advances and challenges in CAR T cell therapy". J. Briones

- International Summer Course. Cell therapy: from the bench to the bedside and return. 5-7 de Juliol 2021, Murcia. Conferencia: "Present and future perspectives of CAR T cells for Hodgkins lymphoma". J. Briones.

- GELTAMO Meeting "Terapia CART en linfomas". 20 de Mayo 2021, Virtual. Conferencia Invitada: "CART cell technology today and in the future". J. Briones.

- Webinar IRISCAT. 21 de Abril 2021, online. Invited speaker: "Terapia CART: ensayos clínicos en neoplasias hematológicas". J. Briones.

- Scientific Meeting: Inmunoterapia y Hemopatías. 2021, Barcelona. Invited speaker: "Estrategias para disminuir la toxicidad CART". J. Briones

- EBMT 1 st Workshop on European Academic CART Clinical Trials. 2021. Invited speaker: "Phase I/II CART CD30 for classical Hodgkin's lymphoma and CD30+ T cell lymphoma". J. Briones.

- Master GEDEF0 en abordaje integral en hemato-oncología. Sociedad de Farmacia. 2021. Invited speaker: "Terapia CART: de la idea al paciente". J. Briones.



Cancer Predisposition and DNA Repair Syndromes

Coordinator

Surrallés Calonge, Jordi
jsurralles@santpau.cat

Members

Bogliolo, Massimo	CIBERER	Peiró Navarro, Montserrat	UAB
Camps Fajol, Cristina	IR	Pujol Calvet, Roser	CIBERER
Castells Roca, Laia	UAB	Ramírez de Haro, María José	CIBERER
Cavero Moreno, Debora	IR	Rodríguez Santiago, Benjamín	FGS
López de Heredia, Miguel	CIBERER	Steigerwald, Daniela	UAB
Minguillón Pedreño, Jordi	IR	Tejero Laguna, Eudald	IR
Molina Romero, Ana	UAB		

Main lines of research

- Application of new generation massive sequencing in the diagnosis and discovery of new genes involved in rare genetic diseases and in the prevention and monitoring of rare diseases
- Mechanism of genomic instability and predisposition to cancer. The objective of this line is to delve into the repair mechanisms of DNA lesions and the biological and clinical consequences of failures in these mechanisms.
- New tools in the diagnosis and therapy of genetic diseases. The objective of this line of research is to develop new diagnostic and therapeutic tools in the Fanconi anemia model disease, including gene therapy, regenerative medicine and drug repositioning.
- Genetics and molecular biology of Fanconi anemia. The objective of this line of research is to genetically characterize Fanconi patients as well as to identify new genes involved in the disease and in turn in the hereditary breast cancer syndrome and its functions.

Scientific challenges

Our research interests are cancer-prone genetic syndromes with defective DNA repair with special focus in Fanconi anemia and familiar cancer syndromes. We perform genetic, molecular biology and therapeutic research including gene discovery, mechanisms of DNA repair, gene and cell therapy approaches and cell-based drug screening platforms. A long term goal is to understand the mechanisms that maintain genome stability and protect us from disease, cancer, and ageing to improve the diagnostics and find novel therapeutic strategies.

Collaborations

Collaborations with other IIB Sant Pau research groups

- Dr Pia Gallano's team, Genetics Department, Hospital de la Santa Creu i Sant Pau.
- Dr Isabel Badell, Director, Unit of Hematology, Oncology and Hematopoietic Stem Cell Transplant, Pediatrics Service, Hospital de la Santa Creu i Sant Pau.
- Dr Enrique Lerma, Anatomic Pathology Department, Hospital de Sant Pau.
- Dr Oscar Gallego, Georgia Anguera, Medical Oncology Department, Hospital de la Santa Creu i Sant Pau.
- Dr Pau Riera, Pharmacy Department

External collaborations

International collaborations

- Eunike Velleuer, Department of Pediatrics, Hospital Neuwerk Maria von den Aposteln, Mönchengladbach, Germany.
- Jonathan Schwartz, Rocket Pharma, New York
- Thomas Helleday, Karoliska Institut, Stockholm,
- Parinda Mehta, Division of Bone Marrow Transplantation and Immune Deficiency, Cincinnati Children's Hospital Medical Center, Department of Pediatrics, College of Medicine, University of Cincinnati, Cincinnati, OH, USA.

National collaborations

- Juan A. Bueren, CIEMAT, Madrid
- Luis A. Perez Jurado, UPF, Barcelona
- Joaquín Dopazo, CIPF, València
- Cristina Diaz de Heredia, H. Vall Hebron, Barcelona
- Albert Català, H. Sant Joan de Deu, Barcelona
- Judith Balmaña, H. Vall Hebron, Barcelona
- Diego Arango, VHIR, Barcelona
- Jose Luís Garcia, GENYO, Granada
- Ramón Garcia-Escudero, CIEMAT, Madrid
- Bellvitge Institute for Biomedical Research (IDIBELL), L'Hospitalet del Llobregat.
- Centro Andaluz de Biología Molecular y Medicina Regenerativa (CABIMER)
- Hospital Universitari de la Vall d'Hebron; Vall d'Hebron Institute of Oncology (VHIO); Vall d'Hebron Institute of Research (VHIR); Universitat Autònoma de Barcelona, Barcelona, Spain.
- Human Cancer Genetics Program, Spanish National Cancer

Research Centre (CNIO), Madrid, Spain.

- Unit of Molecular Bases of Genetic Risk and Genetic Testing, Department of Preventive and Predictive Medicine, Fondazione IRCCS
- Rocket Pharma, New York
- Karoliska Institut, Stockholm
- Cincinnati Children's Hospital Medical Center, Cincinnati,.
- Heinrich Heine University, Düsseldorf, Germany
- Cancer and Blood Diseases Institute, Cincinnati Children's Hospital Medical Center, Cincinnati
- Hospital Medical Center, Cincinnati
- Dana Farber Cancer Institute, Boston Children's Hospital, Boston, USA

Active grants

- JORDI SURRALLES CALONGE. Grup de Síndromes d'Inestabilitat Genòmica i Reparació del DNA. 2017 SGR 01191. Agència de Gestió d'Ajuts Universitaris i de Recerca. Duration 2017-2021. 0,00 €.
- EUDALD TEJERO LAGUNA. Desarrollo y diseño de herramientas bioinformáticas para el tratamiento de datos de secuenciación masiva en el ámbito biomédico. FPU17/04141. Ministeri d'Educació, Cultura i Esport. Duration 2018-2024. 123.184,80 €.
- JORDI SURRALLES CALONGE. La ruta anemia de Fanconi/BRCA: investigación genética y terapéutica. RTI2018-098419-B-I00. Ministeri de Ciència, Innovació i Universitats. Duration 2019-2021. 260.000,00 €.
- JORDI SURRALLES CALONGE. Gefitinib/Afatinib therapy for Head and Neck Squamous Cell Carcinomas in Fanconi anemia. FARF 2019. Fanconi Anemia Research Fund. Duration 2019-2022. 137.091,00 €.
- JORDI MINGUILLON PEDREÑO. Fanconinib hit validation: targeting DNA repair in cancer therapeutics. 2019 LLAV 00044. Agència de Gestió d'Ajuts Universitaris i de Recerca. Duration 2020-2021. 20.000,00 €.
- BENJAMIN RODRIGUEZ SANTIAGO. Catalan Interhospital Network of Genetic Variants to Improve Genetic Diagnosis in Rare Diseases. MARATO 202040-33. Fundació La Marató de TV3. Duration 2021-2024. 21.300,00 €.
- JORDI MINGUILLON PEDREÑO. We developed specific inhibitors of FA/BRCA DNA damage repair pathway. In the current project we seek hit to lead optimization, define tumor candidates, market analysis and IP protection. CAIXAIMPULSE 2020. Obra Social "La Caixa". Duration 2020-2022. 70.000,00 €.
- DEBORA CAVERO MORENO. La ruta anemia de Fanconi/BRCA: investigación genética y terapéutica. PRE2019-091044.

Ministeri de Ciència, Innovació i Universitats. Duration 2020–2024. 95.450,00 €.

Note: Total amount granted to PI. It does not include indirect costs.

Other active grants

- Services agreement with Rocket Pharmaceuticals Inc. (New York). Agosto 2020–2034. Billing according to services performed. Current.
- Services agreement with Rocket Pharmaceuticals Inc. (New York). Nov. 2020. Billing according to services performed. Current.
- Services agreement with Cincinnati Childrens´ Hospital Medical Center (OH-EEUU). Mayo 2021. Billing according to services performed. Current.
- The mechanism of synthetic lethality between BRCA1/2 and Fanconi anaemia E3 ligase activity. Duration - 3 years (2019–2021). Grant number - GNT1156343. Funding agency - The (Australian) National Health and Medical Research Council (NHMRC). Amount awarded - Australian dollars \$773,643.80 / 493.739 euros. CO-IP Jordi Surrallés.
- Afatinib therapy for Head and Neck Squamous Cell Carcinomas in Fanconi anemia. (Fanconi Anemia Research Fund) FARF Research Grant Award Program supplemental funding. 2021. 60,000\$. PI: Jordi Minguillón, PhD; Jordi Surrallés, PhD (CO-PI).
- Terapia de lesiones cancerosas de la mucosa oral de pacientes con anemia de Fanconi mediante sustitutos autólogos bioingenierizados corregidos genéticamente (ER21P7AC745). ACCI20. CIBERER Acciones Cooperativas y Complementarias Intramurales. (01/09/2021 - 31/12/2022). 55.190 euros. 10.500 euros Surrallés group.
- Infraestructura de Medicina de Precisión asociada a la Ciencia y Tecnología (IMPACT). Acción Estratégica en Salud 2017–2020, Programa de Medicina Genómica. Ref. IMP/00009. Proyecto coordinado por el Consorcio Centro de Investigación Biomédica en red M.P. CIBER. Duration: 2021–2023. 7.249.990 euros.

Awards

- ICREA Academia Award 2018 (2019–2023). 200.000 euros.

Patents

- THERAPEUTIC USE OF AFATINIB IN CANCER (P-2021/113). Event for T: Afatinib Reprofilig fàrmacs citostàtics per tractament càncer en pacients d'anèmia Fanconi (AFATINIB) (T-2017/032). Warning date: 16/01/2021. Due date: 22/01/2021, P-2021/113, 22/01/2021.

Transfer products

- Services agreement with Rocket Pharmaceuticals Inc. (New York). Aug 2020–2034. Still active.
- Services agreement with Rocket Pharmaceuticals Inc. (New York). Nov. 2020. Still active
- Services agreement with Cincinnati Childrens´ Hospital Medical Center (OH-EEUU). May 2021. Still active.
- Consulting agreement with Rocket Pharmaceuticals, Inc. (New York). Enero 2022. Still active.
- Material Transfer and Supply Agreement. ModernaTX, Inc. Cambridge. Febrero 2022. Still active.
- The group hosts the Laboratory of Diagnosis of Chromosome Fragility of the Universitat Autònoma de Barcelona. <http://safcro.uab.es>. We performe service under invoice or signed agreement to more that 100 Spanish and European public and private hospitals and diagnostic and pharma companies.

Scientific production

- Ali AB, Messaoud O, Elouej S, Talmoudi F, Ayed W, Mellouli F, Ouederni M, Hadiji S, De Sandre A, Delague V, Levy N, Bogliolo M, Surralles J, Abdelhak S, Amouri A. FANCA Gene Mutations in North African Fanconi Anemia Patients. *Frontiers in Genetics*. 2021; 12:610050. DOI:10.3389/fgene.2021.610050. PMID:33679882. IF:4,599 (Q2/D3).
- Castells L, Gutierrez S, Bonache S, Bogliolo M, Carrasco E, Aza M, Montalban G, Munoz N, Pujol R, Cruz C, Llop A, Ramirez MJ, Saura C, Lasa A, Serra V, Diez O, Balmana J, Surralles J. Clinical consequences of BRCA2 hypomorphism. *npj Breast Cancer*. 2021; 7(1):117. DOI:10.1038/s41523-021-00322-9. PMID:34504103. IF:6,923 (Q1/D2).
- Castells L, Tejero E, Rodriguez B, Surralles J. CRISPR Screens in Synthetic Lethality and Combinatorial Therapies for Cancer. *Cancers*. 2021; 13(7):1591. DOI:10.3390/cancers13071591. PMID:33808217. IF:6,639 (Q1/D3).
- Errazquin R, Sieiro E, Moreno P, Ramirez MJ, Lorz C, Peral J, Ortiz J, Casado JA, Roman FJ, Hanenberg H, Rio P, Surralles J, Segrelles C, Garcia R. Generating New FANCA-Deficient HNSCC Cell Lines by Genomic Editing Recapitulates the Cellular Phenotypes of Fanconi Anemia. *Genes*. 2021; 12(4):548. DOI:10.3390/genes12040548. PMID:33918752. IF:4,096 (Q2/D4).
- Garcia C, Roe E, Rodriguez B, Amat V, Cubiro X, Puig L, Boronat S. A case report of PHF6 mosaicism: Beyond the classic Borjeson–Forssman–Lehmann syndrome. *PEDIATRIC DERMATOLOGY*. 2021; 38(4). DOI:10.1111/pde.14636. PMID:34041787. IF:1,588 (Q3/D8).
- Ramirez MJ, Pujol R, Trujillo JP, Minguillon J, Bogliolo M, Rio P, Navarro S, Casado JA, Badell I, Carrasco E, Balmana J, Catala A, Sevilla J, Belendez C, Argiles B, Lopez M, de Heredia

CD, Rao G, Nicoletti E, Schwartz JD, Bueren JA, Surrallés J. Natural gene therapy by reverse mosaicism leads to improved hematology in Fanconi anemia patients. *AMERICAN JOURNAL OF HEMATOLOGY*. 2021; 96(8). DOI:10.1002/ajh.26234. PMID:33984160. IF:10,047 (Q1/D1).

- Sevilla J, Navarro S, Rio P, Sanchez R, Zubicaray J, Galvez E, Merino E, Sebastian E, Azqueta C, Casado JA, Segovia JC, Alberquilla O, Bogliolo M, Roman FJ, Gimenez Y, Larcher L, Salgado R, Pujol RM, Hladun R, Castillo A, Soulier J, Querol S, Fernandez J, Schwartz J, de Andoin NG, Lopez R, Catala A, Surrallés J, Diaz C, Bueren JA. Improved collection of hematopoietic stem cells and progenitors from Fanconi anemia patients for gene therapy purposes. *Molecular Therapy-Methods & Clinical Development*. 2021; 22. DOI:10.1016/j.omtm.2021.06.001. PMID:34485595. IF:6,698 (Q1/D2).

Other publications

Galvez E, Vallespin E, Arias EG, Sanchez C, Gimenez Y, Navarro S, Rio P, Bogliolo M, Pujol R, Peiro M, Nevado J, Zubicaray J, Sebastian E, Catala A, Belendez C, de Heredia CD, Galera A, Badell I, Madero L, Perona R, Sastre L, Surrallés J, Bueren J, Lapunzina P, Sevilla J. Next-generation Sequencing in Bone Marrow Failure Syndromes and Isolated Cytopenias: Experience of the Spanish Network on Bone Marrow Failure Syndromes. *Hemasphere*. 2021; 5(4). DOI:10.1097/HS9.0000000000000539. PMID:33718801.

Communication and dissemination activities

Scientific dissemination

- Surrallés. Repurposing afatinib for head and neck cancer in Fanconi anemia patients. Stand Up to Cancer Meeting, Boston (zoom), April 30, 2021

- Surrallés J. Experiència en el diagnòstic genètic mitjançant l'estudi dels exomes. XIV Congrés català de ciències de laboratori clínic 4 – 6 maig 2021. Online.

- Surrallés, Invited speaker. Genomic Medicine in Fanconi anemia: from genes to advanced therapies. 8th National DNA DAY 2021-Vellore Institute of Technology, Vellore, India (zoom). May 15th 2021.

- Surrallés J. Fanconi anemia patients and oral cancer. Forsyth Institute, Invited speaker, Boston (zoom), July 1st, 2021

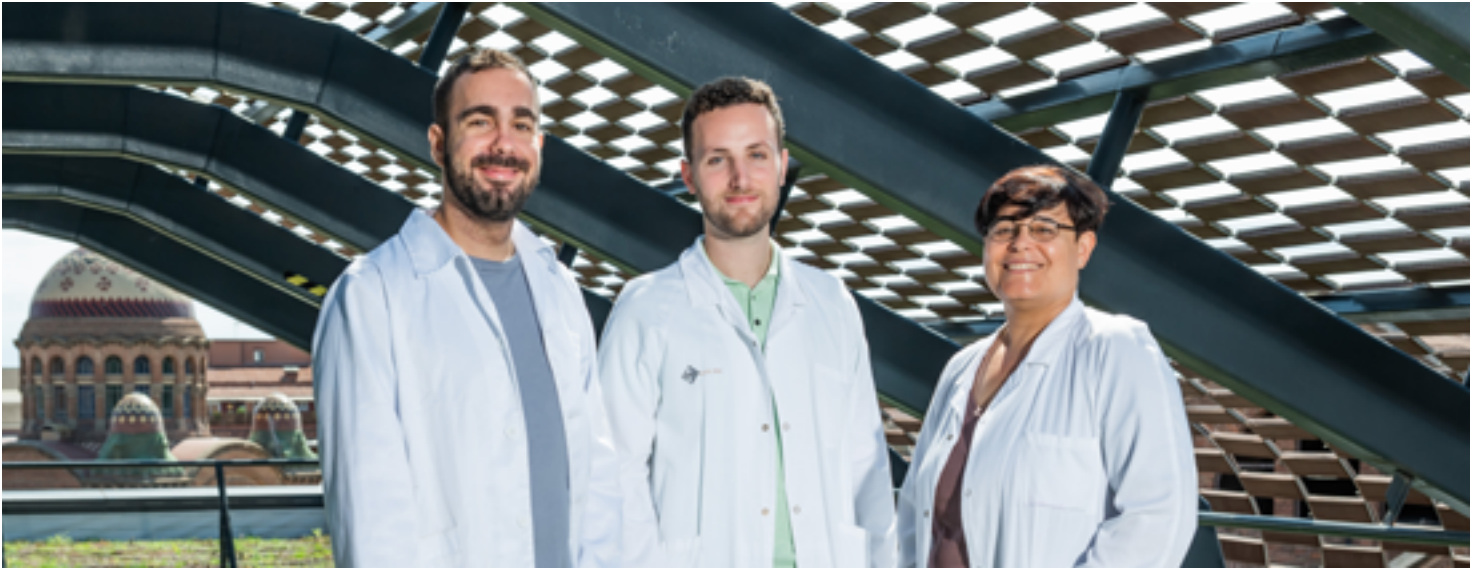
- Surrallés, J, Invited speaker. Head and neck cancer in the cohort of Spanish Fanconi anemia patients: present and future. International Fanconi Anemia Research Symposium, USA (zoom). July 29th 2021.

- Surrallés, invited speakers, Fundación Anemia de Fanconi. Cáncer oral en pacientes Fanconi: incidencia, pronóstico y nuevos tratamientos en investigación. 25 Nov 2021.

Outreach activities to society

- 10/05/2021 ¿Es posible evitar que los tumores generen resistencias al tratamiento?

<https://www.lavanguardia.com/ciencia/20210510/7428462/posible-evitar-tumores-generen-resistencias-tratamiento.html>



Gynecologic and Peritoneal Oncology

Coordinator

Cespedes Navarro, M. Virtudes
mcespedes@santpau.cat

Members

Caruana Santiago, Pablo	IR	Rovira Negre, Ramon	FGS
Español Lloret, M. Pia	FGS	Soler Moreno, Cristina	FGS
Gonzalez Lopez, Jose Antonio	FGS	Teixeira, Natalia	FGS
Luna Guibourg, Rocío	FGS	Zapater Enrique, Óscar	FGS
Martin Lorente, Cristina	FGS		

Main lines of research

- Identify new prognostic biomarkers and new therapeutic targets for risk and therapeutic stratification in endometrial cancer patients.
- Study the effect of the Nervous system in tumor progression and metastasis in gynecological and peritoneal cancers
- Modeling gynecological and peritoneal cancers in animals to better understand tumor progression and dissemination physiopathology and for preclinical drug evaluation.
- Development of new antitumor drugs, using nanotechnology, for targeted delivery to cancer stem cells.

Scientific challenges

- Promoting clinical and translational research of Gynecological cancers with a very large database and studying relevant clinical issues.
- Obtaining funding from FIS, regional authorities, and private companies.
- Promoting cooperation with other clinical and research groups in Sant Pau and extra-hospital and attracting predoctoral and postdoctoral fellows.
- Development of new molecular markers for therapeutic decision-making in endometrial cancer patients.
- Identification and validation of novel therapeutic targets related to

neuromodulation in tumor progression of gynecological cancers.

- Evaluation of antitumor and antimetastatic effects by targeting drugs to cancer stem cells in gynecological and peritoneal cancers.

Collaborations

Collaborations with other IIB Sant Pau research groups

- Women and Perinatal Health research Group, Obstetric and Gynecological Dept. (Dr Elisa Llorba)
- Endocrinology, Diabetes and Nutrition Group, (Dr Eugenia Mato)
- Lipids and cardiovascular Pathology Group (Dr Vicenta Llorente-Cortés)
- Oncogenesis and Antitumour Drugs Group (Dr Ramon Mangués)
- Oncology / Haematology and Transplantation Group
- Anatomy and Pathology Dept. (Dr Enrique Lerma & Dr Alberto Gallardo)
- Pharmacy Dept. (Dr María Gamez)
- Medical Oncology Dept. (Dr Lopez Pousa)

External collaborations

- Biomedical Research Institute (IRB), Barcelona, Spain. (Dr María Macías)
- CIBER-BBN & Institut de Biotecnologia i de Biomedicina Universitat Autònoma de Barcelona, Spain. (Drs Jose Luis Corchero and Neus Ferrer)
- Laboratori d'Enginyeria, Departament de Biologia, Universitat de Girona, Spain. (Dr Antoni Benito)
- Biomedical Research Institute of Lleida-IRB Lleida. (Dr Xavier Gallart-Palau)
- Institut de Biotecnologia i de Biomedicina Universitat Autònoma de Barcelona, Spain. (Dr Antonio Villaverde)
- Institute for Advanced Chemistry of Catalonia (IQAC) Centro Superior de Investigaciones Científicas (CSIC), Barcelona Spain. (Dr Ramón Eritja)
- Grupo GEICO, Grupo Español de Investigación en Cáncer de Ovario, Spain. Dr Cristina Martín-Llorente, Dr R. Rovira, Dr MV Céspedes.
- Hospital de Bellvitge, Barcelona, Spain. (Dr Xavier Matias-Guiu)
- Translational colorectal Cancer genomics, Hospital Clinic, Barcelona, Spain. (Dr Jordi Camps)
- Universidad Complutense de Madrid, UCM, Faculty of Biology, Spain. (María Jesus Delgado)
- New Jersey Medical School, Rutgers University, Newark, New Jersey (USA) (Dr Luis Ulloa)
- SIRIC Montpellier Cancer Institut, Montpellier, France (Dr Julie Pannequin)
- Institute for Cancer Research and Treatment, Candiolo, Torino (Italy) (Dr Paolo Micheli)
- Cancer Center Karolinska, Karolinska Institutet, Stockholm (Sweden). (Arne Östman)
- ATMP-EATRIS, European Union. Member of the Working Group

on Advanced therapies and biologicals of ATMP (Advanced Therapy Medicinal Products), EATRIS (European Infrastructure for Translational Medicine) Network.

- ETP Nanomedicine, European Union, Member of the European Technology Platform on Nanomedicine.
- TME-AACR. Member of the Tumor Microenvironment Working Group, American Association for Cancer Research (AACR).

Active grants

- MARIA VIRTUDES CESPEDES NAVARRO. Terapia dirigida para la eliminación selectiva de células madre metastáticas CXCR4+ en cáncer de endometrio. FMM 2017. Fundació Mutua Madrileña. Duration 2017-2022. 133.333,33 €.
- MARIA VIRTUDES CESPEDES NAVARRO. Nanoterapia dirigida y radioterapia SBRT combinada para la eliminación selectiva de células madre tumorales en cáncer de páncreas. PI17/00150. Instituto de Salud Carlos III. Duration 2018-2021. 123.000,00 €.
- MARIA VIRTUDES CESPEDES NAVARRO. Genomic signatures for the prediction of recurrence and metastasis in Endometrial Cancers. MARATO 201911-30. Fundació La Marató de TV3. Duration 2020-2023. 152.000,00 €.
- MARIA VIRTUDES CESPEDES NAVARRO. Nanoterapia innovadora para cánceres peritoneales metastásicos: activando neuroreceptores para matar células madre tumorales. PI20/00623. Instituto de Salud Carlos III. Duration 2021-2023. 143.000,00 €.
- MARIA VIRTUDES CESPEDES NAVARRO. Contractes "Miguel Servet II" 2020. CPII20/00007. Instituto de Salud Carlos III. Duration 2021-2024. 101.250,00 €.
- MARIA VIRTUDES CESPEDES NAVARRO. Contratos Miguel Servet I 2015. MS15/00163. Instituto de Salud Carlos III. Duration 2016-2021. 202.500,00 €.

Note: Total amount granted to PI. It does not include indirect costs.

Other active grants

- The impact of age in surgical morbidity of endometrial cancer. Promoter num: IIBSP-CEN-2021 Ref 21/210 (OBS) PI. R Rovira
- The impact of BMI on surgical management of endometrial cancer. Promoter num: 1211187/6429 IIBSP-EMC-2021-55 PI. P. Español
- Comparison of laparoscopy and laparotomy for the treatment of early-stage ovarian cancer. Promoter num: 11BSP-OVC-2021-54. PI. C Soler

Awards

- PFIS-FI21/00146. P Caruana. Innovative nanotherapy for highly-metastatic peritoneal cancers: activating neuroreceptors to kill cancer stem cells (01/12/2021-2024). 119.567 €

- RICORS CODE: RD21/0012/0001. RICORS name: PRIMARY CARE INTERVENTIONS TO PREVENT MATERNAL AND CHILD CHRONIC DISEASES OF PERINATAL AND DEVELOPMENTAL ORIGIN. IP: Elisa Llorba. Thematic area: Primary care, chronicity and health promotion; Programme name: Primary care promotion of maternal, child and women's health for prevention of adult chronic diseases.

Doctoral Theses

- Noa De la Fuente, Generación de modelos murinos de cancer de pancreas con mayor eficiencia metastasica para el estudio de agentes antitumorales, Programa de Cirugia y CC. Morfológicas. Facultad de Medicina. UAB, María Virtudes Céspedes and Vicente Artigas, 04/06/2021
- Esperanza Medina Gutierrez, Actividad antineoplásica de nanotoxinas dirigidas a células CXCR4+ en un nuevo modelo murino de cáncer de endometrio avanzado, Programa de Biología celular, fisiología e inmunología. Facultad de Medicina. UAB, M^a Virtudes Céspedes and Ramón Mangués, 18/10/2021

Patents

- Isolda Casanova Rigat, María Virtudes Céspedes Navarro, Neus Ferrer Miralles, Ramon Mangués Bafalluy, Ugutz Unzueta Elorza, Esther Vázquez Gómez, Antonio Villaverde Corrales, Methods and reagents for efficient and targeted delivery of therapeutic molecules to cxcr4 cells, -W02012095527A1 WIPO (PCT), World wide application- EP 2012 EP AU US WO ES DK PT CN JP PL 2013 IL 2017 US 2019 US 2020 US, 20/11/2011.
- Antonio Pedro Villaverde Corrales, Esther Vázquez Gómez Ugutz Unzueta Elorza, Ramón Mangués Bafalluy, María Virtudes Céspedes Navarro, Isolda Casanova Rigat, Therapeutic nanoconjugates and uses thereof, W02019012157A1 WIPO (PCT), Application PCT/EP2018/069303, 20/06/2018
- Antonio Villaverde Corrales, Esther Vázquez Gómez, Naroa Serna Romero, Laura Sánchez García, Ugutz Unzueta Elorza, Ramón Mangués Bafalluy, María Virtudes Céspedes Navarro, Isolda Casanova Rigat, Nanostructured proteins and uses thereof, W02018202921A2 WIPO (PCT), Application PCT/EP2018/061732, 10/06/2018
- Alicia Casals, Albert Hernansanz, Ramón Rovira, Joan Basomba, Roger Comas, Device for simulating and endoscopic operation via natural orifice, W02017098036A1 WIPO (PCT), Utility patent, 15/06/2017

- Alicia Casals, Albert Hernansanz, Ramón Rovira, Procedure and device for learning and training operations of laparoscopic surgery and similar interventions, ES2534140B1, Utility patent, 15/06/2017.

Transfer products

Spin-off

- C-66663303 Surgitrainer S.L. Ramon Rovira Start-up 15/03/2016 Method and device for learning and training operations laparoscopic surgery and similar procedures. Active.

Technology Transfer agreements

- 2016-2016-101 Transferència Surgitrainer and Hystrainer Licence/Transference Agreement Surgitrainer SL 13/9/16

Scientific production

- Castro RD, Olloquequi J, Etchetto M, Caruana P, Steele L, Leighton K-M, Ureña J, Beas C, Camins A, Verdaguier E, Auladell C. Dual mkk4 and mkk7 gene deletion in adult mouse causes an impairment of hippocampal immature granule cells. *INTERNATIONAL JOURNAL OF MOLECULAR SCIENCES*. 2021; 22(17):9545. DOI:10.3390/ijms22179545. PMID:34502457. IF:2,598 (Q2/D3).
- COVIDSurg Collaborative [Sanchez-Lopez A, Balague MC, Targarona E, Sanchez-Cabus S, Molina V, Gonzalez-Lopez JA, Medrano R, Moral A]. Machine learning risk prediction of mortality for patients undergoing surgery with perioperative SARS-CoV-2: the COVIDSurg mortality score. *BRITISH JOURNAL OF SURGERY*. 2021;108(11):1274-1292. DOI:10.1093/bjs/znab183. PMID: 34227657. IF:6,939 (Q1/D1).
- Iantsen A, Ferreira M, Lucia F, Jaouen V, Reinhold C, Bonaffini P, Alfieri J, RAMON N, Masson I, Robin P, Mervoyer A, Rousseau C, Kridelka F, Decuypere M, Lovinfosse P, Pradier O, Hustinx R, Schick U, Visvikis D, Hatt M. Convolutional neural networks for PET functional volume fully automatic segmentation: development and validation in a multi-center setting. *EUROPEAN JOURNAL OF NUCLEAR MEDICINE AND MOLECULAR IMAGING*. 2021; 48(11). DOI:10.1007/s00259-021-05244-z. PMID:33772335. IF:9,236 (Q1/D1).
- Luzarraga A, Mora I, Magret E, RAMON N. Laparoscopic Colposacropexy Mesh Excision Secondary to Severe Spondylodiscitis. *Journal of Minimally Invasive Gynecology*. 2021; 28(11). DOI:10.1016/j.jmig.2021.08.029. PMID:34500066. IF:4,137 (Q1/D2).
- Redondo A, Guerra E, Manso L, Martin C, Martinez J, Perez JA, Varela MQ, Rubio MJ, Barretina MP, Gonzalez A. SEOM clinical guideline in ovarian cancer (2020). *Clinical & Translational Oncology*. 2021; 23(5). DOI:10.1007/s12094-020-02545-x. PMID:33515422. IF:3,405 (Q3/D7).
- Redondo A, Oaknin A, Rubio MJ, Barretina MP, de Juan A, Manso L, Romero I, Martin C, Poveda A, Gonzalez A.

Management of advanced ovarian cancer in Spain: an expert Delphi consensus. *Journal of Ovarian Research*. 2021; 14(1):72. DOI:10.1186/s13048-021-00816-x. PMID:34039386. IF:4,234 (Q1/D2).

- Tattersall HL, Hodson J, Cardona K, Lee RM, Nessim C, Gladly R, Van Der Hage J, Schrage Y, Tseng WW, van Houdt W, Novak M, Grignani G, Tolomeo F, Goel N, Ryon E, Gyorki D, Bagaria SP, Gonzalez JA, Arnau ABM, Sayyed R, Tirota F, Evenden C, Desai A, Almond M, Glasbey J, Fiore M, Gronchi A, Ford SJ. Primary mesenteric sarcomas: Collaborative experience from the Trans-Atlantic Australasian Retroperitoneal Sarcoma Working Group (TARPSWG). *JOURNAL OF SURGICAL ONCOLOGY*. 2021;123(4):1057-1066. DOI:10.1002/jso.26353. Erratum in: *JOURNAL OF SURGICAL ONCOLOGY*. 2021;124(3):457. PMID: 33368277. IF:1,057 (Q2/D3).

- Zapardiel I, Alvarez J, Barahona M, Barri P, Boldo A, Bresco P, Gasca I, Jaunarena I, Kucukmetin A, Mancebo G, Otero B, Roldan F, Rovira R, Suarez E, Tejerizo A, Torrent A, Gorostidi M. Utility of Intraoperative Fluorescence Imaging in Gynecologic Surgery: Systematic Review and Consensus Statement. *ANNALS OF SURGICAL ONCOLOGY*. 2021;28(6):3266-3278. DOI:10.1245/s10434-020-09222-x. PMID: 33095359. IF:5,344 (Q1/D1).

Communication and dissemination activities

Master Degrees

- MV Cespedes. 4313772 Máster en Biotecnología Avanzada UAB "2021-2022". Lecturer.

- R Rovira. Master en cirurgia oncologica minimamente invasiva, UAB "2021-2022". Lecturer.

- MV Cespedes. 1808/7 Máster en Medicina Materno-Fetal UAB "2020-2022". Lecturer.

Meetings and Conferences

- R. Rovira. Prehabilitation, a step forward in assessment of gynaecologic oncology patients. ESGE 30th Annual Congress. Rome, Italy, 2021.

- Mundo A, Luna R, Balcells E, Soler C, Español P, Luzarraga A, Rovira R. A novel technique to minimize surgical bleeding in laparoscopic resection of interstitial ectopic pregnancy: step-by-step demonstration. ESGE 30th Annual Congress. Rome, Italy, 2021.

- Teixeira N, Español P, Luzarraga A, Luna R, Soler C, Rovira R. The impact of hysteroscopy on prognosis of stage I-III endometrial cancer. ESGE 30th Annual Congress. Rome, Italy, 2021

- R. Rovira. State of the art. ENDODUBAI 2021.

- Teixeira N; Soler C, Español P; Rocio L; Rovira R. Pelvic exenteration for locally advanced and relapsed gynaecologic cancer morbidity and long-term survival. 22nd European Congress on Gynaecological Oncology. Prague. Czech Republic 2021.



Molecular Bases of Disease

Fuentes Prior, Pablo IR

Members

Abella Monleón, Montserrat IR

Anton Lopez, Rosa IR

Main lines of research

COVID-19

- Structural and functional analysis of the serine protease TMPRSS2 and its implications in SARS-COV-2.

Cancer

- Structural and functional analysis of the androgen receptor (AR). Design and structure-function characterization of AR homodimerization inhibitors.

- Analysis of mutations and SNPs that affect the TET2 gene and implications for hematopoietic and lymphoid neoplasms.

Neurodegenerative Diseases

- Analysis of the structural bases of exon-7 exclusion from SMN2 and implications for the pathobiology of spinal muscular atrophy (SMA).

- Structural and functional investigations of the kinase, PINK1, and implications for Parkinson's disease

Thrombosis and Haemostasis

- Structural and functional investigations of blood coagulation factors, with emphasis on thrombin interactions with physiological substrates (factor VIII and protease-activated receptors).

Lipid Metabolism and Dyslipidemias

- Bioinformatics analysis of STAP1 mutations identified in individuals with hypercholesterolemia.

Scientific challenges

Consolidate and extend research within the HSCSP Research Institute and the rest of the IIB Sant Pau in a context of limited access to financial support. To this end, the group needs to participate in at least one financed structure-and-function project in each of three major research areas (cardiovascular diseases, neurodegenerative diseases and cancer and innate immune responses).

Active grants

- PABLO FUENTES PRIOR. Bases estructurales de las interacciones del receptor de andrógenos con ERG y modificadores epigenéticos: implicaciones para el desarrollo de nuevas estrategias terapéuticas. RTI2018-101500-B-100. Ministeri de Ciència, Innovació i Universitats. Duration 2019-2021. 120.000,00 €.

Note: Total amount granted to PI. It does not include indirect costs.

Scientific production

- Blasco L, Paramonov I, Leno J, Bernal S, Alias L, Fuentes P, Cusco I, Tizzano EF. Beyond copy number: A new, rapid, and versatile method for sequencing the entire SMN2 gene in SMA patients. *HUMAN MUTATION*. 2021; 42(6). DOI:10.1002/humu.24200. PMID:33739559. IF:4,878 (Q2/D3).
- Fuentes P. Priming of SARS-CoV-2 S protein by several membrane-bound serine proteinases could explain enhanced

viral infectivity and systemic COVID-19 infection. *JOURNAL OF BIOLOGICAL CHEMISTRY*. 2021; 296:100135. DOI:10.1074/jbc.REV120.015980. PMID:33268377. IF:5,157 (Q2/D3).

- Gonzalez-Quereda L, Pagola I, Fuentes Prior P, Bernal S, Rodriguez MJ, Torné L, Salgado Garrido J, Gallano P, Jericó I. Novel PLEKHG5 mutations in a patient with childhood-onset lower motor neuron disease. *Annals of Clinical and Translational Neurology*. 2021;8(1):294-299. DOI:10.1002/acn3.51265. PMID:33275839. IF:4,511 (Q2/D3).

Other scientific production

- Fionda L, Turon J, Prior PF, Noguera SB, Cortes E, Lopez MA, Gallardo E, Rojas R. A new de novo SYT2 mutation presenting as distal weakness. Neuropathy or neuromuscular junction dysfunction? (vol 26, pg 113, 2021). *JOURNAL OF THE PERIPHERAL NERVOUS SYSTEM*. 2021; 26(2). DOI:10.1111/jns.12441. IF:3,494 (Q2/D5).

A.3. Neurological diseases, neurosciences, and mental health



Cerebrovascular Diseases

Coordinator

Marti Fabregas, Joan FGS
jmarti@santpau.cat

Members

Aguilera Simón, Ana	IR	Marin Bueno, Rebeca	IR
Alba Pérez, Anabel	IR	Martinez Domeño, Alejandro	FGS
Bosch de Basea Gómez, Ana	IR	Navarro Roman, Marta	IR
Camps Renom, Pol	FGS	Prats Sanchez, Luis Antonio	FGS
Delgado Mederos, Raquel	FGS	Puig Grifol, Núria	IR
Gallego Fabrega, Cristina	IR	Ramos Pachón, Anna	FGS
Guisado Alonso, Daniel	IR		

Main lines of research

- Intracerebral hemorrhage: Prevention of intracerebral haemorrhage related to anticoagulant therapy, prevention and treatment of hematoma growth, etiological classification, multicenter registry, relevance of microbiota, perihematoma edema.
- Reperfusion therapies: Benefits and risks of intravenous thrombolysis and mechanical thrombectomy, genetics and reperfusion therapies, collateral circulation in acute ischemic stroke with large-vessel occlusion, endothelial progenitor cells in stroke.
- The HOPE trial (A randomized trial on hemodynamic optimization of cerebral perfusion after endovascular therapy in patients with acute ischemic stroke).
- Non-invasive monitoring of cerebral flow with applied optic methods.

- Vulnerability of the carotid atherosclerotic plaque in symptomatic and asymptomatic patients.
- Stroke and infection with COVID-19.
- Role of statins in ischemic and haemorrhagic stroke.
- Participation in clinical trials.

Scientific challenges

- Enhance cooperation with other groups in the framework of Spanish stroke research.
- Spanish research network (RICORS/ICTUS) and also intrahospital and extra-hospital cooperation.
- To obtain funding from national calls (Instituto de Salud Carlos III), european community calls, regional authorities and private companies.
- Increase the number of contracted and grant-aided researchers and professionally development of existing researchers.

Collaborations

Collaborations with other IIB Sant Pau research groups

- Neurovascular pharmacogenomics and genetics.
- Neurosurgery
- Cardiovascular biochemistry
- Lipids and cardiovascular pathology
- Neuroradiology
- Microbiology and infectious diseases
- Nuclear Medicine
- Intensive Medicine
- Emerging processes in prevalent diseases

External collaborations

- Hospital Clínic, Servei de Neurologia (Dr Angel Chamorro)
- Hospital del Mar, Servei de Neurologia (Dr Jaume Roquer)
- Fundació Ictus
- Pla Director de la Malaltia vascular Cerebral, Departament de Salut
- Hospital Arnau de Vilanova, Lleida (Dr. Francesc Purroy)
- Hospital Universitari Vall d'Hebró (Dr. Carlos Molina)
- Hospital Germans Trias i Pujol (Dra Mónica Millan)
- Hospital de Bellvitge (Dr Pere Cardona)
- Hospital Central de Asturias (Dra. Elena López Cancio)
- Hospital de Cruces, Baracaldo (Dra. Mari Mar Freijo)
- Hospital de Donosti (Dra. Ana Maria de Arce Borda)
- Complejo Hospitalario Santiago de Compostela (Dr. Rodríguez-Yáñez)
- Hospital de A Coruña (Dra Mar Castellanos)
- Hospital La Paz, Madrid (Dra. Blanca Fuentes)
- Hospital Ramón y Cajal, Madrid (Dr Jaime Masjuan)
- Hospital de Valladolid (Dr. Juan F. Arenillas)
- Hospital Dr Josep Trueta, Girona (Dr. Joaquín Serena)
- Hospital Virgen del Rocío, Sevilla (Dr Pachi Moniche)
- Hospital La Fe, Valencia (Dr José Tembl)
- Institut de Ciències Fotòniques, ICFO (Dr Turgut Durduran)

- National Hospital for Neurology and Neurosurgery
- University College Hospital, Londres, Dr David Werring
- Mater University Hospital/University College Dublin (Dr Peter Kelly)
- McMaster University / Population Health Research Institute, Hamilton, Ontario (Dr. Ashkan Shoamanesh)
- Washington University School of Medicine, Saint Louis (Dr. Rajat Dhar)

Active grants

- JOAN MARTI FABREGAS. Red de Enfermedades Vasculares Cerebrales. INVICTUS PLUS. RD16/0019/0010. Instituto de Salud Carlos III. Duration 2017-2021. 125.020,00 €.
- RAQUEL DELGADO MEDEROS. Cerebral blood flow-guided early rehabilitation intervention after stroke: a pilot randomized trial. MARATO 20170930. Fundació La Marató de TV3. Duration 2018-2021. 118.500,00 €.
- JOAN MARTI FABREGAS. Malalties Vasculares Cerebrals. 2017 SGR 00665. Agència de Gestió d'Ajuts Universitaris i de Recerca. Duration 2017-2021. 0,00 €.
- DANIEL GUIASADO ALONSO. Evaluación multidisciplinar del pronóstico neurológico tras una muerte súbita cardiaca. CM18/00065. Instituto de Salud Carlos III. Duration 2019-2021. 53.732,00 €.
- JOAN MARTI FABREGAS. Circulación colateral en ictus isquémico agudo con oclusión de gran vaso: un estudio de los factores clínicos, radiológicos, plasmáticos y genéticos relacionados. PI19/00859. Instituto de Salud Carlos III. Duration 2020-2022. 122.000,00 €. JOAN MARTI FABREGAS. Circulación colateral en ictus isquémico agudo con oclusión de gran vaso: un estudio de los factores clínicos, radiológicos, plasmáticos y genéticos relacionados.. PI19/00859. Instituto de Salud Carlos III. Duration 2020-2022. 122.000,00 €.
- LUIS ANTONIO PRATS SANCHEZ. Proyecto MISTIC: papel del Microbioma inteStinal en la evolución neurológica de pacientes con hemorragia IntraCerebral espontánea. PI20/00925. Instituto de Salud Carlos III. Duration 2021-2023. 72.000,00 €.
- JOAN MARTI FABREGAS. Contractes per a la intensificació de l'activitat investigadora 2020. INT20/00011. Instituto de Salud Carlos III. Duration 2021-2022. 60.000,00 €.
- NURIA PUIG GRIFOL. Contractes Predoctorals PFIS 2020. FI20/00252. Instituto de Salud Carlos III. Duration 2021-2024. 82.400,00 €.
- CRISTINA GALLEGRO FABREGA. Contractes Sara Borrell 2020. CD20/00043. Instituto de Salud Carlos III. Duration 2021-2023. 80.598,00 €.

- JOAN MARTI FABREGAS. Ensayo clínico sobre optimización hemodinámica de la perfusión cerebral tras el tratamiento endovascular en pacientes con ictus isquémico (Estudio HOPE).. ICI20/00137. Instituto de Salud Carlos III. Duration 2021-2021. 329.945,00 €.

- POL CAMPS RENOM. Biomarcadors lipoproteics per determinar la inflamació de la placa carotídia en l'ictus isquèmic.. MARATO 20171610. Fundació La Marató de TV3. Duration 2021-2021. 41.012,55 €.

Note: Total amount granted to PI. It does not include indirect costs.

Other active grants

- Fundació Ictus, 2020-2022, 60.000€
- PI19/00421 POL CAMPS RENOM Modified Lipoprotein and Inflammatory Markers Associated with Carotid Plaque Vulnerability and Ischemic Stroke. Instituto de Salud Carlos III. 2020-2022. 130.680€

Scientific production

- Arranz MJ, Gallego C, Martin A, Soler J, Elices M, Dominguez E, Salazar J, Vega D, Briones L, Pascual JC. A genome-wide methylation study reveals X chromosome and childhood trauma methylation alterations associated with borderline personality disorder. *Translational Psychiatry*. 2021; 11(1):5. DOI:10.1038/s41398-020-01139-z. PMID:33414392. IF:6,222 (Q1/D2).

- Best JG, Ambler G, Wilson D, Lee KJ, Lim JS, Shiozawa M, Koga M, Li LX, Lovelock C, Chabriat H, Hennerici M, Wong YK, Mak HKF, Prats L, Martinez A, Inamura S, Yoshifuji K, Arsava EM, Horstmann S, Purrucker J, Lam BYK, Wong A, Kim YD, Song TJ, Lemmens R, Eppinger S, Gattringer T, Uysal E, Tanriverdi Z, Bornstein NM, Ben E, Hallevi H, et al. [Gomez B, Marti J]. Development of imaging-based risk scores for prediction of intracranial haemorrhage and ischaemic stroke in patients taking antithrombotic therapy after ischaemic stroke or transient ischaemic attack: a pooled analysis of individual patient data from cohort studies. *LANCET NEUROLOGY*. 2021; 20(4). PMID:33743239. IF:44,182 (Q1/D1).

- Bonaterra A, Fernandez S, Rivas A, Puig N, Benitez S, Pancorbo O, Rodriguez D, Pujadas F, Freijo MD, Tur S, Martinez M, Portela PC, Vera R, Lebrato L, Arenillas JF, Perez S, Montaner J, Sanchez JL, Hernandez M. Comparison of Plasma Lipoprotein Composition and Function in Cerebral Amyloid Angiopathy and Alzheimer's Disease. *Biomedicines*. 2021; 9(1):72. DOI:10.3390/biomedicines9010072. PMID:33445800. IF:6,081 (Q1/D2).

- Camps P, Jimenez E, Soler M, Puig N, Aguilera A, Marin R, Prats L, Delgado R, Martinez A, Guisado D, Guasch M, Marti J. Endothelial Progenitor Cells Count after Acute Ischemic Stroke Predicts Functional Outcome in Patients with Carotid Atherosclerosis. *Journal of Stroke & Cerebrovascular Diseases*. 2021; 30(12):106144. DOI:10.1016/j.

jstrokecerebrovasdis.2021.106144. PMID:34649037. IF:2,136 (Q4/D8).

- Canyelles M, Garcia A, Junza A, Yanes O, Puig N, Ordonez J, Sionis A, Sans J, Alquezar A, Santos D, Rotllan N, Julve J, Tondo M, Escola JC, Blanco F. The Capacity of APOB-Depleted Plasma in Inducing ATP-Binding Cassette A1/G1-Mediated Macrophage Cholesterol Efflux-But Not Gut Microbial-Derived Metabolites-Is Independently Associated with Mortality in Patients with ST-Segment Elevation Myocardial Infarction. *Biomedicines*. 2021; 9(10):1336. DOI:10.3390/biomedicines9101336. PMID:34680453. IF:6,081 (Q1/D2).

- Carcel J, Cullell N, Muino E, Gallego C, Lledos M, Ibanez L, Krupinski J, Montaner J, Cruchaga C, Lee JM, Gill D, Pare G, Mola M, Roquer J, Jimenez J, Marti J, Fernandez I. Causal Effect of MMP-1 (Matrix Metalloproteinase-1), MMP-8, and MMP-12 Levels on Ischemic Stroke A Mendelian Randomization Study. *STROKE*. 2021; 52(7). DOI:10.1161/STROKEAHA.120.033041. PMID:33902302. IF:7,914 (Q1/D1).

- Carrera C, Carcel J, Cullell N, Torres N, Muino E, Castillo J, Sobrino T, Campos F, Rodriguez E, Lucia L, Millan M, Munoz L, Lopez E, Bustamante A, Ribo M, Alvarez J, Jimenez J, Roquer J, Giralt E, Soriano C, Mola M, Vives C, Navarro RD, Tur S, Obach V, Arenillas JF, Segura T, Serrano G, Marti J, Delgado R, Freijo MM, Moniche F, et al. [Gallego C, Fernandez I]. Single nucleotide variations in ZBTB46 are associated with post-thrombotic parenchymal haematoma. *BRAIN*. 2021; 144. DOI:10.1093/brain/awab090. PMID:33723576. IF:13,501 (Q1/D1).

- Cole JW, Adigun T, Akinyemi R, Akpa OM, Bell S, Chen BW, Conde JJ, Dobao UL, Fernandez I, Fornage M, Gallego C, Jern C, Krawczak M, Lindgren A, Markus HS, Melander O, Owolabi M, Schlicht K, Soderholm M, Srinivasasainagendra V, Tarraga CS, Stenman M, Tiwari H, Corasaniti M, Fecteau N, Guizzardi B, Lopez H, Nguyen K, Gaynor B, O'Connor T, et al. The copy number variation and stroke (CaNVAS) risk and outcome study. *PLoS One*. 2021; 16(4):e0248791. DOI:10.1371/journal.pone.0248791. PMID:33872305. IF:3,240 (Q2/D4).

- Cullell N, Carcel J, Gallego C, Muino E, Lucia L, Lledos M, Amaut K, Krupinski J, Fernandez I. Sleep/wake cycle alterations as a cause of neurodegenerative diseases: a mendelian randomization study. *NEUROBIOLOGY OF AGING*. 2021; 106. DOI:10.1016/j.neurobiolaging.2021.05.008. PMID:34130902. IF:4,673 (Q2/D3).

- Genua I, Puig N, Minambres I, Benitez S, Gil P, Grau M, Rivas A, Balague C, Fernandez S, Garcia A, Perez A, Sanchez JL. Changes in the Composition and Function of Lipoproteins after Bariatric Surgery in Patients with Severe Obesity. *Journal of Clinical Medicine*. 2021; 10(8):1716. DOI:10.3390/jcm10081716. PMID:33923393. IF:4,241 (Q1/D3).

- Gomez A, Lazcano U, Vivanco RM, Prats L, Guisado D, Delgado R, Camps P, Domeno AM, Cuadrado E, Steinhauer EG, Jimenez J, Soriano C, Avellaneda C, Rodriguez A, Marti J, Ois A, Roquer J. Defining Minor Intracerebral Hemorrhage. *CEREBROVASCULAR*

DISEASES. 2021; 50(4). DOI:10.1159/000515169. PMID:33831860. IF:2,762 (Q3/D6).

- Gregori C, Mesquita RC, Favilla CG, Busch DR, Blanco I, Zirak P, Frisk LK, Avtzi S, Maruccia F, Giacalone G, Cotta G, Camps P, Mullen MT, Marti J, Prats L, Martinez A, Kasner SE, Greenberg JH, Zhou C, Edlow BL, Putt ME, Detre JA, Yodh AG, Durduran T, Delgado R. Blood flow response to orthostatic challenge identifies signatures of the failure of static cerebral autoregulation in patients with cerebrovascular disease. *BMC Neurology*. 2021; 21(1):154. DOI:10.1186/s12883-021-02179-8. PMID:33836684. IF:2,474 (Q3/D8).
- Guasch M, Prats L, Martinez A, Delgado R, Camps P, Guisado D, Abilleira S, Marti J. Patterns of Admission and Outcomes for Patients with Intracranial Hemorrhage in Catalonia, Spain. *World Neurosurgery*. 2021; 149. DOI:10.1016/j.wneu.2020.12.129. PMID:33412328. IF:2,104 (Q3/D6).
- Guisado-Alonso D, Edo MC, Estrada Alarcón PV, García-Sánchez SM, Font MÀ, Mena Romo L, Marrero-González P, Mengual JJ, Castrillo L, Montull C, Corominas H, Gómez-Choco M. Progression of Large Vessel Disease in Patients With Giant Cell Arteritis-Associated Ischemic Stroke: The Role of Vascular Imaging: A Case Series. *JCR-JOURNAL OF CLINICAL RHEUMATOLOGY*. 2021;27(8):e418-e424. DOI:10.1097/RHU.0000000000001498. PMID: 32732523. IF:3,517 (Q3/D6).
- Guisado D, Martinez A, Prats L, Delgado R, Camps P, Abilleira S, De la Ossa NP, Ramos A, Cardona P, Rodríguez A, Molina CA, Rudilosso S, Marti J. Reasons for Not Performing Mechanical Thrombectomy A Population-Based Study of Stroke Codes. *STROKE*. 2021; 52(9). DOI:10.1161/STROKEAHA.120.032648. PMID:34289711. IF:7,914 (Q1/D1).
- Heitsch L, Ibanez L, Carrera C, Binkley MM, Strbian D, Tatlisumak T, Bustamante A, Ribo M, Molina C, Davalos A, Lopez E, Munoz L, Soriano C, Giralte E, Obach V, Slowik A, Pera J, Lapicka K, Derbisz J, Sobrino T, Castillo J, Campos F, Rodriguez E, Arias S, Segura T, Serrano G, Vives C, Diaz R, Tur S, Jimenez C, Marti J, Delgado R, et al. [Cullell N, Muino E, Carcel J, Fernandez I]. Early Neurological Change After Ischemic Stroke Is Associated With 90-Day Outcome. *STROKE*. 2021; 52(1). DOI:10.1161/STROKEAHA.119.028687. PMID:33317415. IF:7,914 (Q1/D1).
- Kim NY, Hsu J, Talmasov D, Joutsa J, Soussand L, Wu O, Rost NS, Morenas E, Marti J, Pascual A, Corlett PR, Fox MD. Lesions causing hallucinations localize to one common brain network. *MOLECULAR PSYCHIATRY*. 2021; 26(4). DOI:10.1038/s41380-019-0565-3. PMID:31659272. IF:15,992 (Q1/D1).
- Lluçia L, Muino E, Gallego C, Carcel J, Martin J, Lledos M, Cullell N, Fernandez I. Pharmacogenetics studies in stroke patients treated with rtPA: a review of the most interesting findings. *PHARMACOGENOMICS*. 2021; 22(16). DOI:10.2217/pgs-2021-0100. PMID:34698533. IF:2,533 (Q3/D8).

- Marti J, Guisado D, Delgado R, Martinez A, Prats L, Guasch M, Cardona P, Nunez A, Requena M, Rubiera M, Olive M, Bustamante A, Gomis M, Amaro S, Llull L, Ustrell X, de Oliveira GC, Sero L, Gomez M, Mena L, Serena J, Viturro SB, Purroy F, Vicente M, Rodriguez A, Ois A, Catena E, Garcia MC, Barrachina O, Palomeras E, Krupinski J, et al. [Camps P]. Impact of COVID-19 Infection on the Outcome of Patients With Ischemic Stroke. *STROKE*. 2021; 52(12). DOI:10.1161/STROKEAHA.121.034883. PMID:34455823. IF:7,914 (Q1/D1).

- Martin L, Camps P, Lleixa C, Pascual E, Diaz J, Rojas R, De Luna N, Gallardo E, Cortes E, Munoz L, Alcolea D, Lleo A, Casasnovas C, Homedes C, Gutierrez G, Jimeno MC, Berciano J, Sedano MJ, Garcia T, Pardo J, Marquez C, Rojas I, Jerico I, Martinez E, de la Tassa GM, Dominguez C, Illa I, Querol L. Serum neurofilament light chain predicts long-term prognosis in Guillain-Barre syndrome patients. *JOURNAL OF NEUROLOGY NEUROSURGERY AND PSYCHIATRY*. 2021; 92(1). DOI:10.1136/jnnp-2020-323899. PMID:33154183. IF:10,154 (Q1/D1).

- McCabe JJ, Camps P, Giannotti N, McNulty JP, Coveney S, Murphy S, Barry M, Harbison J, Cronin S, Williams D, Horgan G, Dolan E, Cassidy T, McDonnell C, Kavanagh E, Foley S, Collins S, O'Connell M, Fernandez A, Delgado R, Marnane M, Marti J, Kelly PJ. Carotid Plaque Inflammation Imaged by PET and Prediction of Recurrent Stroke at 5 Years. *NEUROLOGY*. 2021; 97(23). DOI:10.1212/WNL.0000000000012909. PMID:34610991. IF:9,910 (Q1/D1).

- Millán M, Ramos A, Dorado L, Bustamante A, Hernández M, Rodríguez L, Gomis M, Remollo S, Castaño C, Werner M, Wenger D, Rubio S, Domínguez M, Terceño M, Paipa AJ, Rodríguez A, Boned S, Camps P, Cánovas D, Giralte E, López E, Dávalos A, Ros J, Pérez de la Ossa N. Predictors of Functional Outcome After Thrombectomy in Patients With Prestroke Disability in Clinical Practice. *STROKE*. 2022; 53(3). DOI:10.1161/STROKEAHA.121.034960. PMID:34702065. IF:7,914 (Q1/D1).

- Muino E, Carcel J, Carrera C, Lluçia L, Gallego C, Cullell N, Lledos M, Castillo J, Sobrino T, Campos F, Rodriguez E, Millan M, Munoz L, Bustamante A, Lopez E, Ribo M, Alvarez J, Jimenez J, Roquer J, Giralte E, Soriano C, Vives C, Navarro RD, Tur S, Obach V, Arenillas JF, Segura T, Serrano G, Marti J, Delgado R, Camps P, Prats L, Guisado D, et al., Int Stroke Genetic C, Spanish Stroke Genetic C [Guasch M, Marin R, Martinez A, Fernandez I]. RP11-362K2.2:RP11-767I20.1 Genetic Variation Is Associated with Post-Reperfusion Therapy Parenchymal Hematoma. A GWAS Meta-Analysis. *Journal of Clinical Medicine*. 2021; 10(14):3137. DOI:10.3390/jcm10143137. PMID:34300314. IF:4,241 (Q1/D3).

- Muino E, Maisterra O, Jimenez J, Cullell N, Carrera C, Torres NP, Carcel J, Gallego C, Lledos M, Gonzalez J, Olmos F, Espejo E, March A, Pujol R, Rodriguez A, Romeral G, Krupinski J, Marti J, Montaner J, Roquer J, Fernandez I. Genome-wide transcriptome study in skin biopsies reveals an association of E2F4 with cadasil and cognitive impairment. *Scientific Reports*. 2021; 11(1):6846. DOI:10.1038/s41598-021-86349-1. PMID:33767277. IF:4,379 (Q1/D3).

- Nogueira RG, Abdalkader M, Qureshi MM, Frankel MR, Mansour OY, Yamagami H, Qiu Z, Farhoudi M, Siegler JE, Yaghi S, Raz E, Sakai N, Ohara N, Piotin M, Mechtouff L, Eker O, Chalumeau V, Kleinig TJ, Pop R, Liu J, Winters HS, Shang X, Vasquez AR, Blasco J, Arenillas JF, Martinez-Galdamez M, Brehm A, Psychogios MN, Lylyk P, et al. [Ramos-Pachón A]. Global impact of COVID-19 on stroke care. *International Journal of Stroke*. 2021;16(5):573-584. DOI:10.1177/1747493021991652. PMID: 33459583. IF:5,266 (Q1/D2).
- Pérez C, López A, Gómez C, Aguirre C, de Felipe A, de la Riva P, Calleja S, Arjona A, Serrano M, Navarro MP, Delgado R, Bashir S, Llull L, Egido J, García S, Díez N, Benavente L, de la Torre JD, Tejada H, Vesperinas A, Sánchez L, Trillo S. Management of cerebral venous thrombosis in Spain: MOTIVATE descriptive study. *NEUROLOGIA*. 2021. DOI:10.1016/j.nrl.2021.05.016. IF:3,109 (Q3/D6).
- Ramos-Araque ME, Siegler JE, Ribo M, Requena M, López C, de Lera M, Arenillas JF, Pérez IH, Gómez-Vicente B, Talavera B, Portela PC, Guillen AN, Urta X, Llull L, Renú A, Nguyen TN, Jillella D, Nahab F, Nogueira R, Haussen D, Then R, Thon JM, Esparragoza LR, Hernández-Pérez M, Bustamante A, Mansour OY, Megahed M, Hassan T, Liebeskind DS, et al.; SVIN Multinational Registry and Task Force [Ramos A]. Stroke etiologies in patients with COVID-19: the SVIN COVID-19 multinational registry. *BMC Neurology*. 2021;21(1):43. DOI:10.1186/s12883-021-02075-1. PMID: 33514335. IF:2,474 (Q3/D8).
- Ramos-Pachón A, López-Cancio E, Bustamante A, Pérez de la Ossa N, Millán M, Hernández-Pérez M, Garcia-Berrococo T, Cardona P, Rubiera M, Serena J, Ustrell X, Garcés M, Terceño M, Dávalos A, Montaner J. D-Dimer as Predictor of Large Vessel Occlusion in Acute Ischemic Stroke. *Stroke*. 2021;52(3):852-858. DOI:10.1161/STROKEAHA.120.031657. PMID: 33563016. IF:7,914 (Q1/D1).
- Ramos A, Garcia A, Millan M, Ribo M, Amaro S, Cardona P, Martí J, Roquer J, Silva Y, Ustrell X, Purroy F, Gomez M, Zaragoza J, Canovas D, Krupinski J, Sala NM, Palomeras E, Cocho D, Redondo L, Repullo C, Sanjurjo E, Carrion D, Lopez M, Almendros MC, Barcelo M, Monedero J, Catena E, Rybye M, Diaz G, Jimenez X, Sola S, Hidalgo V, Pueyo MJ, de la Ossa NP, Urta X. Bottlenecks in the Acute Stroke Care System during the COVID-19 Pandemic in Catalonia. *CEREBROVASCULAR DISEASES*. 2021; 50(5). DOI:10.1159/000516309. PMID:34023822. IF:2,762 (Q3/D6).
- Renú A, Blasco J, Millán M, Martí-Fàbregas J, Cardona P, Oleaga L, Macho J, Molina C, Roquer J, Amaro S, Dávalos A, Zarco F, Laredo C, Tomasello A, Guimaraens L, Barranco R, Castaño C, Vivas E, Ramos A, López-Rueda A, Urta X, Muchada M, Cuadrado-Godía E, Camps-Renom P, Román LS, Ríos J, Leira EC, Jovin T, Torres F, Chamorro Á; CHOICE Investigators. The Chemical Optimization of Cerebral Embolectomy trial: Study protocol. *International Journal of Stroke*. 2021;16(1):110-116. DOI:10.1177/1747493019895656. PMID: 31852410. IF:5,266 (Q1/D2).
- Rudilosso S, Laredo C, Amaro S, Renú A, Llull L, Obach V, Moreno J, Ribó M, Abilleira S, Cardona P, Martí-Fàbregas J, Pérez de la Ossa N, Ramos A, Roquer J, Serena J, Purroy F, Urta X, Chamorro Á. Clinical improvement within 24 hours from mechanical thrombectomy as a predictor of long-term functional outcome in a multicenter population-based cohort of patients with ischemic stroke. *Journal of NeuroInterventional Surgery*. 2021;13(2):119-123. DOI:10.1136/neurintsurg-2020-015934. PMID: 32461229. IF:5,836 (Q1/D1).
- Rudilosso S, Rios J, Rodriguez A, Gomis M, Vera V, Gomez M, Renu A, Matos N, Llull L, Purroy F, Amaro S, Terceno M, Obach V, Serena J, Martí J, Cardona P, Molina C, Rodriguez A, Canovas D, Krupinski J, Ustrell X, Torres F, San Roman L, Salvat M, Jimenez FX, Palomeras E, Catena E, Colom C, Cocho D, Baiges J, Aragones JM, Diaz G, Costa X, Almendros MC, et al. Effectiveness of Thrombectomy in Stroke According to Baseline Prognostic Factors: Inverse Probability of Treatment Weighting Analysis of a Population-Based Registry. *Journal of Stroke*. 2021; 23(3). DOI:10.5853/jos.2021.00962. PMID:34649384. IF:6,967 (Q1/D2).
- Sánchez van Kammen M, Aguiar de Sousa D, Poli S, Cordonnier C, Heldner MR, van de Munckhof A, Krzywicka K, van Haaps T, Ciccone A, Middeldorp S, Levi MM, Kremer Hovinga JA, Silvis S, Hiltunen S, Mansour M, Arauz A, Barboza MA, Field TS, Tsvigoulis G, Nagel S, Lindgren E, Tatlisumak T, Jood K, Putaala J, Ferro JM, Arnold M, et al. [Guisado-Alonso D]. Characteristics and Outcomes of Patients With Cerebral Venous Sinus Thrombosis in SARS-CoV-2 Vaccine-Induced Immune Thrombotic Thrombocytopenia. *JAMA Neurology*. 2021;78(11):1314-1323. DOI:10.1001/jamaneurol.2021.3619. PMID: 34581763. IF:18,302 (Q1/D1).
- Shoamanesh A, Hart RG, Connolly SJ, Kasner SE, Smith EE, Martí-Fàbregas J, Liu YY, Uchiyama S, Mikulik R, Veltkamp R, O'Donnell MJ, Ntaios G, Muir KW, Field TS, Santo GC, Olavarria V, Mundl H, Lutsep H, Berkowitz SD, Sharma M. Microbleeds and the Effect of Anticoagulation in Patients With Embolic Stroke of Undetermined Source: An Exploratory Analysis of the NAVIGATE ESUS Randomized Clinical Trial. *JAMA Neurology*. 2021;78(1):11-20. DOI:10.1001/jamaneurol.2020.3836. Erratum in: *JAMA Neurology*. 2021;78(1):120. PMID: 33074284. IF: 18,302 (Q1/D1).
- Terceño M, Silva Y, Bashir S, Vera-Monge VA, Cardona P, Molina C, Chamorro Á, de la Ossa NP, Hernández-Pérez M, Werner M, Camps-Renom P, Rodríguez-Campello A, Cánovas D, Purroy F, Serena J; Catalan Stroke Code and Reperfusion Consortium (Cat-SCR). Impact of general anesthesia on posterior circulation large vessel occlusions after endovascular thrombectomy. *International Journal of Stroke*. 2021;16(7):792-797. DOI:10.1177/1747493020976247. PMID: 33573525. IF:5,266 (Q1/D2).
- Wang YJ, Pan YS, Li H, Amarenco P, Denison H, Evans SR, Himmelmann A, James S, Birve F, Ladenvall P, Molina CA, Johnston SC, Martí J, Pham DD. Efficacy and Safety of Ticagrelor and Aspirin in Patients With Moderate Ischemic Stroke An Exploratory Analysis of the THALES Randomized

Clinical Trial. *JAMA Neurology*. 2021; 78(9). DOI:10.1001/jamaneurol.2021.2440. PMID:34244703. IF:18,302 (Q1/D1).

Other scientific production

- Fischer JB, Frisk LK, Scholkmann F, Delgado R, Mayos M, Durduran T. Cerebral and systemic physiological effects of wearing face masks in adults. *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*. 2021; 118(41):e2109111118. DOI:10.1073/pnas.2109111118. PMID:34607955. IF:11,205 (Q1/D2).

- Martínez JP, Guerrero R, Medina V, Branera J, Camps P. Dual-Stentriever technique for retrieval of an unusual middle cerebral artery embolus. *NEUROLOGIA*. 2021; 37(5). DOI:10.1016/j.nrl.2021.08.006. PMID:34509320. IF:3,109 (Q3/D6).

Communication and dissemination activities

- Preceptorship about the Fabry disease. Manifestaciones neurológicas de la enfermedad de Fabry. Barcelona, 22 April 2021. (Joan Martí)

- Meeting NEUROLOGY UP TO DATE 2021. "Enfermedad cerebrovascular", 13 May 2021. (Joan Martí)

- 12È CURS D'ATENCIÓ D'INFERMERIA A LA PERSONA AFECTADA D'ICTUS. Course "Atenció al pacient amb hemorràgia cerebral". online, 18 May 2021.(Joan Martí)

- LXXIII Reunión Anual de la Sociedad Española de Neurología 2021 (Reunión del Grupo de enfermedades cerebrovasculares de la Sociedad Española de Neurología). Talk: "Actualización de la hemorragia cerebral des de una perspectiva clínica", Nov 2021. (Joan Martí)

- XXVII Curso de enfermedades cerebrovasculares para residentes de Neurología. Title "Hemorragia intracraneal", 6 Oct 2021. (Joan Martí)

- Course "Actualización en el diagnóstico y tratamiento de la hemorragia cerebral". Title: "Avances terapéuticos en la hemorragia cerebral asociada a antiagregantes y anticoagulantes. Cuándo reinstaurar éstos fármacos", Madrid, 19 Oct 2021. (Joan Martí)

- Course "Cures infermeres a l'atenció del pacient amb ICTUS". Titles: "Introducció a l'anatomia i fisiologia de la circulació cerebral", "Definició i subtipus d'ICTUS. Principals Síndromes topogràfiques. Casos", and "Valoració neurològica, utilització i interpretació d'escales (NIHSS, Rankin, Canadencia i Glasgow)", 27-28 Oct 2021. (Joan Martí)

- 16th UK Stroke Forum Conference. Invited speaker. Title: "Microbleeds, do they matter?", Dec 2021. (Joan Martí)

- Invited speaker at Jornadas Científicas Ictus at Hospital Universitario Central de Asturias. Title: "La hemorragia cerebral, mucho por hacer". Oviedo, 30th Novembre 2021. (Joan Martí)

- XXVII Curso de enfermedades cerebrovasculares para residentes de Neurología. Title: "Enfermedad carotidea y del arco aórtico asociada a ictus isquémico", 5th October 2021 (Pol Camps)



Neuromuscular Diseases

Coordinator

Olivé Plana, Montserrat FGS

Members

Alonso Pérez, Jorge	IR	Lleixa Rodríguez, Maria Cinta	IR
Álvarez Velasco, Rodrigo	IR	Martín Aguilar, Lorena	IR
Belmonte, Izaskun	FGS	Montejo Collet, Borja	CIBERER
Blanco Soto, Rosa María	IR	Pedrosa Hernandez, Irene	FGS
Cabanillas Ruiz, Silvia	IR	Pla Juncà, Francesc	IR
Carrasco Rozas, Ana	IR	Querol Gutierrez, Luis Antonio	FGS
Cortes Vicente, Elena	FGS	Reyes Leiva, David	IR
De Luna Salva, Noemi	CIBERER	Rojas Garcia, Ricardo	FGS
Díaz Manera, Jorge Alberto	FGS	Suarez Calvet, Xavier	IR
Gallardo Vigo, Eduard	IR	Tejada Illa, Clara	IR
Illa Sendra, Maria Isabel	FGS	Turón Sans, Joana	FGS
Llauger Rossello, Jaume	FGS	Vidal Fernandez, Maria Nuria	IR

Main lines of research

- Accreditation after audit as CSUR-ENM center (2016), ERN-NMD center (2016), XUEC center (2019) for rare neuromuscular diseases. ISO certification for the study of specific autoantibodies in ENM. (All reviewed annually).

- **Autoimmune neuromuscular diseases (myasthenia and neuropathies)**

- Characterization of new target antigens in Myasthenia Gravis (MG), and immune neuropathies (CIDP, GBS, MMN). Their use as diagnostic and therapeutic biomarkers.

- Complement fixation cell models in myasthenia.
- Mouse models of myasthenia.
- Nerve damage biomarkers.
- Pathogenesis of newly recognized antigens both in MG and in CIDP.
- Analysis of the innate immunity in inflammatory myopathies.
- Analysis of the impact of new immunomodulating therapies on IgG4 mediated Neuromuscular Diseases (NMD).
- Functional aspects of immune system cells (response to ligands, production of antibodies, etc).

- Phase I to III clinical trials in autoimmune neuromuscular diseases.
- Collaborators of the IGOS data base for Guillain Barre syndrome.
- Coordinators of the INCBASE (international database for CIDP).
- NMD-ES Spanish registry for neuromuscular diseases.
- **Muscular dystrophy, dysferlinopathy and inflammatory myopathies**
- Characterization of rare genetic myopathies.
- Muscle MRI analysis as a biomarker of different muscular dystrophies.
- Role of PDGF in muscular dystrophies fibrosis. Study of nintedanib as an antifibrotic drug in muscular dystrophies.
- Role of fibroadipogenic progenitors in muscular dystrophies.
- Natural history of Dysferlinopathies. The international COS-study Jain Foundation.
- Study of proteasome and autophagy inhibitors in dysferlin myopathy. Development of cell models of NMD diseases to study pathogenic mechanisms and drug screening.
- Pathogenic mechanisms in inflammatory myopathies (DM, necrotizing myopathies).
- Clinical trials in muscular dystrophies and metabolic muscle diseases.
- **Amyotrophic lateral sclerosis**
- Gene profile of ALS patients in Spain.
- Biomarkers profile in different phenotypes of ALS.
- Cell models of ALS.

Scientific Challenges

- Advance in the knowledge of the immunological mechanisms involved in the pathogenesis of autoimmune neuromuscular diseases (MG, CIDP, MMN).
- Evaluate the use of NfL and myelin proteins as biomarkers of nerve damage in inflammatory neuropathies
- To develop 2D and 3D cell based assays to understand the effect of autoantibodies in Myasthenia gravis.
- Advance in the knowledge of the pathogenetic mechanisms of inflammatory myopathies (DM, necrotizing myopathies).
- Search for new antigens and develop diagnostic tests with new biomarkers in immune-mediated neuropathies and Myasthenia Gravis.
- Search for new genes in rare genetic myopathies
- Implement new diagnostic and disease follow-up methods for muscular dystrophies resulting from dysferlinopathy and other myopathies research (biomarkers (miRNA, secretome), MRI, etc).
- Advance in the knowledge of the pathogenetic mechanisms involved in dysferlin deficiency and other muscular dystrophies.

- Search for new genes and biomarkers in the different phenotypes of ALS.
- Advance in the knowledge of the pathogenetic mechanisms involved in ALS.
- Use of the NMD.ES registry to perform research in different NMD.

Collaborations

Collaborations with other IIB Sant Pau research groups

- Genetics (Pia Gallano, Lida González)
- Immunology (Silvia Vidal, Laura Martínez, Anaïs Mariscal)
- Dementia (Oriol Dols, Ignacio Illán)

External collaborations

- Jyoti Jaiswal. Children's National Hospital Washington DC. USA
- Javier Ramon. IBEC. Barcelona. Spain
- Antonio del Río. IBEC. Barcelona, Spain
- Homa Tajsharghi. University of Skövde, Sweden
- Jerome Devaux. Institut des Neurosciences de Montpellier, France
- Nigel Laing, Gina Ravencroft. Harry Perkins Institute of Medical Research. Perth. Australia
- Ira Devenson. Garvan Institute of Medical Research. Darlinghurst. Australia

Active grants

- EDUARD GALLARDO VIGO. Recerca en Malalties Neuromusculars.. 2017 SGR 01727. Agència de Gestió d'Ajuts Universitaris i de Recerca. Duration 2017-2021. 0,00 €.
- JORGE ALBERTO DIAZ MANERA. Avances en técnicas de imagen y terapia en distrofias musculares: evaluación y tratamiento de la fibrosis. PI18/01525. Instituto de Salud Carlos III. Duration 2019-2021. 107.000,00 €.
- XAVIER SUAREZ CALVET. Fisiopatogenia y nuevas estrategias terapéuticas en las distrofias musculares. CD18/00195. Instituto de Salud Carlos III. Duration 2019-2022. 80.598,00 €.
- LORENA MARTIN AGUILAR. Contractes Rio Hortega 2019. CM19/00042. Instituto de Salud Carlos III. Duration 2020-2021. 53.732,00 €.
- LUIS ANTONIO QUEROL GUTIERREZ. Biomarcadores diagnósticos y de daño tisular en neuropatías autoinmunes. PI19/01407. Instituto de Salud Carlos III. Duration 2020-2022. 102.000,00 €.
- RICARDO ROJAS GARCIA. Validación de biomarcadores candidatos para el diagnóstico y la progresión de la Esclerosis Lateral Amiotrófica y estudio de las vías fisiopatogénicas

implicadas.. PI19/01543. Instituto de Salud Carlos III. Duration 2020-2022. 102.000,00 €.

- MARIA ISABEL ILLA SENDRA. Estudio de la heterogeneidad de la Miastenia Gravis: Investigación clínica y preclínica mediante la implementación de modelos celulares 2D y 3D y utilización de biosensores. PI19/01774. Instituto de Salud Carlos III. Duration 2020-2022. 80.000,00 €.

- JORGE ALONSO PEREZ. Contractes Rio Hortega 2019.. CM19/00178. Instituto de Salud Carlos III. Duration 2020-2022. 53.732,00 €.

- RODRIGO ALVAREZ VELASCO. Desenvolupament d'un model tridimensional de teixit muscular humà in vitro per a la seva aplicació diagnòstica i terapèutica en la miastenia gravis.. SLT008/18/00207. Departament de Salut. Duration 2019-2022. 93.941,52 €.

- ELENA CORTES VICENTE. Contractes Juan Rodés 2019.. JR19/00037. Instituto de Salud Carlos III. Duration 2020-2024. 180.000,00 €.

- EDUARD GALLARDO VIGO. Aproximaciones terapéuticas en distrofias musculares mediante modelos celulares y animales. GEMIO 2019. Fundació Isabel Gemio. Duration 2019-2022. 136.363,65 €.

- LUIS ANTONIO QUEROL GUTIERREZ. Contractes per a la intensificació de l'activitat investigadora 2020. INT20/00080. Instituto de Salud Carlos III. Duration 2021-2022. 60.000,00 €.

- LORENA MARTIN AGUILAR. M-AES 2020. MV20/00024. Instituto de Salud Carlos III. Duration 2021-2021. 7.015,00 €.

- XAVIER SUAREZ CALVET. New therapies targeting fibroadipogenic cell subpopulations implicated in muscle degeneration. MARATO 202034-10. Fundació La Marató de TV3. Duration 2021-2022. 110.528,00 €.

- LUIS ANTONIO QUEROL GUTIERREZ. Precision medicine in chronic inflammatory neuropathy assessment. GBS/CIDP 2020. GBS CIDP FOUNDATION INTERNATIONAL. Duration 2020-2021. 50.245,70 €.

Note: Total amount granted to PI. It does not include indirect costs.

Other active grants

- EDUARD GALLARDO VIGO Validació de l'eficàcia dels PS-Liposomes-haAChR-EP per el tractament de la Miastènia Gravis: estudi de generació de tolerància antígen específica en un model murí de Miastènia Gravis. Ahead Therapeutics. Duration 2021-2022. 50.000 euros

Awards

- Dr Montse Olivé. Premi Eduard Bertran Rubio a la Trajectòria Professional. Societat Catalana de Neurologia, May 2021.

Books or chapters with ISBN

- Analisis de la actividad muscular espontanea R. Rojas Garcia, J. Turon Sans, I. Illa Sendra En Manual de electromiografía clínica, Ed. E. Gutierrez-Rivas, M. D. Jimenez, J. Pardo, M. Romero, Ediciones Ergon S. A., Madrid 2021 (3ª edición) págs 83-96. ISBN: 978-84-17844-77-6

Doctoral theses

- Elba Pascual Goñi, Autoanticuerpos en las neuropatías inmunomediadas y correlaciones clínico patológicas, Universitat Autònoma de Barcelona, Luis Querol, 26/05/2021

- Lorena Martín Aguilar, Estudio de biomarcadores con utilidad clínica en neuropatías autoinmunes, Universitat Autònoma de Barcelona, Luis Querol, 16/06/2021

Scientific production

- Allen JA, Eftimov F, Querol L. Outcome measures and biomarkers in chronic inflammatory demyelinating polyradiculoneuropathy: from research to clinical practice. *Expert Review of Neurotherapeutics*. 2021; 21(7). DOI:10.1080/14737175.2021.1944104. PMID:34130574. IF:4,618 (Q2/D3).

- Alonso A, Fernandez E, Benito DND, Ortez C, Garcia C, Montiel E, Belmonte I, Pedrosa I, Segovia S, Pinol P, Carrasco A, Suarez X, Jimenez C, Nascimento A, Llauger J, Nunez C, Montesinos P, Alonso J, Gallardo E, Illa I, Diaz J. Platelet Derived Growth Factor-AA Correlates With Muscle Function Tests and Quantitative Muscle Magnetic Resonance in Dystrophinopathies. *Frontiers in Neurology*. 2021; 12:659922. DOI:10.3389/fneur.2021.659922. PMID:34177765. IF:4,003 (Q2/D4).

- Alonso A, Nunez C, Montesinos P, Alonso J, Garcia C, Montiel E, Belmonte I, Pedrosa I, Segovia S, Llauger J, Diaz J. Different Approaches to Analyze Muscle Fat Replacement With Dixon MRI in Pompe Disease. *Frontiers in Neurology*. 2021; 12:675781. DOI:10.3389/fneur.2021.675781. PMID:34305788. IF:4,003 (Q2/D4).

- Alonso J, Casaus A, Gimenez A, Duff J, Rojas R, Illa I, Straub V, Topf A, Diaz J. Late onset Sandhoff disease presenting with lower motor neuron disease and stuttering. *NEUROMUSCULAR DISORDERS*. 2021; 31(8). DOI:10.1016/j.nmd.2021.04.011. PMID:34210542. IF:4,296 (Q2/D4).

- Alvarez R, Gutierrez G, Trujillo JC, Martinez E, Segovia S, Arribas M, Fernandez G, Paradas C, Velez B, Casanovas C, Nedkova V, Guerrero A, Ramos A, Martinez A, Pardo J, Sevilla T, Gomez MT, de Munain AL, Jerico I, Pelayo AL, Martin MA,

Morgado Y, Mendoza MD, Perez H, Rojas R, Turon J, Querol L, Gallardo E, Illa I, Cortes E. Clinical characteristics and outcomes of thymoma-associated myasthenia gravis. *EUROPEAN JOURNAL OF NEUROLOGY*. 2021; 28(6). DOI:10.1111/ene.14820. PMID:33721382. IF:6,089 (Q1/D2).

- Borrego S, Turon J, Ximelis T, Aldecoa I, Molina L, Povedano M, Rubio MA, Gamez J, Cano A, Pare M, L, Sotoca J, Clarimon J, Balasa M, Antonell A, Llado A, Sanchez R, Rojas R, Gelpi E. Cognitive decline in amyotrophic lateral sclerosis: Neuropathological substrate and genetic determinants. *BRAIN PATHOLOGY*. 2021; 31(3):e12942. DOI:10.1111/bpa.12942. PMID:33576076. IF:6,508 (Q1/D2).

- Conde E, Reyes D, Pintor L, Donaire A, Manzanares I, Rumia J, Roldan P, Boget T, Bargallo N, Gil FJ, Khawaja M, Setoain X, Centeno M, Carreno M. Psychotic symptoms in drug resistant epilepsy patients after cortical stimulation. *EPILEPSY RESEARCH*. 2021; 173:106630. DOI:10.1016/j.eplepsyres.2021.106630. PMID:33865048. IF:3,045 (Q3/D6).

- Diaz J, Kishnani PS, Kushlaf H, Ladha S, Mozaffar T, Straub V, Toscano A, Van der Ploeg AT, Berger KI, Clemens PR, Chien YH, Day JW, Illarioshkin S, Roberts M, Attarian S, Borges JL, Bouhour F, Choi YC, Erdem S, Goker O, Kostera A, Haack KA, Hug C, Huynh O, Johnson J, Thibault N, Zhou TY, Dimachkie MM, Schoser B. Safety and efficacy of avalglucosidase alfa versus alglucosidase alfa in patients with late-onset Pompe disease (COMET): a phase 3, randomised, multicentre trial. *LANCET NEUROLOGY*. 2021; 20(12). PMID:34800399. IF:44,182 (Q1/D1).

- Diaz J, Walter G, Straub V. Skeletal muscle magnetic resonance imaging in Pompe disease. *MUSCLE & NERVE*. 2021; 63(5). DOI:10.1002/mus.27099. PMID:33155691. IF:3,217 (Q3/D6).

- Diaz J. Fifteen years of enzyme therapy in Pompe disease. *REVISTA DE NEUROLOGIA*. 2021; 73(9). DOI:10.33588/rn.7309.2021382. PMID:34676531. IF:0,870 (Q4/D10).

- Dominguez C, Madruga M, Hirano M, Marti I, Martin MA, Munell F, Nascimento A, Olive M, Quan J, Sardina MD, Marti R, Paradas C. Collaborative model for diagnosis and treatment of very rare diseases: experience in Spain with thymidine kinase 2 deficiency. *Orphanet Journal of Rare Diseases*. 2021; 16(1):407. DOI:10.1186/s13023-021-02030-w. PMID:34600563. IF:4,123 (Q2/D4).

- Fionda L, Turon J, Prior PF, Noguera SB, Cortes E, Lopez MA, Gallardo E, Rojas R. A new de novo SYT2 mutation presenting as distal weakness. Neuropathy or neuromuscular junction dysfunction?. *JOURNAL OF THE PERIPHERAL NERVOUS SYSTEM*. 2021; 26(1). DOI:10.1111/jns.12425. PMID:33320396. IF:3,494 (Q2/D5).

- Frasquet M, Rojas R, Argente H, Vazquez JF, Muelas N, Vilchez JJ, Sivera R, Millet E, Barreiro M, Diaz J, Turon J, Cortes E, Querol L, Ramirez L, Martinez D, Sanchez A, Espinos C, Sevilla T, Lupo V. Distal hereditary motor neuropathies: Mutation spectrum and genotype-phenotype correlation. *EUROPEAN*

JOURNAL OF NEUROLOGY. 2021; 28(4). DOI:10.1111/ene.14700. PMID:33369814. IF:6,089 (Q1/D2).

- Gelber PE, Ramirez E, Grau A, Gonzalez A, Llauger J, Farinas O. A new computed tomography scoring system to assess osteochondral allograft transplantation for the knee: inter-observer and intra-observer agreement. *INTERNATIONAL ORTHOPAEDICS*. 2021; 45(5). DOI:10.1007/s00264-020-04927-w. PMID:33416905. IF:3,075 (Q2/D3).

- Gutschmidt K, Musumeci O, Diaz J, Chien YH, Knop KC, Wenninger S, Montagnese F, Pugliese A, Tavilla G, Alonso J, Hwu PWL, Toscano A, Schoser B. STIG study: real-world data of long-term outcomes of adults with Pompe disease under enzyme replacement therapy with alglucosidase alfa. *JOURNAL OF NEUROLOGY*. 2021; 268(7). DOI:10.1007/s00415-021-10409-9. PMID:33543425. IF:4,849 (Q1/D3).

- Jacobs MB, James MK, Lowes LP, Alfano LN, Eagle M, Lofra RM, Moore U, Feng J, Rufibach LE, Rose K, Duong T, Bello L, Pedrosa I, Holsten S, Sakamoto C, Canal A, Praxedes N, Thiele S, Siener C, Vandeveld B, DeWolf B, Maron E, Guglieri M, Hogrel JY, Blamire AM, Carlier PG, Spuler S, Day JW, Jones KJ, Bharucha DX, Salort E, Pestronk A, Walter MC, Et al. [Diaz J]. Assessing Dysferlinopathy Patients Over Three Years With a New Motor Scale. *ANNALS OF NEUROLOGY*. 2021; 89(5). DOI:10.1002/ana.26044. PMID:33576057. IF:10,422 (Q1/D1).

- Lleixa C, Martin L, Pascual E, Franco T, Caballero M, De Luna N, Gallardo E, Suarez X, Martinez L, Diaz J, Rojas R, Cortes E, Turon J, Casasnovas C, Homedes C, Gutierrez G, Jimeno MC, Berciano J, Sedano MJ, Garcia T, Pardo J, Marquez C, Rojas I, Jerico I, Martinez E, de la Tassa GM, Dominguez C, Juarez C, Illa I, Querol L. Autoantibody screening in Guillain-Barre syndrome. *Journal of Neuroinflammation*. 2021; 18(1):251. DOI:10.1186/s12974-021-02301-0. PMID:34719386. IF:8,322 (Q1/D1).

- Luijten LWG, Leonhard SE, van der Eijk AA, Doets AY, Appeltshausen L, Arends S, Attarian S, Benedetti L, Briani C, Casasnovas C, Castellani F, Dardiotis E, Echaniz A, Garssen MPJ, Harbo T, Huizinga R, Humm AM, Jellema K, van der Kooi AJ, Kuitwaard K, Kuntzer T, Kusunoki S, Lascano AM, Martinez E, Rinaldi S, Samijn J, Scheidegger O, Tsouni P, Vicino A, Visser LH, Walgaard C, Wang YZ, Wirtz PW, Ripellino P, Jacobs BC, Martín L, Živkovic SA. Guillain-Barre syndrome after SARS-CoV-2 infection in an international prospective cohort study. *BRAIN*. 2021; 144(11). DOI:10.1093/brain/awab279. PMID:34553216. IF:13,501 (Q1/D1).

- Mantegazza R, Wolfe GI, Muppidi S, Wiendl H, Fujita KP, O'Brien FL, Booth H, Howard JF, Illa I, Cortés E, Díaz J, Querol LA, Rojas R, Vidal N, RSG. Post-intervention Status in Patients With Refractory Myasthenia Gravis Treated With Eculizumab During REGAIN and Its Open-Label Extension. *NEUROLOGY*. 2021; 96(4). DOI:10.1212/WNL.0000000000011207. PMID:33229455. IF:9,910 (Q1/D1).

- Martel L, Alonso A, Bascunana H, Diaz J, Llauger J, Nunez C, Montesinos P, Webb SM, Valassi E. Prevalence of sarcopenia

after remission of hypercortisolism and its impact on HRQoL. *CLINICAL ENDOCRINOLOGY*. 2021; 95(5). DOI:10.1111/cen.14568. PMID:34323296. IF:3,478 (Q3/D7).

- Martel L, Alonso J, Bascunana H, Diaz J, Llauger J, Nunez C, Montesinos P, Webb SM, Valassi E. Intramuscular fatty infiltration and physical function in controlled acromegaly. *EUROPEAN JOURNAL OF ENDOCRINOLOGY*. 2021; 185(1). DOI:10.1530/EJE-21-0209. PMID:33950861. IF:6,664 (Q1/D2).
- Martin L, Camps P, Lleixa C, Pascual E, Diaz J, Rojas R, De Luna N, Gallardo E, Cortes E, Munoz L, Alcolea D, Lleo A, Casasnovas C, Homedes C, Gutierrez G, Jimeno MC, Berciano J, Sedano MJ, Garcia T, Pardo J, Marquez C, Rojas I, Jerico I, Martinez E, de la Tassa GM, Dominguez C, Illa I, Querol L. Serum neurofilament light chain predicts long-term prognosis in Guillain-Barre syndrome patients. *JOURNAL OF NEUROLOGY NEUROSURGERY AND PSYCHIATRY*. 2021; 92(1). DOI:10.1136/jnnp-2020-323899. PMID:33154183. IF:10,154 (Q1/D1).
- Meca JE, Maurino J, Perez F, Forero L, Sepulveda M, Calles C, Martinez ML, Gonzalez I, Boyero S, Romero L, Sempere AP, Meca V, Querol L, Costa L, Prefasi D, Gomez R, Ballesteros J. Quantifying the patient's perspective in neuromyelitis optica spectrum disorder: Psychometric properties of the SymptoMScreen questionnaire. *PLoS One*. 2021; 16(7):e0255317. DOI:10.1371/journal.pone.0255317. PMID:34324586. IF:3,240 (Q2/D4).
- Meca JE, Prefasi D, Perez F, Forero L, Sepulveda M, Calles C, Martinez ML, Gonzalez I, Boyero S, Romero L, Sempere AP, Meca V, Querol L, Costa L, De Castro H, Canal N, Maurino J. Perception of Stigma in Patients with Neuromyelitis Optica Spectrum Disorder. *Patient Preference and Adherence*. 2021; 15. DOI:10.2147/PPA.S305707. PMID:33880015. IF:2,711 (Q2/D4).
- Moore U, Gordish H, Diaz J, James MK, Mayhew AG, Guglieri M, Fernandez R, Rufibach LE, Feng J, Blamire AM, Carlier PG, Spuler S, Day JW, Jones KJ, Bharucha DX, Salort E, Pestronk A, Walter MC, Paradas C, Stojkovic T, Mori M, Bravver E, Pegoraro E, Lowes LP, Mendell JR, Bushby K, Straub V, Jain C. Miyoshi myopathy and limb girdle muscular dystrophy R2 are the same disease. *NEUROMUSCULAR DISORDERS*. 2021; 31(4). DOI:10.1016/j.nmd.2021.01.009. PMID:33610434. IF:4,296 (Q2/D4).
- Narayanaswami P, Sanders DB, Wolfe G, Benatar M, Cea G, Evoli A, Gilhus NE, Illa I, Kuntz NL, Massey J, Melms A, Murai H, Nicolle M, Palace J, Richman D, Verschuuren J. International Consensus Guidance for Management of Myasthenia Gravis 2020 Update. *NEUROLOGY*. 2021; 96(3). DOI:10.1212/WNL.000000000001124. PMID:33144515. IF:9,910 (Q1/D1).
- Natera D, Foley AR, Dominguez C, Ortez C, Jain M, Mebrahtu A, Donkervoort S, Hu Y, Fink M, Yun PM, Ogata T, Medina J, Vigo M, Meilleur KG, Leach ME, Dastgir J, Diaz J, Carrera L, Exposito J, Alarcon M, Cuadras D, Montiel E, Milisenda JC, Dominguez R, Olive M, Colomer J, Jou C, Jimenez C, Bonnemann CG, Nascimento A. Association of Initial Maximal Motor Ability With Long-term Functional Outcome in Patients With COL6-Related Dystrophies. *NEUROLOGY*. 2021; 96(10). DOI:10.1212/WNL.0000000000011499. PMID:33441455. IF:9,910 (Q1/D1).

Related Dystrophies. *NEUROLOGY*. 2021; 96(10). DOI:10.1212/WNL.0000000000011499. PMID:33441455. IF:9,910 (Q1/D1).

- Nunez C, Montesinos P, Alonso A, Alonso J, Reyes D, Sanchez J, Llauger J, Segovia S, Belmonte I, Pedrosa I, Martinez A, Matellini B, Walter G, Diaz J. Magnetization Transfer Ratio in Lower Limbs of Late Onset Pompe Patients Correlates With Intramuscular Fat Fraction and Muscle Function Tests. *Frontiers in Neurology*. 2021; 12:634766. DOI:10.3389/fneur.2021.634766. PMID:33796064. IF:4,003 (Q2/D4).
- Pascual E, Fehmi J, Lleixa C, Martin L, Devaux J, Hoftberger R, Delmont E, Doppler K, Sommer C, Radunovic A, Carvajal A, Smyth S, Williams L, Mazanec R, Potockova V, Hinds N, Cassereau J, Viala K, Lefilliatre M, Nicolas G, Foley P, Leypoldt F, Keddie S, Lunn MP, Zimprich F, Nunkoo VS, Loscher WN, Martinez L, Diaz J, Rojas R, Illa I, Rinaldi S, Querol L. Antibodies to the Caspr1/contactin-1 complex in chronic inflammatory demyelinating polyradiculoneuropathy. *BRAIN*. 2021; 144. PMID:33880507. IF:13,501 (Q1/D1).
- Querol L, Crabtree M, Herepath M, Priedane E, Viejo IV, Agush S, Sommerer P. Systematic literature review of burden of illness in chronic inflammatory demyelinating polyneuropathy (CIDP). *JOURNAL OF NEUROLOGY*. 2021; 268(10). DOI:10.1007/s00415-020-09998-8. PMID:32583051. IF:4,849 (Q1/D3).
- Querol L, Lleixa C. Novel Immunological and Therapeutic Insights in Guillain-Barre Syndrome and CIDP. *Neurotherapeutics*. 2021; 18(4). DOI:10.1007/s13311-021-01117-3. PMID:34549385. IF:7,620 (Q1/D1).
- Reyes D, Alonso J, Mayos M, Nunez C, Llauger J, Belmonte I, Pedrosa I, Segovia S, Diaz J. Correlation Between Respiratory Accessory Muscles and Diaphragm Pillars MRI and Pulmonary Function Test in Late-Onset Pompe Disease Patients. *Frontiers in Neurology*. 2021; 12:621257. DOI:10.3389/fneur.2021.621257. PMID:33732206. IF:4,003 (Q2/D4).
- Ripellino P, Ventura E, Querol L, Gobbi C. Chronic inflammatory demyelinating polyneuropathy with hypertrophic nerves. *JOURNAL OF THE PERIPHERAL NERVOUS SYSTEM*. 2021; 26(2). DOI:10.1111/jns.12445. PMID:33881184. IF:3,494 (Q2/D5).
- Schoser B, Roberts M, Byrne BJ, Sitaraman S, Jiang H, Laforêt P, Toscano A, Castelli J, Díaz J, Goldman M, van der Ploeg AT, Bratkovic D, Kuchipudi S, Mozaffar T, Kishnani PS, Sebok A, Pestronk A, Dominovic A, Khan A, Koritnik B, Tard C, Lindberg C, Quinn C, Eldridge C, Bodkin C, Reyes D, Hughes D, Stefanescu E, Salort E, Butler E, et al. [Alonso J, Vidal N]. Safety and efficacy of cipaglusosidase alfa plus miglustat versus alglucosidase alfa plus placebo in late-onset Pompe disease (PROPEL): an international, randomised, double-blind, parallel-group, phase 3 trial. *LANCET NEUROLOGY*. 2021; 20(12). DOI:10.1016/S1474-4422(21)00331-8. PMID:34800400. IF:44,182 (Q1/D1).
- Siddiqi ZA, Nowak RJ, Mozaffar T, O'Brien F, Yountz M, Patti F, Illa I, Cortés E, Díaz J, Querol LA, Rojas R, Vidal N, Nye JL. Eculizumab in refractory generalized myasthenia gravis

previously treated with rituximab: subgroup analysis of REGAIN and its extension study. *MUSCLE & NERVE*. 2021; 64(6). DOI:10.1002/mus.27422. PMID:34590717. IF:3,217 (Q3/D6).

- Sivera R, Lupo V, Frassetto M, Argente H, Alonso J, Diaz J, Querol L, Garcia MD, Pascual SI, Garcia T, Paradas C, Vazquez JF, Muelas N, Millet E, Vilchez JJ, Espinos C, Sevilla T. Charcot-Marie-Tooth disease due to MORC2 mutations in Spain. *EUROPEAN JOURNAL OF NEUROLOGY*. 2021; 28(9). DOI:10.1111/ene.15001. PMID:34189813. IF:6,089 (Q1/D2).

- Suarez X, Fernandez E, Pinol P, Alonso J, Carrasco A, Lleixa C, Lopez S, Pons G, Soria L, Bigot A, Mouly V, Illa I, Gallardo E, Jaiswal JK, Diaz J. Isolation of human fibroadipogenic progenitors and satellite cells from frozen muscle biopsies. *FASEB JOURNAL*. 2021; 35(9):e21819. DOI:10.1096/fj.202100588R. PMID:34405910. IF:5,191 (Q1/D2).

- Van den Bergh PYK, van PA, Hadden RDM, Avau B, Vankrunkelsven P, Allen JA, Attarian S, Blomkwist PH, Cornblath DR, Eftimov F, Goedee HS, Harbo T, Kuwabara S, Lewis RA, Lunn MP, Nobile E, Querol L, Rajabally YA, Sommer C, Topaloglu HA. European Academy of Neurology/Peripheral Nerve Society guideline on diagnosis and treatment of chronic inflammatory demyelinating polyradiculoneuropathy: Report of a joint Task Force-Second revision. *JOURNAL OF THE PERIPHERAL NERVOUS SYSTEM*. 2021; 26(3). DOI:10.1111/jns.12455. PMID:34085743. IF:3,494 (Q2/D5).

- Van Rheenen W, van der Spek R, Bakker MK, van J, Hop PJ, Zwamborn R, de Klein N, Westra HJ, Bakker OB, Deelen P, Shireby G, Hannon E, Moisse M, Baird D, Restuadi R, Dolzhenko E, Dekker AM, Gawor K, Westeneng HJ, Tazelaar GHP, van KR, Kooyman M, Byrne RP, Doherty M, Heverin M, Al Khleifat A, Iacoangeli A, Shatunov A, et al. [Rojas R]. Common and rare variant association analyses in amyotrophic lateral sclerosis identify 15 risk loci with distinct genetic architectures and neuron-specific biology. *NATURE GENETICS*. 2021; 53(12). DOI:10.1038/s41588-021-00973-1. PMID:34873335. IF:38,330 (Q1/D1).

- Verboon C, Harbo T, Cornblath DR, Hughes R, van PA, Lunn MP, Gorson KC, Barroso F, Kuwabara S, Galassi G, Lehmann HC, Kusunoki S, Reisin RC, Binda D, Cavaletti G, Jacobs BC, Querol LA, Wirtz PW. Intravenous immunoglobulin treatment for mild Guillain-Barre syndrome: an international observational study. *JOURNAL OF NEUROLOGY NEUROSURGERY AND PSYCHIATRY*. 2021; 92(10). DOI:10.1136/jnnp-2020-325815. PMID:34103340. IF:10,154 (Q1/D1).

- Wieske L, Martin L, Fehmi J, Lleixa C, Koel M, Chatterjee M, van Z, Killestein J, Verhamme C, Querol L, Rinaldi S, Teunissen CE, Eftimov F. Serum Contactin-1 in CIDP A Cross-Sectional Study. *Neurology-Neuroimmunology & Neuroinflammation*. 2021; 8(5):e1040. DOI:10.1212/NXI.0000000000001040. PMID:34285092. IF:8,485 (Q1/D1).

Other scientific production

- Fionda L, Turon J, Prior PF, Noguera SB, Cortes E, Lopez MA, Gallardo E, Rojas R. A new de novo SYT2 mutation presenting as distal weakness. Neuropathy or neuromuscular junction dysfunction? (vol 26, pg 113, 2021). *JOURNAL OF THE PERIPHERAL NERVOUS SYSTEM*. 2021; 26(2). DOI:10.1111/jns.12441. IF:3,494 (Q2/D5).

- Guglieri M, Diaz J, Straub V. TREAT-NMD stakeholder meeting for natural history studies in limb girdle muscular dystrophy 18th June 2019, Amsterdam, The Netherlands. *NEUROMUSCULAR DISORDERS*. 2021; 31(9). DOI:10.1016/j.nmd.2021.06.011. PMID:34426054. IF:4,296 (Q2/D4).

- Lunn MP, Cornblath DR, Jacobs BC, Querol L, Van PA, Hughes RA, Willison HJ. COVID-19 vaccine and Guillain-Barré syndrome: Let's not leap to associations. *BRAIN*. 2021; 144(2). DOI:10.1093/brain/awaa444. PMID:33313690. IF:13,501 (Q1/D1).

- Nunez C, Montesinos P, Alonso A, Alonso J, Reyes D, Sanchez J, Llauger J, Segovia S, Belmonte I, Pedrosa I, Martinez A, Matellini B, Walter G, Diaz J. Magnetization Transfer Ratio in Lower Limbs of Late Onset Pompe Patients Correlates With Intramuscular Fat Fraction and Muscle Function Tests (vol 12, 634766, 2021). *Frontiers in Neurology*. 2021; 12:727020. DOI:10.3389/fneur.2021.727020. PMID:34326809. IF:4,003 (Q2/D4).

- Querol L. Autoimmune neuropathies: treatable neuropathies beyond traditional classifications comment. *JOURNAL OF NEUROLOGY NEUROSURGERY AND PSYCHIATRY*. 2021; 92(10). DOI:10.1136/jnnp-2021-326676. PMID:34400541. IF:10,154 (Q1/D1).

Other publications

- Verghese A, Krishnan D, Chia YK, Querol L, Hiew FL. Optic Nerve Demyelination in IgG4 Anti-Neurofascin 155 Antibody-Positive Combined Central and Peripheral Demyelination Syndrome. *Journal Of Central Nervous System Disease*. 2021; 13:11795735211039913. DOI:10.1177/11795735211039913. PMID:34899003.

Communication and dissemination activities

Neuromuscular Diseases Unit

- IX Curso de formación en enfermedades neuromusculares. Unidad de enfermedades neuromusculares, Hospital de la Santa Creu i Sant Pau.. May 2021. Virtual.

Dr Olive

- EPNS Virtual Training Course. Muscle pathology in children (I). Jurmala (Latvia) 12-13 April, 2021. Virtual.

- EPNS Virtual Training Course. Muscle pathology in children (II). Jurmala (Latvia) 12-13 April, 2021. Virtual.

- LGMD European Masterclass. TREAT NMD. Muscle biopsy as a tool to diagnose patients with LGMD. 29th April 2021. Virtual.

- AcadeMYO, virtual version of the Summer School of Myology. Myofibrillar myopathies.

Institut de Myologie, Hôpital de la Salpêtrière, PARIS. Junio 2021. Virtual.

- III Congreso SOLANE 21 (Sociedad latinoamericana de enfermedades neuromusculares). Utilidad de la biopsia de músculo en el diagnóstico de los pacientes con debilidad distal. 12-17 julio 2021. Virtual.

- VIII Simposio de Enfermedades Neuromusculares, modalidad virtual. Asociación Colombiana de Neurología. Miopatías distales. 30-31 July 2021.

- XIX Reunión anual Sociedad Madrileña de Neurología. Miopatías distales. 21-22 Oct 2021. Virtual.

- EVELAM. Escuela latinoamericana de miología. Miopatías miofibrilares. Dec 2021. Virtual

Dr Suárez

- VI WORKSHOP TRANSFERENCIA DEL CONOCIMIENTO CIENTÍFICO EN LA Distrofia Muscular de Duchenne 2021 "Aislamiento de progenitores fibroadipogénicos y células satélite humanas a partir de biopsias musculares congeladas".

Dr Cortés

- Miastenia Gravis asociada a Timoma. II Curso de actualización en el diagnóstico y tratamiento de los tumores tímicos. Hospital Sant Pau. 4 March 2021.

- Crisis miasténica. IV Curso nacional de neurología crítica. Sociedad Española de Neurología. 10 June 2021.

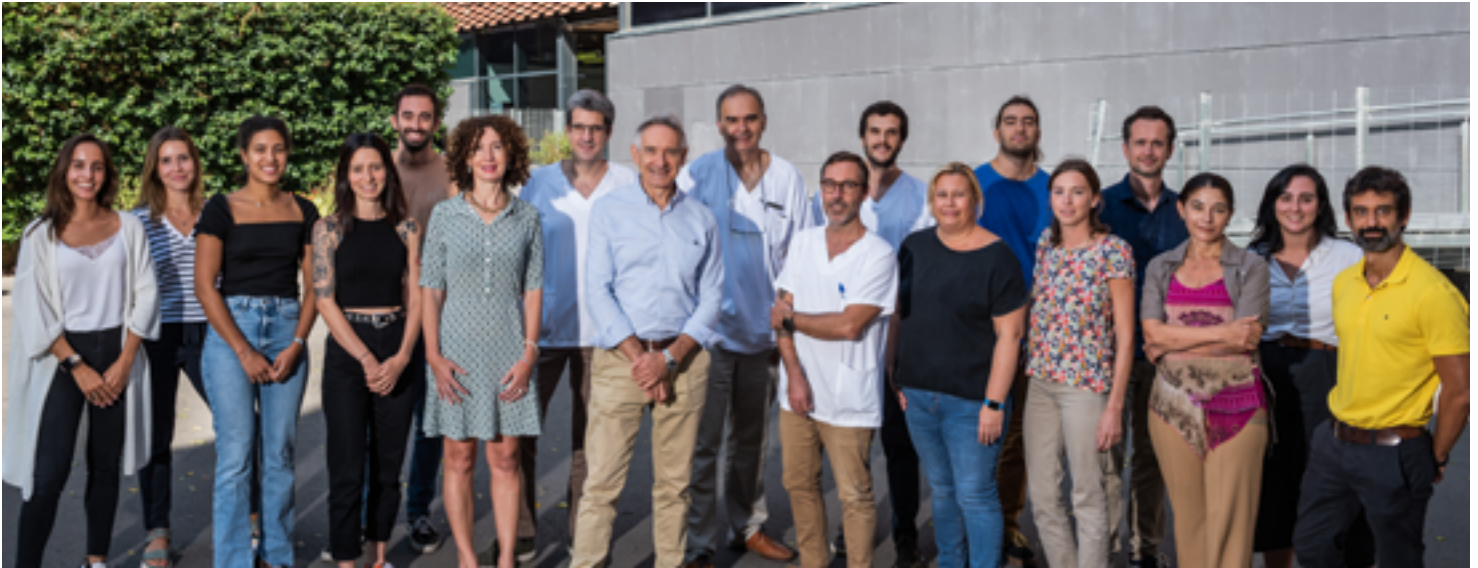
- Current treatment strategies in Myasthenia Gravis. Myasthenie-Symposium. Universitätsspital Zürich. 25 March 2021.

- Myasthenia Gravis In Seniors. ICNMD 2021. 28 May 2021.

- Webinar MyRealWorldMG. AMES (Asociación Miastenia España). 21 Oct 2021.

- Aproximación practica al diagnostico y manejo terapéutico de Miastenia Gravis. Curso de formación "Abordaje práctico de las enfermedades neuromusculares". Sociedad Española de Neurología. 27 Nov 2021.

- "Actualización en el diagnóstico, tratamiento y nuevas terapias en la Miastenia Gravis". Hospital Universitari Germans Trias i Pujol. 21 Dec 2021



Parkinson Disease and Movement Disorders

Coordinator

Kulisevsky Bojarski, Jaime FGS
jkulisevsky@santpau.cat

Members

Aracil Bolanos, Ignacio	IR	Martinez Horta, Saul Indra	IR
Barreiro Meran, Gilda	IR	Pagonabarraga Mora, Javier	FGS
Bejr-Kasem Marco, Helena	FGS	Pascual Sedano, Berta Marta	FGS
Besteiro Cavero, Elena	IR	Pérez González, Rocío	CIBERNED
Campolongo Perillo, Antonia	FGS	Pérez Pérez, Jesús	FGS
Garcia Sanchez, Carmen	FGS	Puig Davi, Arnau	IR
Gironell Carrero, Alexandre	FGS	Rivas Asensio, Elisa M.	CIBERNED
Horta Barba, Andrea	IR	Sampedro Santaló,	
Izquierdo Barrionuevo, Cristina	IR	Frederic Vicenç	IR
Kulisevsky Plaza, Gabriel	IR	Siles López, Estefanía	IR
Martín, Pablo Lucas	IR	Tejero Álvarez, Elisabet	IR

Main lines of research

Cognitive Impairment, Behavioural Dysfunctions and other non-motor symptoms in Parkinson Disease (PD):

- Study of the neural correlates of cognitive performance, mild cognitive impairment, dementia and behavioral alterations (apathy, visual hallucinations and impulse control disorders) in PD using neurophysiological techniques (event-related brain potentials), structural, functional and molecular neuroimaging.

- Characterization of the neurodegenerative process underlying cognitive impairment in PD through the study of cortical atrophy patterns related to genetic and biomarker indicators.

- Development and validation of PD-specific tools for cognitive and functional assessment to detect subtle changes in cognitive performance and treatment response.

- Prospective follow-up study of cognition and mood in PD patients with deep-brain stimulation of the subthalamic nucleus.

- Identification of blood-based, cognitive and neurophysiological biomarkers of cognitive deterioration in PD.
- Identification of genetic and neurophysiological biomarkers of apathy and impulse control disorders in PD.
- Data science applied to large PD databases such as PPMI.
- Surgery and treatments of continuous infusion of intraduodenal levodopa.
- Study of the effects of continuous infusion of intraduodenal levodopa on cognition and mood.
- Follow-up and etiologic study of weight loss in patients treated with continuous infusion of intraduodenal levodopa.

Huntington's disease (HD):

- Characterization of the natural course HD in large and international cohort and studies (Enroll-HD).
- Study of the neural correlates of clinical progression, cognitive performance, mild cognitive impairment, dementia and behavioural alterations in HD using neurophysiological techniques (event-related brain potentials), structural, functional and molecular neuroimaging.
- Identification of potential neuroimaging, blood-based, muscular tissue, CSF and clinical biomarkers of disease progression in premanifest and manifest HD.
- Study of the prevalence and neural substrates of behavioral alterations in premanifest and manifest HD.
- Development and validation of HD-specific tools for cognitive and functional assessment to detect subtle changes in cognitive performance and treatment response.
- Study of the effect of intermediate alleles and homozygosity on the clinical presentation of HD.
- Data science applied to large HD databases such as Enroll-HD and Registry.
- Identification of different cognitive phenotypes in HD.
- Study of the role of TAU in the heterogeneity of cognitive deterioration and trajectory of neurodegeneration in HD.

Progressive supranuclear palsy (PSP):

- Development of a PSP-specific cognitive rating scale.
- Development of a standardized eye movement evaluation.
- Study of the neural correlates of clinical progression, cognitive performance and behavioral alterations in PSP using structural and functional neuroimaging.

Essential tremor:

- Molecular neuroimaging in essential tremor.
- Clinical, neurophysiological and neuroimaging assessment of patients with FXTAS (fragile X-associated tremor/ataxia syndrome).

Scientific Challenges

Parkinson's Disease (PD)

• General

- COPPADIS: COhort of Patients with Parkinson's Disease in Spain (national collaborative study).
- Intensification for Specialist Physicians of the "Strategic Research and Innovation Plan" (PERIS) Expedient Number: SLT008 / 18.

• Cognition

- DuoCog: randomized, double blind and crossed study (immediate levodopa vs. intraduodenal in cognition and mood).

• Neuropsychiatric disorders

- Prospective study: new method of music therapy in apathy and depression.
- Choral singing in patients with PD. Study on its effects on apathy and depression.
- Effects of mindfulness on the presence and development of TCI.
- Natural history and neural correlates of psychotic symptoms in PD patients.

• Advanced PD

- Nutritional analysis in patients with intraduodenal levodopa.
- Prospective study of cognitive, behavioral, sleep and quality of life in patients with deep brain stimulation (DBS) and intraduodenal levodopa.
- Prospective study of patient satisfaction after DBS.
- Subthalamic DBS study in PD: functional reorganization of brain networks and repercussion on postsurgical complications.
- Monitoring the mobility using a sensor in fluctuating PD for therapeutic purposes. Multicenter Clinical Trial (INV-PROC-A118).

Huntington Disease (HD)

- Coordination of the "Cognitive Phenotype Working Group" (European Huntington's Disease Network).
- Spanish Coordination of Enroll-HD: A Prospective Registry Study in a Global Huntington's Disease Cohort (PI in Spain: J. Kulisevsky)
- Validation of cognitive (HD-CRS) and functionality (HD-CFRS) scales.
- Development and validation of new tools for cognitive and functional assessment of cognitive impairment in HD.

Tremor

- Development of a tremor diagnostic system using a mobile app and software. Joint project with Mediktor company.

- Perampanel in essential tremor. “Real life” study.

Other neurodegenerative diseases

- Neural correlates of hypofrontality in different subtypes of progressive supranuclear palsy (PSP).
- Neuropsychiatric and behavioral symptoms in PSP subtypes.
- FXTAS: collaborative research with Genetics from Hospital Clínic (Barcelona) and Associació Catalana X Fràgil (ACXF).
- Collaboration with GEMT-CAT (Movement Disorders Group Catalan Neurology Society) in the Consensus Document on Genetics in Movement Disorders.

Neuroimaging and data engineering

- Dynamic connectivity models in cognitive impairment in PD. In collaboration with Center for Brain and Cognition, Pompeu Fabra University, Barcelona.
- Neuroimaging and neurophysiology of hallucinations in PD: Project: “Unraveling dysfunctional brain networks in patients with Parkinson’s disease suffering from hallucinations”, in collaboration with Prof. Blanke, Ecole Polytechnique Fédérale de Lausanne (EPFL), Switzerland.
- Effects of dopaminergic treatment of PD on neurocognitive networks. Collaborative study with Hospital del Mar, Barcelona.
- Functional and structural brain correlates in HD: cognition, apathy, depression, irritability, biomarkers, oxytocin levels. Collaborative study with Hospital de Burgos (HUBU).
- Analysis of collaborative databases (“big-data”): ENROLL (EH), PPMI (EP), COPPADIS (EP).
- Analysis of local databases: PSP, EH, EP.

Parkinson’s disease and other movement disorders’ laboratory

- Processing, biobanking and biomarker analyses of human liquid biological samples (plasma, serum, CSF and urine) and development and optimization of methods for extracellular vesicle isolation from different biofluids in movement disorders.
- Identification of molecular signatures in brain, plasma, CSF and urine extracellular vesicles in Huntington’s disease to improve disease prognosis and stratification of patients in clinical trials

Innovation

- Creation and Direction of the Multidisciplinary Functional Unit for the Care of Minority Diseases Coursing with Movement Disorders. Recognized as a Functional Unit by Sant Pau Hospital in February 2021.

- Implementation of the pluridisciplinary monographic consultation in Parkinsonisms other than Parkinson’s disease (Progressive Supranuclear Palsy, Cortico-Basal Degeneration, Multisystem Atrophy). (2021)

Collaborations

- “GAITDBSV2. Estudio multicéntrico prospectivo para evaluar el efecto de la estimulación cerebral profunda en el equilibrio y marcha de pacientes con enfermedad de Parkinson a medio y largo plazo mediante análisis clínico y sensores inerciales de movimiento”. PI at IIB Sant Pau: Pascual-Sedano B. Promotor: Beatriz de la Casa Fayés. Hospital Gregorio Marañón, Madrid.
- Proyecto Multicéntrico: “Efectos no motores de la estimulación cerebral profunda direccional sobre el núcleo subtalámico. Ensayo clínico cruzado”. PI at IIB Sant Pau: Pascual-Sedano B. Code: NOMOTORDBS. CEIM Code: EC/20/379/6169 (PS); Ref HSCSP 20/379. Promotor: Fernando Alonso Frech, Hospital Clínico San Carlos, Madrid.
- “Extracellular RNA profiling of human plasma in Huntington’s disease”. Collaborative study with the research group of Eulàlia Martí at the Department of Biomedicine, Faculty of Medicine, Institute of Neurosciences, University of Barcelona.
- Collaboration with GEMT-CAT (Movement Disorders Group Catalan Neurology Society) in the Consensus Document on Genetics in Movement Disorders. Pascual-Sedano B.
- Neuroimaging and neurophysiology of hallucinations in PD: Project: “Unraveling dysfunctional brain networks in patients with Parkinson’s disease suffering from hallucinations”, in collaboration with Prof. Blanke, Ecole Polytechnique Fédérale de Lausanne (EPFL), Switzerland. Bejr-kasem Marco H.
- “Functional and structural brain correlates in HD: cognition, apathy, depression, irritability, biomarkers, oxytocin levels”. Collaborative study with Hospital de Burgos (HUBU). Martínez-Horta S and Pérez-Pérez J.
- COPPADIS: Cohort of Patients with Parkinson’s Disease in Spain (National Collaborative Study). Kulisevsky J, Bejr-Kasen-Marco J, Horta A, Puig A, Pagonabarraga J, Pascual-Sedano B.
- FXTAS: Collaborative research with Genetics from Hospital Clínic, Barcelona and Associació Catalana X Fràgil (ACXF). Pagonabarraga J.
- “Effects of dopaminergic treatment of PD on neurocognitive networks”. Collaborative study with Hospital del Mar, Barcelona. Sampedro F, Aracil I.

Active grants

- JAIME KULISEVSKY BOJARSKI. Huntington's Disease Network. EHDN. Varis. Duration 2010–2021. 199.560,00 €.
- JESUS PEREZ PEREZ. Estudio longitudinal de los correlatos clínicos y neuroradiológicos asociados a los niveles de huntingtina y otros biomarcadores en LCR y plasma en la enfermedad de Huntington. PI17/01885. Instituto de Salud Carlos III. Duration 2018–2021. 97.000,00 €.
- JAIME KULISEVSKY BOJARSKI. Grup de Trastorns del Moviment de l'Hospital de la Santa Creu i Sant Pau. 2017 SGR 00935. Agència de Gestió d'Ajuts Universitaris i de Recerca. Duration 2017–2021. 0,00 €.
- JAIME KULISEVSKY BOJARSKI. Historia natural y correlatos neuronales de los síntomas psicóticos en pacientes con enfermedad de Parkinson. PI18/01717. Instituto de Salud Carlos III. Duration 2019–2021. 77.000,00 €.
- IGNACIO ARACIL BOLAÑOS. Contractes Rio Hortega 2019. CM19/00156. Instituto de Salud Carlos III. Duration 2020–2021. 53.732,00 €.
- JAVIER PAGONABARRAGA MORA. Disfunció de xarxes neuronals en el desenvolupament de trastorns cognitius, conductuals i psiquiàtics en la malaltia de Parkinson i altres Trastorns del Moviment.. SLT008/18/00088. Departament de Salut. Duration 2019–2021. 160.427,87 €.
- FREDERIC VICENÇ SAMPEDRO SANTALO. Contractes de tècnics bioinformàtics de recolçament als IIS 2019. CA19/00007. Instituto de Salud Carlos III. Duration 2020–2021. 53.732,00 €.
- SAUL INDRA MARTINEZ HORTA. Neurobiological mechanisms subserving the differential expression and rate of progression of cognitive impairment in Huntington's disease. HDSA 2019. Huntington's Disease Society of America. Duration 2019–2021. 111.389,46 €.

Note: Total amount granted to PI. It does not include indirect costs.

Other active grants

- Proyecto FIS: "Desarrollo y validación instrumentos específicos de evaluación cognitiva basados en la biología de la enfermedad de Huntington". (IP: Kulisevsky J; Co-IP: Martinez Horta S)
- Seed fund EPY-202-2020. "Huntington's disease brain pathology signatures in exosomes: potential markers of disease progression".
- Funding body and call: European Huntington's disease Network, Seed fund call 10/2019 Principal Investigator: Pérez-

González R, IIB-Sant Pau /CIBERNED. Date of contract: 09/2020 - 12/2021. Amount of Funding: 32,784€.

- "Longitudinal analysis and monitoring by neuroimaging of hallucinations in Parkinson's disease". (01/11/2018 - 01/12/2021). Instituto de Salud Carlos III. IP: Pagonabarraga J, Kulisevsky J.
- "Blood-based and neurophysiological markers of cognitive deterioration and dementia in Parkinson's disease". (01/01/2015 - 31/12/2017). Fundació La Marató de TV3. IP: Pagonabarraga J.
- "Prediction of Apathy and impulse control disorders in Parkinson's disease based on feedback-related negativity". (01/01/2015 - 31/12/2017). Fundació La Marató de TV3. IP: Kulisevsky J.

Awards

- Appointment as a Fellow of the European Academy of Neurology (to honor outstanding achievements in academic and clinical neurology) (March 2021). Kulisevsky J.
- According to a review of the prestigious PLOS Biology Journal based on scientific impact indicators (<https://doi.org/10.1371/journal.pbio.3000918>) Dr Kulisevsky was ranked among the 2% most influential researchers in the world [Ioannidis JPA, Boyack KW, Baas J (2020) Updated science-wide author databases of standardized citation indicators. PLoS Biol 2020; 18 (10): e3000918.]

Books or chapters Doctoral theses

- Saul Martínez Horta, Correlatos neuronales y neuropsicológicos de las alteraciones cognitivas y conductuales en las fases prodrómica e inicial de la enfermedad de Huntington. Calificación Excelente Cum Laude. Universitat Autònoma de Barcelona, Jaime Kulisevsky, Javier Pagonabarraga, 28/01/2020
- Helena Bejr-Kasem, Correlatos anatómo-funcionales de las alucinaciones menores y su impacto sobre la cognición en la enfermedad de Parkinson. Calificación Excelente Cum Laude., Universitat Autònoma de Barcelona, Jaime Kulisevsky, Javier Pagonabarraga, 19/02/2021

Patents

- Jaime Kulisevsky & Juan Marín Lahoz, PREDICTING BEHAVIOURAL ADDICTIONS. Applicant: FUNDACIÓ INSTITUT DE RECERCA DE L'HOSPITAL DE LA SANTA CREU I SANT PAU. Oficina de depósito: OEPM. EP20383043.5., European Patent, 05/06/2021

Transfer products

- Licensing agreements. Revenues along 2021 to Sant Pau Research Institute for licensing Cognitive Assessment Instruments invented by J. Kulisevsky & J. Pagonabarraga (Parkinson's Disease Cognitive rating Scale): 230,000 euros

Scientific production

- Abbruzzese G, Kulisevsky J, Bergmans B, Gomez JC, Kagi G, Raw J, Stefani A, Warnecke T, Jost WH, SYNAPSES Study Investigators GRP. A European Observational Study to Evaluate the Safety and the Effectiveness of Safinamide in Routine Clinical Practice: The SYNAPSES Trial. *Journal of Parkinsons Disease*. 2021; 11(1). DOI:10.3233/JPD-202224. PMID:33104040. IF:5,568 (Q1/D3).

- Aracil I, Sampedro F, Pujol J, Soriano C, Gonzalez JM, Kulisevsky J, Pagonabarraga J. The impact of dopaminergic treatment over cognitive networks in Parkinson's disease: Stemming the tide?. *HUMAN BRAIN MAPPING*. 2021; 42(17). DOI:10.1002/hbm.25650. PMID:34510640. IF:5,038 (Q1/D2).

- Bejr-Kasem H, Sampedro F, Marín-Lahoz J, Martínez-Horta S, Pagonabarraga J, Kulisevsky J. Minor hallucinations reflect early gray matter loss and predict subjective cognitive decline in Parkinson's disease. *European Journal of Neurology*. 2021;28(2):438-447. DOI:10.1111/ene.14576. PMID: 33032389. IF:6,089 (Q1/D2).

- Bernasconi F, Blondiaux E, Potheegadoo J, Stripeikyte G, Pagonabarraga J, Bejr H, Bassolino M, Akselrod M, Martinez S, Sampedro F, Hara M, Horvath J, Franza M, Konik S, Bereau M, Ghika JA, Burkhard PR, Van de Ville D, Faivre N, Rognini G, Krack P, Kulisevsky J, Blanke O. Robot-induced hallucinations in Parkinson's disease depend on altered sensorimotor processing in fronto-temporal network. *Science Translational Medicine*. 2021; 13(591):eabc8362. DOI:10.1126/scitranslmed.abc8362. PMID:33910980. IF:17,956 (Q1/D1).

- Blauwendraat C, Iwaki H, Makarios MB, Bandres S, Leonard HL, Grenn FP, Lake J, Krohn L, Tan M, Kim JJ, Gibbs JR, Hernandez DG, Ruskey JA, Pihlstrom L, Toft M, van JJ, Marinus J, Schulte C, Brockmann K, Sharma M, Siitonen A, Majamaa K, Eerola J, Tienari PJ, Grosset DG, Lesage S, Corvol JC, Brice A, Wood N, et al. [Clarimón J, Dols O, Kulisevsky J, Pagonabarraga J]. Investigation of Autosomal Genetic Sex Differences in Parkinson's Disease. *ANNALS OF NEUROLOGY*. 2021; 90(1). DOI:10.1002/ana.26090. PMID:33901317. IF:10,422 (Q1/D1).

- Calabria M, Perez JP, Martinez S, Horta A, Carceller M, Kulisevsky J, Costa A. Language reconfiguration in bilinguals A study with Huntington's disease patients. *Linguistic Approaches to Bilingualism*. 2021; 11(4). DOI:10.1075/lab.18022.cal. IF:1,813 (Q2/D3).

- Chen ZB, Zhang D, Reynolds RH, Gustavsson EK, Garcia S, D'Sa K, Fairbrother A, Vandrovicova J, Hardy J, Houlden H,

Taliun S, Botia J, Ryten M, Clarimón J, Dols O, Kulisevsky J, Pagonabarraga J, Int Parkinson's Dis Genomics C. Human-lineage-specific genomic elements are associated with neurodegenerative disease and APOE transcript usage. *Nature Communications*. 2021; 12(1):2076. DOI:10.1038/s41467-021-22262-5. PMID:33824317. IF:14,919 (Q1/D1).

- De Paepe AE, Ara A, Garcia C, Martinez S, Perez J, Kulisevsky J, Rodriguez N, Vaquer I, Subira S, Calopa M, Munoz E, Santacruz P, Ruiz J, Mareca C, de Diego R, Camara E. Gray Matter Vulnerabilities Predict Longitudinal Development of Apathy in Huntington's Disease. *MOVEMENT DISORDERS*. 2021; 36(9). DOI:10.1002/mds.28638. PMID:33998063. IF:10,338 (Q1/D1).

- Diez M, Houle G, Ortega S, Bandres S, Alvarez I, Carcel M, Ibanez L, Fernandez MV, Budde JP, Trotta JR, Tonda R, Chong JX, Bamshad MJ, Nickerson DA, Aguilar M, Tartari JP, Gironell A, Garcia E, Agundez J, Alonso H, Jimenez FJ, Fernandez M, Valldeoriola F, Marti MJ, Tolosa E, Coria F, Pastor MA, Vilarino C, Rajput A, Dion PA, Cruchaga C, Rouleau GA, Pastor P, U. Exome-wide rare variant analysis in familial essential tremor. *PARKINSONISM & RELATED DISORDERS*. 2021; 82. DOI:10.1016/j.parkreldis.2020.11.021. PMID:33279834. IF:4,891 (Q1/D3).

- Gaig C, Compta Y, Heidebreder A, Marti MJ, Titulaer MJ, Crijnen Y, Hogl B, Lewerenz J, Erro ME, Garcia JC, Nigro P, Tambasco N, Patalong M, Erdler M, Macher S, Berger E, Hoftberger R, Geis C, Hutterer M, Milan A, Martin A, Manzanares LL, Quintas S, Hoglinger GU, Mohn N, Schoberl F, Thaler FS, Asioli GM, Provini F, Plazzi G, Berganzo K, Blaabjerg M, et al. [Perez JP]. Frequency and Characterization of Movement Disorders in Anti-IgLN5 Disease. *NEUROLOGY*. 2021; 97(14). DOI:10.1212/WNL.0000000000012639. PMID:34380749. IF:9,910 (Q1/D1).

- Garcia R, Santos D, Alonso A, Alvarez M, Ares B, Avila A, Caballol N, Carrillo F, Sevilla FE, Freire E, Esteban JCG, Legarda I, Manzanares LL, Valdes EL, Martinez I, Mata M, Parees I, Pascual B, Mir P, Castrillo JCM. Management of Parkinson's disease and other movement disorders in woman of childbearing age: Part 1. *NEUROLOGIA*. 2021; 36(2). DOI:10.1016/j.nrl.2020.05.010. PMID:32718872. IF:3,109 (Q3/D6).

- Garcia R, Santos D, Alonso A, Alvarez M, Ares B, Avila A, Caballol N, Carrillo F, Sevilla FE, Freire E, Esteban JCG, Legarda I, Manzanares LL, Valdes EL, Martinez I, Mata M, Parees I, Pascual B, Castrillo JCM, Mir P. Management of Parkinson's disease and other movement disorders in women of childbearing age: Part 2. *NEUROLOGIA*. 2021; 36(2). DOI:10.1016/j.nrl.2020.05.012. PMID:32980194. IF:3,109 (Q3/D6).

- Gialluisi A, Reccia MG, Modugno N, Nutile T, Lombardi A, Di LG, Pietracupa S, Ruggiero D, Scala S, Gambardella S, Iacoviello L, Gianfrancesco F, Acampora D, D'Esposito M, Simeone A, Ciullo M, Esposito T, Kulisevsky J, Pagonabarraga J, Int Parkinsons Dis Genomics C. Identification of sixteen novel candidate genes for late onset Parkinson's disease. *Molecular Neurodegeneration*. 2021; 16(1):35. DOI:10.1186/s13024-021-00455-2. PMID:34148545. IF:14,195 (Q1/D1).

- Grothe MJ, Labrador MA, Jesus S, Macias D, Adarmes A, Carrillo F, Camacho EI, Franco P, Lora FR, Martin JF, Barbera MA, Pastor P, Arroyo SE, Vila BS, Foraster AC, Martinez JR, Padilla FC, Morlans MP, Aramburu IG, Ceberio JI, Vara JH, de Fabregues O, Fonticoba TD, Pascual B, Kulisevsky J, Martinez P, Santos D, Mir P. In vivo cholinergic basal forebrain degeneration and cognition in Parkinson's disease: Imaging results from the COPPADIS study. *PARKINSONISM & RELATED DISORDERS*. 2021; 88. DOI:10.1016/j.parkreldis.2021.05.027. PMID:34144230. IF:4,891 (Q1/D3).
- Horta A, Pagonabarraga J, Martinez S, Busteed L, Pascual B, Illan I, Marin J, Aracil I, Perez J, Sampedro F, Bejr H, Kulisevsky J. Cognitive and behavioral profile of progressive supranuclear palsy and its phenotypes. *JOURNAL OF NEUROLOGY*. 2021; 268(9). DOI:10.1007/s00415-021-10511-y. PMID:33704556. IF:4,849 (Q1/D3).
- Jost ST, Visser V, Rizos A, Loehrer PA, Silverdale M, Evans J, Samuel M, Petry JN, Sauerbier A, Gronostay A, Barbe MT, Fink GR, Ashkan K, Antonini A, Martinez P, Chaudhuri KR, Timmermann L, Dafsari HS, Pagonabarraga J, Walker RW. Non-motor predictors of 36-month quality of life after subthalamic stimulation in Parkinson disease. *npj Parkinsons Disease*. 2021; 7(1):48. DOI:10.1038/s41531-021-00174-x. PMID:34103534. IF:8,651 (Q1/D1).
- Kia DA, Zhang D, Guelfi S, Manzoni C, Hubbard L, Reynolds RH, Botia J, Ryten M, Ferrari R, Lewis PA, Williams N, Trabzuni D, Hardy J, Wood NW, Clarimón J, Dols O, Kulisevsky J, Pagonabarraga J, United B, Int Parkinsons Dis G. Identification of Candidate Parkinson Disease Genes by Integrating Genome-Wide Association Study, Expression, and Epigenetic Data Sets. *JAMA Neurology*. 2021; 78(4). DOI:10.1001/jamaneurol.2020.5257. PMID:33523105. IF:18,302 (Q1/D1).
- Lage C, Lopez S, Bejanin A, Kazimierczak M, Aracil I, Calvo A, Pozueta A, Garcia M, Fernandez A, Bravo M, Jimenez J, Banzo I, Irure J, Pegueroles J, Illan I, Fortea J, Rodriguez E, Lleo A, Garcia CE, Sanchez P. Distinctive Oculomotor Behaviors in Alzheimer's Disease and Frontotemporal Dementia. *Frontiers in Aging Neuroscience*. 2021; 12:603790. DOI:10.3389/fnagi.2020.603790. PMID:33613262. IF:5,750 (Q1/D2).
- Leon P, Pagonabarraga J, Moris J, Martinez S, Marin J, Horta A, Bejr H, Kulisevsky J, Rodriguez A. Neural signatures of predictive language processing in Parkinson's disease with and without mild cognitive impairment. *CORTEX*. 2021; 141. DOI:10.1016/j.cortex.2021.03.032. PMID:34049254. IF:4,027 (Q1/D2).
- Martinez S, Bejr H, Horta A, Pascual B, Santos D, De Deus T, Jesus S, Aguilar M, Planellas L, Garcia J, Caballol N, Vives B, Hernandez J, Cabo I, Lopez L, Gonzalez I, Avila MA, Catalan MJ, Lopez LM, Puente V, Garcia JM, Borrue C, Solano B, Alvarez M, Vela L, Escalante S, Cubo E, Carrillo F, Martinez JC, Sanchez P, Alonso MG, Lopez N, Gaston I, et al. [Kulisevsky J]. Identifying comorbidities and lifestyle factors contributing to the cognitive profile of early Parkinson's disease. *BMC Neurology*. 2021; 21(1):477. DOI:10.1186/s12883-021-02485-1. PMID:34879838. IF:2,474 (Q3/D8).
- Martinez S, Ivanir E, Perrinjaquet T, Keuter MH, Kulisevsky J. Effects of a Green Oat Herb Extract on Cognitive Performance and Neurophysiological Activity: A Randomized Double-Blind Placebo-Controlled Study. *Frontiers in Neuroscience*. 2021; 15:748188. DOI:10.3389/fnins.2021.748188. PMID:34658781. IF:4,677 (Q2/D4).
- Martinez-Horta S, Sampedro F, Horta-Barba A, Perez-Perez J, Pagonabarraga J, Gomez-Anson B, Kulisevsky J. Structural brain correlates of irritability and aggression in early manifest Huntington's disease. *Brain Imaging and Behavior*. 2021; 15(1):107-113. DOI:10.1007/s11682-019-00237-x. PMID:31898092. IF:3,978 (Q2/D4).
- Pagano G, Boess FG, Taylor KI, Ricci B, Mollenhauer B, Poewe W, Boulay A, Anzures J, Vogt A, Marchesi M, Post A, Nikolcheva T, Kinney GG, Zago WM, Ness DK, Svoboda H, Britschgi M, Ostrowitzki S, Simuni T, Marek K, Koller M, Sevigny J, Doody R, Fontoura P, Umbricht D, Bonni A, PASADENA I, Bejr H, Bojarsky JK, Prasinezumab GRP. A Phase II Study to Evaluate the Safety and Efficacy of Prasinezumab in Early Parkinson's Disease (PASADENA): Rationale, Design, and Baseline Data. *Frontiers in Neurology*. 2021; 12:705407. DOI:10.3389/fneur.2021.705407. PMID:34659081. IF:4,003 (Q2/D4).
- Pagonabarraga J, Horta A, Busteed L, Bejr H, Illan I, Aracil I, Marin J, Pascual B, Perez J, Campolongo A, Izquierdo C, Martinez S, Sampedro F, Kulisevsky J. Quantitative evaluation of oculomotor disturbances in progressive supranuclear palsy. *PARKINSONISM & RELATED DISORDERS*. 2021; 85. DOI:10.1016/j.parkreldis.2021.03.002. PMID:33744691. IF:4,891 (Q1/D3).
- Pagonabarraga J, Tinazzi M, Caccia C, Jost WH. The role of glutamatergic neurotransmission in the motor and non-motor symptoms in Parkinson's disease: Clinical cases and a review of the literature. *JOURNAL OF CLINICAL NEUROSCIENCE*. 2021; 90. DOI:10.1016/j.jocn.2021.05.056. PMID:34275546. IF:1,961 (Q4/D9).
- Perez A, Giraldo DM, Rios J, Munoz E, Compta Y, Marti MJ, Pagonabarraga J. Progression of Motor and Non-Motor Symptoms in Multiple System Atrophy: A Prospective Study from the Catalan-MSA Registry. *Journal of Parkinsons Disease*. 2021; 11(2). DOI:10.3233/JPD-202332. PMID:33492245. IF:5,568 (Q1/D3).
- Pezzoli S, Sanchez R, Solanes A, Kempton MJ, Bandmann O, Il J, Cagnin A, Goldman JG, Merkitich D, Firbank MJ, Taylor JP, Pagonabarraga J, Kulisevsky J, Blanc F, Verdolini N, Venneri A, Radua J. Neuroanatomical and cognitive correlates of visual hallucinations in Parkinson's disease and dementia with Lewy bodies: Voxel-based morphometry and neuropsychological meta-analysis. *NEUROSCIENCE AND BIOBEHAVIORAL REVIEWS*. 2021; 128. DOI:10.1016/j.neubiorev.2021.06.030. PMID:34171324. IF:8,989 (Q1/D1).

- Rodriguez A, Hernandez J, Minarro A, Perez C, Bayes A, Martinez JC, Perez DA, Gironell A. Monitoring Parkinsons Patients M. Multicentre, randomised, single-blind, parallel group trial to compare the effectiveness of a Holter for Parkinson's symptoms against other clinical monitoring methods: study protocol. *BMJ Open*. 2021; 11(7):e045272. DOI:10.1136/bmjopen-2020-045272. PMID:34281918. IF:2,692 (Q2/D4).
- Sampedro F, Farres C, Soler J, Elices M, Schmidt C, Corripio I, Dominguez E, Pomarol E, Salvador R, Pascual JC. Structural brain abnormalities in borderline personality disorder correlate with clinical severity and predict psychotherapy response. *Brain Imaging and Behavior*. 2021; 15(5). DOI:10.1007/s11682-021-00451-6. PMID:33634348. IF:3,978 (Q2/D4).
- Sampedro F, Kulisevsky J. Intracortical surface-based MR diffusivity to investigate neurologic and psychiatric disorders: a review. *JOURNAL OF NEUROIMAGING*. 2022; 32(1). DOI:10.1111/jon.12930. PMID:34506674. IF:2,486 (Q3/D6).
- Sampedro F, Marin J, Martinez S, Camacho V, Lopez DA, Pagonabarraga J, Kulisevsky J. Extrastriatal SPECT-DAT uptake correlates with clinical and biological features of de novo Parkinson's disease. *NEUROBIOLOGY OF AGING*. 2021; 97. DOI:10.1016/j.neurobiolaging.2020.10.016. PMID:33212336. IF:4,673 (Q2/D3).
- Sampedro F, Martinez S, Perez J, Perez R, Horta A, Campolongo A, Aracil I, Gomez B, Kulisevsky J. Interaction between sex and neurofilament light chain on brain structure and clinical severity in Huntington's disease. *Annals of Clinical and Translational Neurology*. 2021; 8(12). DOI:10.1002/acn3.51460. PMID:34761569. IF:4,511 (Q2/D3).
- Sampedro F, Perez J, Martinez S, Perez R, Horta A, Campolongo A, Izquierdo C, Pagonabarraga J, Gomez B, Kulisevsky J. Cortical microstructural correlates of plasma neurofilament light chain in Huntington's disease. *PARKINSONISM & RELATED DISORDERS*. 2021; 85. DOI:10.1016/j.parkreldis.2021.03.008. PMID:33770670. IF:4,891 (Q1/D3).
- Sampedro F, Roldan A, Alonso A, Grasa E, Portella MJ, Aguilar EJ, Nunez F, Gomez B, Corripio I. Grey matter microstructural alterations in schizophrenia patients with treatment-resistant auditory verbal hallucinations. *JOURNAL OF PSYCHIATRIC RESEARCH*. 2021; 138. DOI:10.1016/j.jpsychires.2021.03.037. PMID:33852993. IF:4,791 (Q1/D2).
- Santos D, Fonticoba TD, Bartolome CC, Castro ES, Jesus S, Mir P, Pascual B, Pagonabarraga J, Kulisevsky J, Hernandez J, Planellas LL, Cabo I, Seijo M, Legarda I, Padilla FC, Caballo N, Cubo E, Nogueira V, Losada M, Ariztegui NL, Aramburu IG, Caldentey JG, Borrue C, Valero C, Alonso PS. Depression is Associated with Impulse-compulsive Behaviors in Parkinson's disease. *JOURNAL OF AFFECTIVE DISORDERS*. 2021; 280. DOI:10.1016/j.jad.2020.11.075. PMID:33242731. IF:4,839 (Q1/D2).
- Santos-Garcia D, Blazquez M, Calopa M, Escamilla F, Freire E, Ruiz PJG, Grandas F, Kulisevsky J, Lopez L, Castrillo JCM, Mir P, Pagonabarraga J, Perez F, Salom JM, Tijero B, Valldeoriola F, Yanez R, Aviles A, Luquin MR. Present and Future of Parkinson's Disease in Spain: PARKINSON-2030 Delphi Project. *Brain Sciences*. 2021; 11(8):1027. DOI:10.3390/brainsci11081027. PMID:34439646. IF:3,394 (Q3/D6).
- Santos-García D, Castro ES, de Deus Fonticoba T, Panceiras MJF, Enriquez JGM, González JMP, Bartolomé CC, Planellas LL, Caldentey JG, Caballo N, Legarda I, López IC, Manzanares LL, Rivera MAÁ, Catalán MJ, Nogueira V, Borrue C, Saucó MÁ, Vela L, Cubo E, Castrillo JCM, Alonso PS, Losada MGA, Ariztegui NL, Gastón MI, Kulisevsky J, Pagonabarraga J, et al. Sleep Problems Are Related to a Worse Quality of Life and a Greater Non-Motor Symptoms Burden in Parkinson's Disease. *JOURNAL OF GERIATRIC PSYCHIATRY AND NEUROLOGY*. 2021;34(6):642-658. DOI:10.1177/0891988720964250. PMID: 33043810. IF:2,680 (Q3/D7).
- Santos-García D, De Deus FT, Cores BC, Valdés AL, Suárez CE, Aneiros Á, Jesús S, Aguilar M, Pastor P, Planellas L, Cosgaya M, García CJ, Caballo N, Legarda I, Hernández VJ, Cabo I, López ML, González AI, Ávila RMA, José CM, Nogueira V, Puente V, García MJM, Borrue C, Solano VB, Álvarez SM, Vela L, Escalante S, Cubo E, Carrillo PF, Martínez CJC, et al.; COPPADIS Study Group [Kulisevsky J]. Mood in Parkinson's disease: From early-to late-stage disease. *INTERNATIONAL JOURNAL OF GERIATRIC PSYCHIATRY*. 2021;36(5):627-646. DOI:10.1002/gps.5461. PMID: 33169885. IF:3,485 (Q1/D3).
- Santos-García D, Fonticoba TD, Cores C, Muñoz G, Gonzalez JMP, Miro CM, Suarez E, Jesus S, Aguilar M, Pastor P, Planellas L, Cosgaya M, Caldentey JG, Caballo N, Legarda I, Vara JH, Cabo I, Manzanares LL, Aramburu IG, Rivera M, Catalan MJ, Nogueira V, Puente V, de Arcos MR, Borrue C, Vila BS, Saucó MA, Vela L, Escalante S, Cubo E, Padilla FC, et al. [Kulisevsky J]. Predictors of clinically significant quality of life impairment in Parkinson's disease. *npj Parkinsons Disease*. 2021; 7(1):118. DOI:10.1038/s41531-021-00256-w. PMID:34916528. IF:8,651 (Q1/D1).
- Santos-García D, Fonticoba TDD, Gonzalez JMP, Bartolome CC, Aymerich LV, Enriquez JGM, Suarez E, Jesus S, Aguilar M, Pastor P, Planellas LL, Cosgaya M, Caldentey JG, Caballo N, Legarda I, Vara JH, Cabo I, Manzanares LL, Aramburu IG, Rivera M, Catalan MJ, Nogueira V, Puente V, Moreno JMG, Borrue C, Vila BS, Saucó MA, Vela L, Escalante S, et al.; COPPADIS GRP [Kulisevsky J]. Staging Parkinson's Disease Combining Motor and Nonmotor Symptoms Correlates with Disability and Quality of Life. *Parkinsons Disease*. 2021; 2021. DOI:10.1155/2021/8871549. PMID:34094501. IF:2,704 (Q3/D7).
- Santos-García D, Rios LN, Fonticoba TD, Bartolome CC, Roca LG, Panceiras MF, Miro CM, Canfield H, Jesus S, Aguilar M, Pastor P, Cosgaya M, Caldentey JG, Caballo N, Legarda I, Vara JH, Cabo I, Manzanares LL, Aramburu IG, Rivera M, Mayordomo VG, Nogueira V, Puente V, Dotor J, Borrue C, Vila BS, Saucó MA, Vela L, Escalante S, Cubo E, Padilla FC, et al. [Kulisevsky J]. Diplopia Is Frequent and Associated with Motor and Non-Motor Severity in Parkinson's Disease: Results from the COPPADIS Cohort at 2-Year Follow-Up. *Diagnostics*. 2021; 11(12):2380.

DOI:10.3390/diagnostics11122380. PMID:34943619. IF:3,706 (Q2/D3).

• Santos-García D, de Deus T, Cores C, Canfield H, Paz González JM, Martínez Miró C, Valdés Aymerich L, Suárez E, Jesús S, Aguilar M, Pastor P, Planellas L, Cosgaya M, García Caldentey J, Caballol N, Legarda I, Hernández-Vara J, Cabo I, López Manzanares L, González Aramburu I, Ávila Rivera MA, Catalán MJ, Nogueira V, Puente V, Dotor J, Borrué C, et al.; Coppadis Study Group [Kulisevsky J]. Predictors of Global Non-Motor Symptoms Burden Progression in Parkinson's Disease. Results from the COPPADIS Cohort at 2-Year Follow-Up. *Journal of Personalized Medicine*. 2021; 11(7):626. DOI:10.3390/jpm11070626. PMID:34209166. IF:4,945 (Q1/D2).

• Stantonyonge N, Martinez S, Sampedro F, Sanchez MB, Chico A. Defective involuntary attention to novelty in type 1 diabetes and impaired awareness of hypoglycaemia. *DIABETES RESEARCH AND CLINICAL PRACTICE*. 2021; 177:108898. DOI:10.1016/j.diabres.2021.108898. PMID:34098058. IF:5,602 (Q1/D3).

• Stantonyonge N, Sampedro F, Mendez J, Martinez S, Chico A, Gomez B. Structural Gray and White Matter Differences in Patients With Type 1 Diabetes and Impaired Awareness of Hypoglycemia. *JOURNAL OF CLINICAL ENDOCRINOLOGY & METABOLISM*. 2021; 106(2). DOI:10.1210/clinem/dgaa832. PMID:33180907. IF:5,958 (Q1/D2).

• Storm CS, Kia DA, Almramhi MM, Bandres S, Finan C, Hingorani AD, Wood NW, Clarimón J, Dols O, Kulisevsky J, Marín J, Pagonabarraga J, Lynch TL. Finding genetically-supported drug targets for Parkinson's disease using Mendelian randomization of the druggable genome. *Nature Communications*. 2021; 12(1):7342. DOI:10.1038/s41467-021-26280-1. PMID:34930919. IF:14,919 (Q1/D1).

Other scientific production

• Martinez S, Horta A, Perez J, Sampedro F, de Lucia N, De Michele G, Kehrer S, Priller J, Migliore S, Squitieri F, Castaldo A, Mariotti C, Mananes V, Lopez JL, Rodriguez N, Martinez A, Garcia P, Julio F, Januario C, Delussi M, de Tommaso M, Noguera S, Ruiz J, Sitek EJ, Nuzzi A, Pagonabarraga J, Kulisevsky J, European Huntingtons Dis N. Correction to: Utility of the Parkinson's disease-Cognitive Rating Scale for the screening of global cognitive status in Huntington's disease (vol 267, pg 1527, 2020). *JOURNAL OF NEUROLOGY*. 2021; 268(2). DOI:10.1007/s00415-020-10305-8. PMID:33399970. IF:4,849 (Q1/D3).

Other publications

• Gironell A, Badosa JM, Roig A, Tuccillo R, Marconi G, Munoz M, Ribosa R, Vallhonrat AC, Linares EJ, Puig AR, Feixas G. EFFICACY OF CLINICAL HYPNOSIS IN FUNCTIONAL NEUROLOGICAL DISORDERS: EXPERIENCE IN A CONSECUTIVE SERIES OF 50 PATIENTS. *Revista De Psicoterapia*. 2021; 32(119). DOI:10.33898/rdp.v32i119.472.

• Horta A, Martinez S, Perez J, Sampedro F, de Lucia N, De Michele G, Salvatore E, Kehrer S, Priller J, Migliore S, Squitieri F, Castaldo A, Mariotti C, Mananes V, Lopez JL, Rodriguez N, Martinez A, Julio F, Janurio C, Delussi M, de Tommaso M, Noguera S, Ruiz J, Sitek EJ, Wallner R, Nuzzi A, Pagonabarraga J, Kulisevsky J. Arithmetic Word-Problem Solving as Cognitive Marker of Progression in Pre-Manifest and Manifest Huntington's Disease. *Journal Of Huntingtons Disease*. 2021; 10(4). DOI:10.3233/JHD-210480. PMID:34602494.

• Puig A, Martinez S, Sampedro F, Horta A, Perez J, Campolongo A, Izquierdo C, Pagonabarraga J, Gomez B, Kulisevsky J. Cognitive and Affective Empathy in Huntington's Disease. *Journal Of Huntingtons Disease*. 2021; 10(3). DOI:10.3233/JHD-210469. PMID:34486985.

Protocols

• Protocolo de la Unidad Funcional para el cuidado de las enfermedades minoritarias que cursan con trastornos del movimiento (Approved and in force)

• Protocolo del CSUR-53 de Enfermedades Minoritarias que Cursan con Trastornos del Movimiento (Ongoing evaluation)

• Protocolo de enfermedad de Huntington del HSCSP (Approved and in force)

• Protocolo de Parkinsonismos atípicos del HSCPS (Approved and in force)

• Protocolo de Síndrome de Tourette del HSCSP (Approved and in force)

• Protocolo de organización y realización de ensayos clínicos en enfermedades minoritarias que cursan con trastornos del movimiento del HSCSP (Approved and in force)

• Protocolo de acogida en urgencias de pacientes con trastornos del movimiento (Approved and in force)

• Member of the Drafting Committee of CATSALUT (Servei Català de la Salut) Protocols (AQUAS) for Invasive Treatment for Movement Disorders (Radiosurgery, Functional Surgery, High Intensity Focused Ultrasound) in Catalonia (2021). Kulisevsky J.

Communication and dissemination activities

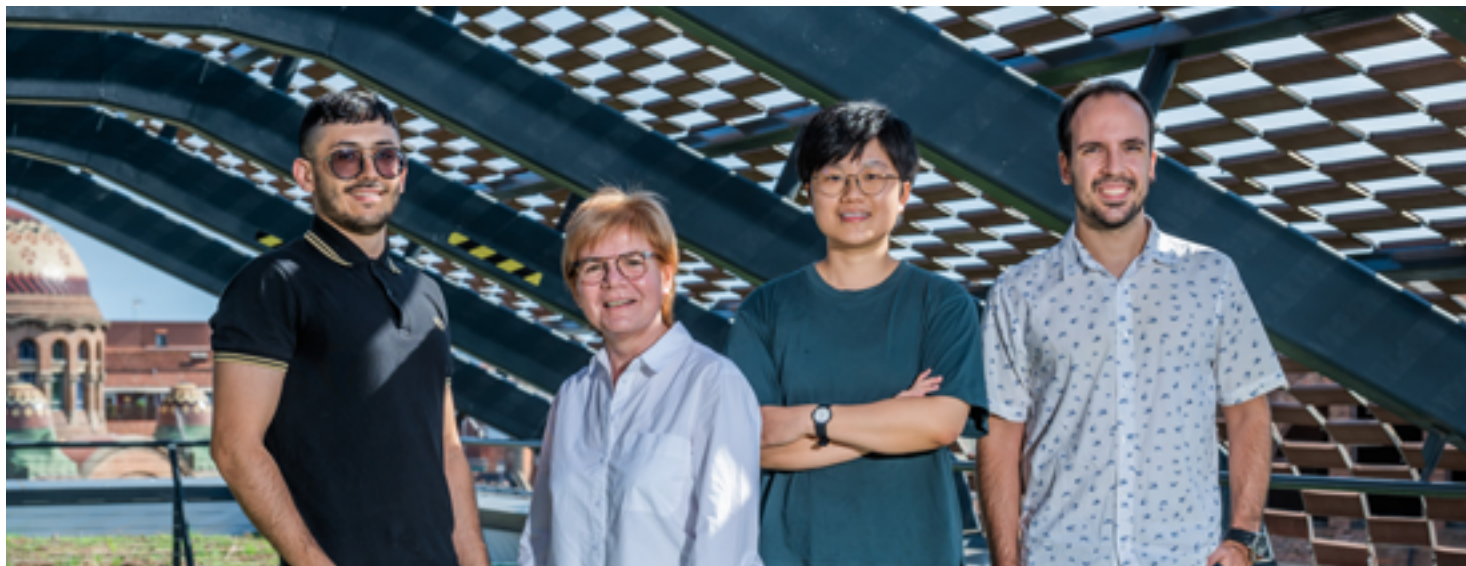
Outreach activities and teaching

• **Nurse Open Session, Hospital de la Santa Creu i Sant Pau.** (16/02/2021). Virtual. "Enfermedad de Párkinson: algo más que un temblor". Campolongo A.

• **Webinars CNS.** (04/03/2021). "El ON y el OFF en la Enfermedad de Parkinson: más allá del movimiento". Kulisevsky J, Campolongo A, Martinez-Horta S, Morer L.

- **Course: “Puesta al Día en Enfermedad de Huntington”.** (7 and 14/04/2021). Live webinar. Organisers: J. Kulisevsky y P. García-Ruiz Sociedad Española de Neurología.
 - **Talk on World Parkinson Day 2021: “El Comitè Mèdic Respon”.** (14/04/2021).; Associació Catalana per el Parkinson. Kulisevsky J
 - **PD Academy.** (19–25–27/05/2021). Virtual Meeting. “Safinamide Safety Profile And Pattern Of Use In Clinical Practice: New Data From The European Observational Study “Synapses””. Kulisevsky J. “Role of non-dopaminergic pathways in PD”. Pagonabarraga J
 - **6ª Edición Desafío de enfermería en la Enfermedad de Parkinson.** (13/05/2021). Virtual. Sociedad Española de Enfermería Neurológica. Moderator: Campolongo A
 - **NeuroAcademy. Third Training Program in Neurology for Portuguese Neurologists: Update in Movement Disorders** (22–23/10/2021). Barcelona. Organiser: Kulisevsky J
 - **“Encuentro con el neurólogo Jaime Kulisevsky”.** (05/11/2021). Consulado General y Centro de Promoción de la República Argentina en Barcelona.
 - **Asociación Corea de Huntington Española (ACHE). Puesta al Día en Enfermedad de Huntington.** (11/11/2021). Online course. Live webinar. Centro de Referencia Estatal de Atención a Personas con Enfermedades Raras y sus Familias (Creer). Talk: “Tratamiento actual en la Enfermedad de Huntington y nuevas moléculas”. Kulisevsky J
 - **XIX Jornadas Técnicas Online de la Enfermedad de Huntington, Abordaje multidisciplinar y nuevos escenarios.** (15/11/2021). Virtual. ACMAH (Associació Catalana de la Malaltia de Huntington). “Ley Orgánica 3/2021 de Regulación de la Eutanasia: Protocolos desde el contexto hospitalario”, “Consideraciones específicas en la Enfermedad de Huntington, cuando hablamos de eutanasia y voluntades anticipadas”. Pérez Pérez J.
 - **Course: Escuela Clínica de Neuropsicología y patología del Lenguaje del Hospital de Sant Pau / Unidad Docente Sant Pau.** (2021)
 - “Especialización en Neuropsicología de las enfermedades neurodegenerativas que cursan con trastornos del movimiento”. Martínez-Horta S.
 - “Exploración neuropsicológica en enfermedad de Parkinson”. Martínez-Horta S
 - “Exploración neuropsicológica en enfermedad de Huntington”. Martínez-Horta S
 - “Exploración neuropsicológica en Parkinsonismos atípicos”. Martínez-Horta S
 - **Course: COPC.** (2021)
 - “Evaluación e intervención neuropsicológica en la enfermedad de Huntington”. Martínez-Horta S.
 - “Evaluación neuropsicológica y diagnóstico diferencial de los parkinsonismos atípicos”. Martínez-Horta S.
 - **Course: “Evaluación Neuropsicológica en la enfermedad de Huntington”.** (2021). Jornadas de Primavera de la Sociedad Catalana de Neuropsicología. Martínez-Horta S.
 - **Lectures at Universitat oberta de Catalunya. (2021).**
 - Tratamiento de la enfermedad de Parkinson. Kulisevsky J.
 - Temblor, Distonía, Coreas y Tics. Kulisevsky J
 - **Master Degree in Movement Disorders** (2021) Universidad de Murcia-Viguera Editores. “Aspectos Neuropsicológicos de la demencia en la Enfermedad de Parkinson”. Kulisevsky J
- Scientific dissemination**
- **International Meeting on Neuroacanthocytosis Syndromes.** (26/03/2021). Virtual. Universidad de Barcelona. “Outcome of Deep Brain Stimulation in Two Patients with Chorea-acanthocytosis”. Pascual-Sedano B, Pérez-Pérez J, Rebordão L, García-Sánchez C, Aracil I, Campolongo A, Gironell A, Rodríguez-Rodríguez R, Álvarez- Holzapfel MJ, Gómez- Ansón B, Medina V, Pagonabarraga J, Kulisevsky J(invited talk).
 - **Neurology Up-To-Date, 17ª Edition.** (13/05/2021). Virtual. “Enfermedad de Parkinson”. Kulisevsky J (organizer). With the scientific endorsement of the Spanish Society of Neurology & With the teaching endorsement of the Spanish Society of Neurology.
 - **XXV Reunión Anual de la Societat Catalana de Neurologia.** (03–07/05/2021). Virtual. “Noves evidències en eficàcia i seguretat de Opicapona”. Kulisevsky J.
 - **7th EAN Virtual Congress.** (19–22/06/2021). European Academy of Neurology. “Characterizing cognitive impairment in synucleinopathies”. Pagonabarraga J.
 - **Zambon Brasil Meeting** (19/08/2021). Virtual. “Safinamide: Mechanism of Action and its use in real-world practice”. Pagonabarraga J.
 - **European Huntington’s Disease Network (EHDN).** (09–11/09/2021). Remote Meeting. Chair of the Cognition Session and Closing Remarks. Kulisevsky J.
 - **MDS Virtual Congress 2021.** (17–22/09/2021). Movement Disorder Society. “How to tailor the treatment in PD patients after L-dopa “honeymoon”?”. Pagonabarraga J.
 - **XLIII Reunión Anual de la Sociedad Andaluza de Neuropsicología** (30/09/2021–2/10/2021). Huelva. “La neuropsicología oculta en la enfermedad de Huntington”. Martínez-Horta S.
 - **POST MDS Congress.** (20–21/10/2021). Escuela SEN. Sociedad Española de Neurología.
 - “Síntomas no motores en la Enfermedad de Parkinson”. Pascual-Sedano B

- “Parkinsonismos secundarios y atípicos”. Pascual-Sedano B
- **Training Program in Neurology (Third Edition): Update in Movement Disorders in a European Centre of Excellence.** (22/10/2021). Movement Disorders Unit Hospital de la Santa Creu i Sant Pau, Barcelona. “Neuropsychiatric complications in Parkinson’s disease”. Lecture and organizer Kulisevsky J.
- **VII Congreso Uruguayo de Neurología.** (22/10/2021). Montevideo (Streaming). Sociedad de Neurología del Uruguay. “Trastornos neuropsiquiátricos en la Enfermedad de Parkinson”. Kulisevsky J.
- **GEIVEX-TeNTaCLES 2021, 2nd online minisymposium.** (18/11/2021). Grupo Español de Innovación e Investigación en Vesículas Extracelulares. “Exploring the secretion of extracellular vesicles in the brains of Huntington’s disease patients”. Pérez-González R, Rivas-Asensio E, Pérez-Pérez J, Martínez-Horta S, Kulisevsky J.
- **LXXIII Reunion Anual de la Sociedad Española de Neurología.** (22/11/2021-02/12/2021). Virtual.
- “Valoración del perfil cognitivo y conductual en la enfermedad de Huntington”. Martínez-Horta S.
- “Semiología central del diagnóstico diferencial de los Parinsonismos atípicos”. Martínez-Horta S.
- “Bases neurofisiológicas, clínica y comorbilidades en el síndrome de Tourette”. Martínez-Horta S.
- “Bases Neurobiológicas del efecto placebo”. Martínez-Horta S.
- **Simposio Neurología en Movimiento. Reunión Anual de la Sociedad Española de Neurología.** (02/12/2021). Virtual. “Enfermedad de Parkinson 2030: una prospección a 10 años”. Kulisevsky J.
- **Reunión Anual de la Sociedad Española de Neurología.** (01/12/2021). Virtual. Coordinador del Seminario “El tiempo cuenta en la Enfermedad de Parkinson” y Ponencia: “Identificación temprana del paciente fluctuante... ¿Qué más podemos hacer? “. Kulisevsky J.



Molecular Neuropharmacology

Coordinator

Pol Rigau, Olga
opol@santpau.cat

IR

Members

Bai, Xue	UAB	Martínez Martel, Ignacio	UAB
Batallé Melgarejo, Gerard	UAB	Martínez Serrat, María	UAB
Cazuza, Rafael Alves EXTERNA	ENTITAT	Pouso-Vázquez Sánchez, Enric	UAB
Coral Pérez, Santiago	UAB	Roch Alba, Gerard	UAB
		Rodríguez Peris, Laura	UAB

Main lines of research

Chronic pain is an important clinical problem due to the low efficacy of conventional treatments and their numerous side effects. Chronic pain is also accompanied by affective disorders such as depression, anxiety and memory deficits, which exert a negative influence on the perception of pain, creating a vicious circle that contributes to the impairment in the quality of life of patients. At present, the treatment of chronic pain and the linked emotional disorders is a major challenge.

Our main objective is to find new treatments that effectively relieve chronic pain and the associated comorbidities by using pharmacological, molecular and genetic techniques.

Main Research lines:

- **New strategies for the treatment of chronic pain.** To identify new drugs capable of alleviating inflammatory, osteoarthritis, and/or neuropathic pain induced by nerve injury or chemotherapy in different preclinical pain models and to investigate the precise mechanisms underlying their effects.
- **New therapies for the emotional disorders associated with chronic pain.** To investigate the role played by different gaseous neurotransmitters in the modulation of anxiety- and depressive-like behaviors and/or the cognitive deficits accompanying persistent chronic pain.
- **Neuropharmacology of opioids and cannabinoids.** To establish new

strategies to potentate the analgesic effects of opioids and cannabinoids during chronic pain, avoiding the development of side effects that result from the administration of high and/or continued doses of these drugs.

• **New stratagems for the treatment of diabetic neuropathy.**

To identify new approaches to inhibit oxidative stress and neuropathy, two of the major complications associated with diabetes, by evaluating the therapeutic action of specific molecules in different preclinical models of diabetes.

Scientific Challenges

• To identify new pharmacological compounds that effectively abolish chronic pain with few side effects which use can be transferred to clinical practice and/or be patentable. To evaluate the analgesic, antidepressant and/or anxiolytic effects of carbon monoxide, hydrogen sulfide and molecular hydrogen in animals with chronic osteoarthritis, inflammatory or neuropathic pain; the mechanism of action of these compounds in specific areas of the central and peripheral nervous systems; and their effects on the functional disability linked with osteoarthritis and the cognitive deficits accompanying chronic pain.

• Oxidative stress is one of the principal mechanisms involved in the development and maintenance of chronic pain. To identify new antioxidant compounds as potential therapeutic targets and to evaluate their effects on proinflammatory signals and plasticity changes provoked by nerve injuries, chemotherapeutic agents, or metabolic disorders.

• To study the interaction between carbon monoxide and other gaseous neurotransmitters (nitric oxide and hydrogen sulfide) at the molecular and behavioral levels. To evaluate the effects of these combinations on the modulation of nociceptive responses, emotional disorders, and locomotor activity in different preclinical pain models.

• To evaluate the neuroprotective, anti-apoptotic and antioxidant mechanisms implicated in the modulation of inflammatory pain induced by the heme oxygenase 1/carbon monoxide signaling pathway activation and its interaction with the endogenous cannabinoid system.

• To identify new pharmacological targets for the treatment of the allodynia associated with diabetes and evaluate their actions on the molecular changes provoked by neuropathy in the central and peripheral nervous system.

• To advance the knowledge of the molecular mechanisms involved in the analgesic effects of opioids and cannabinoids. To enhance the analgesic actions of mu- and delta-opioid receptor agonists and cannabinoid 2 receptor agonists in chronic pain through their co-administration with specific drugs and

to evaluate their effects on the emotional and/or cognitive disorders associated with chronic pain.

Collaborations

External collaborations

- Dr Christie Leite–Panissi. University of São Paulo. Brazil.
- Dr Gianfranco Balboni. University of Cagliari. Italy.
- Dr Loredana Salerno, University of Catania, Italy
- Dr Valeria Pittalà, University of Catania, Italy
- Dr Roberto Motterlini. INSERM U955. University Paris–Est. France.
- Dr Luciano Saso, University of Sapienza, Italy
- Dr Lydia Giménez-LLort. Universitat Autònoma de Barcelona. Spain

Active grants

- OLGA POL RIGAU. Nuevos enfoques para el tratamiento del dolor crónico y comorbilidades asociadas. PI18/00645. Instituto de Salud Carlos III. Duration 2019–2021. 97.000,00 €.

Note: Total amount granted to PI. It does not include indirect costs.

Grants awarded in 2021

- OLGA POL RIGAU. Nuevas dianas moleculares para el tratamiento del dolor crónico. PI21/00592. Instituto de Salud Carlos III. Duration 2022–2024. 166.980,00 €.

Scientific production

- Bai X, Batalle G, Pol O. The Anxiolytic and Antidepressant Effects of Diallyl Disulfide and GYY4137 in Animals with Chronic Neuropathic Pain. *Antioxidants*. 2021; 10(7):1074. DOI:10.3390/antiox10071074. PMID:34356307. IF:6,312 (Q1/D1).
- Batalle G, Bai X, Pouso E, Roch G, Rodriguez L, Pol O. The Recovery of Cognitive and Affective Deficiencies Linked with Chronic Osteoarthritis Pain and Implicated Pathways by Slow-Releasing Hydrogen Sulfide Treatment. *Antioxidants*. 2021; 10(10):1632. DOI:10.3390/antiox10101632. PMID:34679766. IF:6,312 (Q1/D1).
- Cazuza RA, Arantes A, Pol O, Leite C. HO–CO pathway activation may be associated with hippocampal mu and delta opioid receptors in inhibiting inflammatory pain aversiveness and nociception in WT but not NOS2–KO mice. *BRAIN RESEARCH BULLETIN*. 2021; 169. DOI:10.1016/j.brainresbull.2021.01.002. PMID:33422660. IF:4,077 (Q2/D5).
- Ferreira–Chamorro P, Redondo A, Riego G, Pol O. Treatment with 5–fluoro–2–oxindole Increases the Antinociceptive Effects of Morphine and Inhibits Neuropathic Pain. *CELLULAR AND MOLECULAR NEUROBIOLOGY*. 2021;41(5):995–1008.

DOI:10.1007/s10571-020-00952-w. PMID: 32880099. IF:5,046 (Q2/D4).

- Pol O. The role of carbon monoxide, heme oxygenase 1, and the Nrf2 transcription factor in the modulation of chronic pain and their interactions with opioids and cannabinoids. *MEDICINAL RESEARCH REVIEWS*. 2021;41(1):136-155. DOI:10.1002/med.21726. PMID: 32820550. 12,944 (Q1/D1).

- Porta A, Rodriguez L, Bai X, Batalle G, Roch G, Pouso E, Balboni G, Pol O. Hydrogen Sulfide Inhibits Inflammatory Pain and Enhances the Analgesic Properties of Delta Opioid Receptors. *Antioxidants*. 2021; 10(12):1977. DOI:10.3390/antiox10121977. PMID:34943080. IF:6,312 (Q1/D1).

Communication and dissemination activities

Conferences and communications

- Pain Seminars. Anesthesiology Research Laboratory. University of California. 2021. San Diego, USA. Gaseous neurotransmitters and chronic pain. Pol O.

- XLIV Reunião Anual da Sociedade Brasileira de Neurociências e Comportamento (SBNeC). 2021. Sao Paulo, Brasil. Dor persistente: neurotransmissores gasosos e suas interações. Pol O.

- 8th European Congress of Pharmacology (EPHAR). 2021. Prague, Czech Republic. Mechanisms implicated in the analgesic effects of slow-releasing hydrogen sulfide donors during inflammatory pain in mice. Rodríguez L, Bai X, Batallé G, Roch G, Pouso-Vázquez E, Pol O.

- 8th European Congress of Pharmacology (EPHAR). 2021. Prague, Czech Republic. The recovery of cognitive and affective deficiencies linked with chronic osteoarthritis pain and implicated pathways by slow-releasing hydrogen sulfide treatment. Batallé G, Bai X, Pouso-Vázquez E, Roch G, Rodríguez L, Pol O.

- 8th European Congress of Pharmacology (EPHAR). 2021. Prague, Czech Republic. The beneficial effects of heme oxygenase 1 activation in the management of chemotherapy-induced neuropathy in mice. Roch G, Batallé G, Bai X, Pouso-Vázquez E, Rodríguez L, Pol O.

- 8th European Congress of Pharmacology (EPHAR). 2021. Prague, Czech Republic. The anxiolytic, antidepressant and antinociceptive effects of diallyl disulfide and GYY4137 in mice with chronic neuropathic pain. Bai X, Batallé G, Pol O.

- 8th European Congress of Pharmacology (EPHAR). 2021. Prague, Czech Republic. Effects of heme oxygenase 1 and cannabinoid 2 receptors on oxidative stress and nociceptive responses accompanying type 2 diabetes. Pouso-Vázquez E, Bai X, Batallé G, Roch G, Pol O.

- World Congress on Pain (IASP). 2021. Virtual Congress. Treatment with Slow-Releasing Hydrogen Sulfide Donors Inhibits Peripheral Inflammatory Pain in Mice. Porta A, Batallé G, Bai X, Pol O.

- World Congress on Pain (IASP). 2021. Virtual Congress. The anxiolytic and antidepressant effects of two slow-releasing hydrogen sulfide donors in animals with chronic neuropathic pain: mechanisms implicated. Bai X, Batallé G, Pol O.

- World Congress on Pain (IASP). 2021. Virtual Congress. The Effects of Hydrogen Sulfide in the Oxidative Stress, Nociceptive, Inflammatory and Apoptotic Responses Induced by Chronic Osteoarthritis Pain. Batallé G, Bai X, Pol O.

- VIII INC-UAB Scientific Conferences. 2021. Girona, Spain. The antinociceptive actions, recovery of cognitive and affective deficiencies linked with chronic osteoarthritis pain and implicated pathways by slow-releasing hydrogen sulfide treatment. Batallé G, Bai X, Pouso-Vázquez E, Roch G, Rodríguez L, Pol O.

- VIII INC-UAB Scientific Conferences. 2021. Girona, Spain. The anxiolytic and antidepressant effects of diallyl disulfide and GYY4137 in animals with chronic neuropathic pain and their interaction with μ opioid receptors. Bai X, Batallé G, Pouso-Vázquez E, Roch G, Rodríguez L, Pol O.

Directed Master's Theses

- Enrique Pouso-Vázquez Sánchez. Effects of heme oxygenase 1 and cannabinoid 2 receptors in the oxidative stress and nociceptive responses associated with type 2 diabetes in mice. Institut d'Investigació Biomèdica-IIB Sant Pau and Universitat Autònoma de Barcelona. Pol O

- Gerard Roch Alba. The beneficial effects of heme oxygenase 1 and hydrogen sulfide activation in the management of chemotherapy-induced neuropathy in mice and mechanisms associated. Institut d'Investigació Biomèdica-IIB Sant Pau and Universitat Autònoma de Barcelona. Pol O

- Laura Rodríguez Peris. Mechanisms implicated in the analgesic effects of slow-releasing hydrogen sulfide donors during inflammatory pain in mice. Institut d'Investigació Biomèdica-IIB Sant Pau and Universitat Autònoma de Barcelona. Pol O

Other activities

- Editor of ANTIOXIDANTS. in the special issue Antioxidants in Chronic Pain II. D1 in Food Science & Technology. Pol O



Pharmacological research in humans

Coordinator

Antoni Joan Arbos, Rosa Maria
rantonijoana@santpau.cat FGS

Members

Ayala Oliveros, Johan Humberto	IR	Gomis Pulgar, Ana Maria	IR
Ballester Verneda, Maria Rosa	IR	Leguizamo Martínez, Lina M.	IR
Bros Gonzalez, Pablo	IR	Martinez Bonifacio, David	IR
Castillo Ocaña, Marta	IR	Martinez Colomer, Juan	IR
Cedeño Pico, Gonzalo Edson	IR	Martinez Dominguez, Pura	IR
Coimbra Hurtado, Maria Jimena	IR	Martinez Martinez, Maria Isabel	IR
Coma Bolta, Sonia	IR	Mercader Segui, Esteve	IR
Cuadro Bertolín, David	IR	Molina Perelló, Pol	IR
Espinosa Guerrero, Alejandra Nallely	IR	Mora Amargos, Sara	IR
Funes Ungria, Maria Angels	IR	Puntes Rodriguez, Montserrat	IR
Garrido Sanchez, Maria Teresa	IR	Sánchez Núñez, Isabel	IR
Gich Saladich, Ignasi Josep	FGS		

Main lines of research

- **Clinical Trials with no Therapeutic Benefits to Volunteer Participants**
- Phase I clinical trials (healthy volunteers) whose main objectives include: first in human, safety and tolerability (local, systemic/dermatological, ophthalmological, vaginal), pharmacokinetics, bioavailability and bioequivalence (generic drugs), pharmacodynamics, interactions (drug-drug/drug-food), evaluation and characterization of biomarkers, proofs

of concept, acceptability and preference studies.

- Follow-up studies in populations with the same or different characteristics (elderly, obese, postmenopausal, with liver or kidney failure).

- Collaboration with clinical services to conduct phase II/III studies.

- **Neuro-Physio-Pharmacology of Sleep/Wake States**

- Investigate human brain activity in sleep and wakefulness, mechanisms involved in these states, problems derived from sleep disturbances and possible interventions.
- Approach the phenomenon as a continuum: appropriate interpretation of the impact of a certain intervention, whether pharmacological or not, should consider the complementarity of evaluations performed during sleep and during wakefulness.
- Develop psychomotor performance tests, subjective evaluation scales and pupillometric tests.

Scientific Challenges

- Consolidate a strong leadership in Phase I studies in Spain, increase relationships with the pharmaceutical industry at national level and extend relations abroad with multinational pharmaceutical companies and industries from other sectors.
- Perform high quality Phase I-II studies, in order to improve scientific knowledge and contribute to the scientific community with reliable data.
- Develop neurophysiologic recording performance in ambulatory conditions, simplifying participation of volunteers but not lowering the quality of data obtained.
- Promote the dissemination of our activity with a dual objective: return the knowledge generated to the society and demystify research in humans, approaching it to the community, and to foster participate in clinical trials (specific sectors of the populations, such as the elderly).
- Set up educational activities related to the application of good clinical practices in clinical research and into sleep medicine and its medical (pathology, and treatment) and social (quality of life, prevention of accident risk) consequences.

Active grants

- ROSA MARIA ANTONIJOAN ARBOS. Descubrimiento y desarrollo de nuevos tratamientos Inmuno-Oncológicos. RTC2019-006865-1. Ministeri de Ciència, Innovació i Universitats. Duration 2020-2022. 251.174,00 €.
- ROSA MARIA ANTONIJOAN ARBOS. Descubrimiento y desarrollo de nuevos tratamientos Inmuno-Oncológicos y anti-fibróticos con efecto local_INMUNORGAN.. RTC2019-007449-1. Ministeri de Ciència, Innovació i Universitats. Duration 2020-2022. 137.574,00 €.
- ROSA MARIA ANTONIJOAN ARBOS. Estudio de una nueva estrategia terapéutica para tratar la infertilidad femenina basada en el compuesto OXO-001.. RTC2019-007454-1.

Ministeri de Ciència, Innovació i Universitats. Duration 2020-2021. 239.941,65 €.

Note: Total amount granted to PI. It does not include indirect costs.

Scientific production

- Antonijoan RM, Ferrero JM, Coimbra J, Puntos M, Martinez J, Arevalo MI, Mascaro C, Molinero C, Buesa C, Maes T. First-in-Human Randomized Trial to Assess Safety, Tolerability, Pharmacokinetics and Pharmacodynamics of the KDM1A Inhibitor Vafidemstat. *CNS DRUGS*. 2021; 35(3). DOI:10.1007/s40263-021-00797-x. PMID:33755924. IF:5,749 (Q1/D2).
- Corominas H, Castellvi I, Pomar V, Antonijoan R, Mur I, Matas L, Gich I, de Benito N, Laiz A, Castillo D, Villamarin L, Filella D, Mill AM, Quijada MA, Puig M, Casademont J, Domingo P. Effectiveness and safety of intravenous tocilizumab to treat COVID-19-associated hyperinflammatory syndrome: Covizumab-6 observational cohort. *CLINICAL IMMUNOLOGY*. 2021; 223:108631. DOI:10.1016/j.clim.2020.108631. PMID:33189888. IF:3,969 (Q3/D6).
- Ferreri L, Mas E, Cardona G, Zatorre RJ, Antonijoan RM, Valle M, Riba J, Ripolles P, Rodriguez A. Dopamine modulations of reward-driven music memory consolidation. *Annals of the New York Academy of Sciences*. 2021; 1502(1). DOI:10.1111/nyas.14656. PMID:34247392. IF:5,691 (Q1/D2).
- Llorca V, Palacios R, Routh DR, Buil E, Adrados M, Gich I, Bioque M, Mur M. High neutrophil-lymphocyte ratio upon admission is associated with better response in psychotic depression. *JOURNAL OF PSYCHIATRIC RESEARCH*. 2021; 143. DOI:10.1016/j.jpsychires.2021.08.021. PMID:34438202. IF:4,791 (Q1/D2).
- Lopez L, Domenech E, Roguera M, Gich I, Farre M, Rodrigo C, Montane E. Spontaneous Reporting of Adverse Drug Reactions in a Pediatric Population in a Tertiary Hospital. *Journal of Clinical Medicine*. 2021; 10(23):5531. DOI:10.3390/jcm10235531. PMID:34884233. IF:4,241 (Q1/D3).
- Magallares B, Lobo D, Castellvi I, Moya P, Gich I, Martinez L, Park H, Millan AM, Laiz A, Diaz C, Fernandez S, Corominas H. Assessment of EULAR/ACR-2019, SLICC-2012 and ACR-1997 Classification Criteria in SLE with Longstanding Disease. *Journal of Clinical Medicine*. 2021; 10(11):2377. DOI:10.3390/jcm10112377. PMID:34071275. IF:4,241 (Q1/D3).
- Munoz FZ, Rios M, Roe E, Bernabeu J, Montserrat MT, Puig L, Gich I, Baselga E. Efficacy and Safety of Topical Timolol for the Treatment of Infantile Hemangioma in the Early Proliferative Stage A Randomized Clinical Trial. *JAMA Dermatology*. 2021; 157(5). DOI:10.1001/jamadermatol.2021.0596. PMID:33825828. IF:10,282 (Q1/D1).
- Navarro DF, Garcia AL, de Guzman EN, Rabassa M, Campos RZ, Pardo H, Ricci I, Canelo C, Meneses JF, Yepes JJ, Kuindersma J, Saladich IG, Alonso P. Vitamin D recommendations in clinical guidelines: A systematic review, quality evaluation and

analysis of potential predictors. *INTERNATIONAL JOURNAL OF CLINICAL PRACTICE*. 2021; 75(11):e14805. DOI:10.1111/ijcp.14805. PMID:34486779. IF:2,503 (Q2/D5).

• Tundidor D, Meek CL, Yamamoto J, Martinez C, Gich I, Feig DS, Murphy HR, Corcoy R. Continuous Glucose Monitoring Time-in-Range and HbA(1c) Targets in Pregnant Women with Type 1 Diabetes. *Diabetes Technology & Therapeutics*. 2021; 23(10). DOI:10.1089/dia.2021.0073. PMID:33945304. IF:6,118 (Q1/D2).

• Weersink RA, Alvarez-Alvarez I, Medina-Cáliz I, Sanabria-Cabrera J, Robles-Díaz M, Ortega-Alonso A, García-Cortés M, Bonilla E, Niu H, Soriano G, Jimenez-Perez M, Hallal H, Blanco S, Kaplowitz N, Lucena MI, Andrade RJ. Clinical Characteristics and Outcome of Drug-Induced Liver Injury in the Older Patients: From the Young-Old to the Oldest-Old. *CLINICAL PHARMACOLOGY & THERAPEUTICS*. 2021;109(4):1147-1158. DOI:10.1002/cpt.2108. PMID: 33179256. IF:6,875 (Q1/D1).



Mental Health

Coordinator

Portella Moll, Maria Jesus IR
mportella@santpau.cat

Members

Alemany Santamaría, Carlo	FGS	Grasa Bello, Eva Maria	
Allende Leal, Saiko		CIBERSAM	
CIBERSAM		Jaramillo Muñumer, María	
Almenta Gallego, David	FGS	CIBERSAM	
Alonso Solís, Anna	IR	Jubero Urgell, Miriam	IR
Alvarez Martínez, Enric	FGS	Martin Blanco, Ana	FGS
Ávila Porcet, Aina	FGS	Núñez Leáñez, Christian	IR
Carceller Sindreu, Maria Del Mar	FGS	Perez Blanco, Josefina	FGS
Carmona Farres, Cristina	FGS	Pousa Tomàs, Esther	FGS
Casellas Pujol, Elisabet	FGS	Puigdemont Campos, Maria Dolors	FGS
Corripio Collado, Iluminada	FGS	Roldan Bejarano, Alejandra	FGS
De Diego Adeliño, Francisco Javier	FGS	Serrano Gimeno, Víctor	FGS
Díaz Perez, Anna Maria	FGS	Soler Ribaudi, Joaquin	FGS
Farré Martínez, Adriana	FGS	Tiana Sastre, Thais	FGS
Fernandez Vidal, Aina	FGS	Vicent Gil, Muriel	IR

Main lines of research

- Psychotic disorders (treatment-resistant schizophrenia, DBS, digital health).
- Affective disorders (major depression and validation of scales).
- Borderline personality disorder.
- Community psychiatry.

Scientific Challenges

- Foster research that reduces the healthcare, social and personal costs of mental illness by exploring areas such as epidemiology, etiopathogenesis, physiopathology, prevention and treatment.
- Foster research into mental health therapies.

- Foster research to improve quality of life of patients with mental disorders.

Research into Psychotic Disorders

- Study of treatment resistance in schizophrenia.
- Study of novel treatments (DBS, digital health) in schizophrenia and first episode of psychosis.
- Neuroimaging studies in psychosis.
- Study of environmental, biological and genetic factors in psychosis.
- Efficacy and effectiveness studies of antipsychotic drugs.
- Efficacy and effectiveness studies of metacognitive and emotion regulation therapies for schizophrenia and first episode of psychoses.

Research into Affective Disorders

- Identification and evaluation of new therapeutic targets in depression.
- Neuroimaging studies in first psychotic episodes.
- Biological and genetic markers in affective disorders.
- Implementation of new therapeutic programmes, depression evaluation and social aspects of depression.

Research into Personality Disorders

- Clinical trials regarding the usefulness of mixed treatment in patients with borderline personality disorder and validation of diagnostic instruments.
- Genetic-neuroimaging studies of borderline personality disorder (BPD).
- Efficacy and effectiveness studies of psychotherapy for treating borderline personality disorder.

Research into Community intervention

- Community psychiatry.
- Validation of patient and caregiver satisfaction scales and programs.

Collaborations

Collaborations with other IIB Sant Pau research groups

- Addictive Behaviours
- Neuroradiology
- Neurosurgery
- Hypophysis Diseases
- CIM – Sant Pau
- Pain Clinic Sant Pau
- Genetics
- Internal Medicine

External collaborations

- Institut Hospital del Mar d'Investigacions Mèdiques (IMIM), Mental Health Research Group
- Hospital Clínic y Provincial de Barcelona, Psychiatry Department
- Hospital Parc Taulí, Sabadell, Psychiatry Department
- Universidad de Valencia, Medicine-Psychiatry Department

- Universidad de Cádiz, Medicine-Pharmacology Department
- Sant Joan de Déu Research Foundation
- University of Oxford, Medicine-Psychiatry Department
- Participation as coordinators and professors in the Master's Degree in Research in Mental Health. Universitat Autònoma de Barcelona, Universidad de Cantabria, Universitat de Barcelona, Universidad Complutense de Madrid, Universidad de Cádiz, CIBERSAM.
- Part of the CIBERSAM Group CB/07/09/0010 <https://www.cibersam.es/grupos/grupo-de-investigacion?id=14242>
- ENIGMA Consortium <https://enigma.ini.usc.edu/>
- Red TECSAM <https://tecsam.org/es/>

Active grants

- FRANCISCO JAVIER DE DIEGO ADELIÑO. Estudio longitudinal de predicción precoz de la respuesta en depresión con la combinación multimodal de biomarcadores epigenéticos, neurocognitivos y clínicos. PI16/00302. Instituto de Salud Carlos III. Duration 2017-2021. 86.500,00 €.
- MARIA JESUS PORTELLA MOLL. RIDEM: Rehabilitación Integral para Depresión Mayor. Estudio de eficacia de un programa de rehabilitación integral. PI17/00056. Instituto de Salud Carlos III. Duration 2018-2021. 47.000,00 €.
- MARIA JESUS PORTELLA MOLL. Grup de Recerca en Trastorns Psiquiàtrics de Sant Pau. 2017 SGR 1343. Agència de Gestió d'Ajuts Universitaris i de Recerca. Duration 2017-2021. 16.250,00 €.
- ILUMINADA CORRIPIO COLLADO. Estimulación Cerebral Profunda: hacia una nueva intervención para la recuperación del paciente con esquizofrenia resistente al tratamiento. PI19/00242. Instituto de Salud Carlos III. Duration 2020-2022. 85.000,00 €.
- JOAQUIN SOLER RIBAUDI. Ensayo clínico sobre los efectos de un entrenamiento de habilidades en síntomas de larga evolución en pacientes con Trastorno Límite de Personalidad. PI19/00087. Instituto de Salud Carlos III. Duration 2020-2022. 20.800,00 €.
- ALEJANDRA ROLDAN BEJARANO. Contractes Rio Hortega 2019. CM19/00043. Instituto de Salud Carlos III. Duration 2020-2022. 53.732,00 €.
- FRANCISCO JAVIER DE DIEGO ADELIÑO. DePREDIgen - Estudio longitudinal de predicción precoz de la respuesta en depresión con la combinación multimodal de biomarcadores epigenéticos, neurocognitivos y clínicos. SLT008/18/00092. Departament de Salut. Duration 2019-2021. 165.909,04 €.
- CARLO ALEMANY SANTAMARIA. sAPPTisfacció: Creació d'una plataforma digital per l'avaluació de la satisfacció dels usuaris i cuidadors d'hospitalització psiquiàtrica domiciliària. SCPSM

2019. Societat Catalana de Psiquiatria i Salut Mental. Duration 2019–2021. 2.608,70 €.

- ILUMINADA CORRIPIO COLLADO. Contractes per a la intensificació de l'activitat investigadora 2020. INT20/00008. Instituto de Salud Carlos III. Duration 2021–2022. 60.000,00 €.

- MARIA JESUS PORTELLA MOLL. Rehabilitación Integral cognitiva para DEpresión Mayor (RIDEM). Ensayo clínico multicéntrico, aleatorizado para investigar su eficacia. PI20/00270. Instituto de Salud Carlos III. Duration 2021–2023. 96.500,00 €.

- CHRISTIAN NUÑEZ LEANEZ. Contractes Sara Borrell 2020. CD20/00142. Instituto de Salud Carlos III. Duration 2021–2023. 80.598,00 €.

Note: Total amount granted to PI. It does not include indirect costs.

Other active grants

- CIBER multidisciplinary study to optimize the treatment of schizophrenia using multi-omics data and systems biology – SchizOMICS. ICI21/00089, Instituto Salud Carlos III. 01/07/2021 – 01/07/2023. 1.192.431€. PI: Javier Labad. Collaborators: Saiko Allende, Eva M Grasa, Esther Pousa, Josefina Pérez.

- Adaptation and validation of the cognitive battery Brief Assessment of Cognition App (BAC App) and the Virtual Reality Assessment of Functional Capacity Tool (VRFCAT) for use in Spain. PI20/00066, Instituto de Salud Carlos III. 2021–2023. 87.120 €. PI: Rosa Ayesa. Collaborators: Esther Pousa.

- Prevención e Intervención en Suicidio (SURVIVE): estudio de cohorte y ensayos clínicos controlados anidados de programas de prevención secundaria para intentos de suicidio. PI19/00236, Instituto de Salud Carlos III / FEDER. 31/12/2019 – 31/12/2022. 212.657,5€. Coordinator: Víctor Pérez Sola. Collaborators: Dolores Puigdemont, Aina Fernández.

- European project: e-MOTIPH; Smart and innovative e-mental health solution to manage and patients with schizophrenia. Grant number 12470, EU. 2018–2021. PI: Joan Escudero. Collaborators: Iluminada Corripio, Eva M^a Grasa, Anna Alonso.

- Cognició social i baixos cognitius en persones amb primers episodis psicòtics en comparació amb esquizofrènia crònica i controls sans. SLT006/17/00231, Generalitat de Catalunya, Call PERIS 2018. 2018–2021. 117.648,53€ (total), 1550€ (Sant Pau). Susana Ochoa (PI, coordinator). Eva M. Grasa (PI Sant Pau).

- Influencia del estilo de apego en la cognición social y sesgos cognitivos en personas con primeros episodios psicóticos, esquizofrenia crónica y controles sanos. PI18/00212. Instituto de Salud Carlos III. 2018–2021. 135.520 €. PI: Susana Ochoa. Collaborators: Eva Grasa, Esther Pousa.

- Sleepiness in Major Depressive Disorder – Javier De Diego Adeliño, Maria J Portella Moll. Jazz Pharmaceutical–IQVIA. 2020 – 2022.

- A Randomized, Double-Blind, Placebo-controlled Study Evaluating the Efficacy and Safety of SAGE-217 in the Treatment of Adults with Severe Postpartum Depression – Josefina Pérez, Aina Ávila Parcet. Sage Therapeutics. 2021.

Grants awarded in 2021

- JOAQUIN SOLER RIBAUDI, Estudio piloto aleatorizado de terapia dialéctica conductual y EMDR para el tratamiento del trastorno límite de la personalidad y el trauma, 2020 EMDR EUROPE INVESTIGATOR GRANT, EMDR EUROPE, 2020 – 2022, 15.740,74 €.

Note: Total amount granted to PI. It does not include indirect costs.

Awards

- VI Premi Reptes Clínic del Dia a Dia, Jornada de Cloenda curs 2020–2021. Awards committee members: M^a del Mar Carceller, Ana Martín Blanco, Carlo Alemany, Aina Ávila

Doctoral theses

- Azucena Justicia Díaz, Eficacia de la autoayuda guiada online en pacientes con depresión leve y moderada, Universitat Autònoma de Barcelona (UAB), Dr. Víctor Pérez Sola; Dra. Maria J Portella Moll, 15/12/2021
- Alexandra Roldán Bejarano, Estimulación cerebral profunda en esquizofrenia resistente, Universitat Autònoma de Barcelona (UAB), Dra. Iluminada Corripio Collado; Dra. Maria J. Portella Moll, 05/03/2021

Scientific production

- Amoretti S, Mezquida G, Rosa AR, Bioque M, Cuesta MJ, Pina L, Garcia C, Barcones F, Gonzalez A, Merchan J, Corripio I, Vieta E, Baeza I, Cortizo R, Bonnin CM, Torrent C, Bernardo M, PEPs GRP. The functioning assessment short test (FAST) applied to first-episode psychosis: Psychometric properties and severity thresholds. *EUROPEAN NEUROPSYCHOPHARMACOLOGY*. 2021; 47. DOI:10.1016/j.euroneuro.2021.02.007. PMID:33658165. IF:4,600 (Q2/D3).

- Amoretti S, Rabelo FD, Rosa AR, Mezquida G, Sanchez AM, Fraguas D, Cabrera B, Lobo A, Gonzalez A, Pina L, Corripio I, Vieta E, Torrent C, de la Serna E, Berge D, Bioque M, Garriga M, Serra M, Cuesta MJ, Bernardo M. Cognitive clusters in first-episode psychosis. *SCHIZOPHRENIA RESEARCH*. 2021; 237. DOI:10.1016/j.schres.2021.08.021. PMID:34481203. IF:4,939 (Q1/D2).

- Amoretti S, Verdolini N, Mezquida G, Rabelo FD, Cuesta MJ, Pina L, Gomez M, De C, Gonzalez A, Diaz CM, Corripio I, Vieta E,

- de la Serna E, Mane A, Sole B, Carvalho AF, Serra M, Bernardo M. Identifying clinical clusters with distinct trajectories in first-episode psychosis through an unsupervised machine learning technique. *EUROPEAN NEUROPSYCHOPHARMACOLOGY*. 2021; 47. DOI:10.1016/j.euroneuro.2021.01.095. PMID:33531261. IF:4,600 (Q2/D3).
- Arnaiz JA, Rodrigues-Silva C, Mezquida G, Amoretti S, Cuesta MJ, Fraguas D, Lobo A, González-Pinto A, Díaz-Caneja MC, Corripio I, Vieta E, Baeza I, Mané A, García-Rizo C, Bioque M, Saiz J, Bernardo M, Mas S; PEPs group. The usefulness of Olanzapine plasma concentrations in monitoring treatment efficacy and metabolic disturbances in first-episode psychosis. *Psychopharmacology (Berl)*. 2021;238(3):665–676. DOI:10.1007/s00213-020-05715-5. PMID: 33230696. IF:4,530 (Q2/D3).
 - Arranz MJ, Gallego C, Martin A, Soler J, Elices M, Dominguez E, Salazar J, Vega D, Briones L, Pascual JC. A genome-wide methylation study reveals X chromosome and childhood trauma methylation alterations associated with borderline personality disorder. *Translational Psychiatry*. 2021; 11(1):5. DOI:10.1038/s41398-020-01139-z. PMID:33414392. IF:6,222 (Q1/D2).
 - Baeza I, de la Serna E, Amoretti S, Cuesta MJ, Diaz CM, Mezquida G, Lobo A, Gonzalez A, Corripio I, Vieta E, Puig O, Legido T, Bioque M, Garcia C, Bernardo M, Castro J. Premorbid Characteristics as Predictors of Early Onset Versus Adult Onset in Patients With a First Episode of Psychosis. *JOURNAL OF CLINICAL PSYCHIATRY*. 2021; 82(6):21m13907. DOI:10.4088/JCP.21m13907. PMID:34529899. IF:4,384 (Q1/D3).
 - Ballesteros A, Torres A, Lopez J, Mezquida G, Lobo A, Gonzalez A, Pina L, Corripio I, Vieta E, de la Serna E, Mane A, Bioque M, Moreno L, Espliego A, Lorente R, Amoretti S, Bernardo M, Cuesta MJ. The longitudinal effect of antipsychotic burden on psychosocial functioning in first-episode psychosis patients: the role of verbal memory. *PSYCHOLOGICAL MEDICINE*. 2021; 51(12):PII S003329172000080X. DOI:10.1017/S003329172000080X. PMID:32326991. IF:7,723 (Q1/D1).
 - Bernardo M, Amoretti S, Cuesta MJ, Parellada M, Mezquida G, Corripio I, Mico JA. The prevention of relapses in first episodes of schizophrenia: The 2EPs Project, background, rationale and study design. *Revista de Psiquiatria y Salud Mental*. 2021; 14(3). DOI:10.1016/j.rpsm.2020.07.004. PMID:33020032. IF:3,318 (Q2/D4).
 - Briones L, Ali I, Schmidt C, Nicolaou S, Pascual JC, Soler J, Vega D. Predicting Non-Suicidal Self-Injury in Young Adults with and without Borderline Personality Disorder: a Multilevel Approach Combining Ecological Momentary Assessment and Self-Report Measures. *PSYCHIATRIC QUARTERLY*. 2021; 92(3). DOI:10.1007/s11126-020-09875-7. PMID:33475912. IF:2,832 (Q3/D6).
 - Calabria M, Perez JP, Martinez S, Horta A, Carceller M, Kulisevsky J, Costa A. Language reconfiguration in bilinguals A study with Huntington's disease patients. *Linguistic Approaches to Bilingualism*. 2021; 11(4). DOI:10.1075/lab.18022.cal. IF:1,813 (Q2/D3).
 - Calderon-Mediavilla M, Vila-Badia R, Dolz M, Butjosa A, Barajas A, Del Cacho N, Sánchez B, Pardo M, Baños I, Usall J, Ochoa S, [...] Santos A, Nuñez C; GENIPE Group; PROFEP Group. Depressive symptoms and their relationship with negative and other psychotic symptoms in early onset psychosis. *EUROPEAN CHILD & ADOLESCENT PSYCHIATRY*. 2021;30(9):1383–1390. DOI:10.1007/s00787-020-01618-0. PMID: 32865655. IF:4,785 (Q1/D1).
 - Casellas E, Raventos B, Pineiro M, Navarro H, Castillon M, Portella MJ, Martin A. A Real-World Study of the Association between a Brief Group Psychoeducation and the Course of Bipolar Disorder. *International Journal of Environmental Research and Public Health*. 2021; 18(9):5019. DOI:10.3390/ijerph18095019. PMID:34068535. IF:3,390 (Q1/D3).
 - Caso JR, MacDowell KS, Gonzalez A, Garcia S, de Diego J, Carceller M, Sarramea F, Caballero J, Gracia P, De la Camara C, Aguera L, Gomez ML, Alba C, Rodriguez JM, Leza JC. Gut microbiota, innate immune pathways, and inflammatory control mechanisms in patients with major depressive disorder. *Translational Psychiatry*. 2021; 11(1):645. DOI:10.1038/s41398-021-01755-3. PMID:34934041. IF:6,222 (Q1/D2).
 - Cobo J, Coronas R, Pousa E, Oliva JC, Gimenez O, Esteba S, Novell R, Palao DJ, Caixas A. Multidimensional Evaluation of Awareness in Prader-Willi Syndrome. *Journal of Clinical Medicine*. 2021; 10(9):2007. DOI:10.3390/jcm10092007. PMID:34067179. IF:4,241 (Q1/D3).
 - Draganov M, Arranz MJ, Vives Y, Jubero M, de Diego J, Avila A, Puigdemont D, Portella MJ. Polymorphisms in the IL1-b gene are associated with increased Glu and Glx levels in treatment-resistant depression. *PSYCHIATRY RESEARCH-NEUROIMAGING*. 2021; 316:111348. DOI:10.1016/j.psychres.2021.111348. PMID:34371477. IF:2,376 (Q3/D8).
 - Feliu A, de Diego J, Luciano JV, Iraurgi I, Alemany C, Puigdemont D, Perez V, Portella MJ, Trujols J. Unhappy While Depressed: Examining the Dimensionality, Reliability and Validity of the Subjective Happiness Scale in a Spanish Sample of Patients with Depressive Disorders. *International Journal of Environmental Research and Public Health*. 2021; 18(20):10964. DOI:10.3390/ijerph182010964. PMID:34682709. IF:3,390 (Q1/D3).
 - Feliu A, Perez-Aranda A, Luciano JV, Demarzo M, Marino M, Soler J, Van Gordon W, Garcia-Campayo J, Montero-Marin J. Psychometric Properties of the 15-Item Five Facet Mindfulness Questionnaire in a Large Sample of Spanish Pilgrims. *Mindfulness*. 2021; 12(4): 852–862. DOI:10.1007/s12671-020-01549-6. IF:4,684 (Q1/D2).
 - Ferrer M, Fernandez D, Lopez R, Birules I, Barajas A, Lorente E, Diaz L, Verdaguer M, Garcia H, Sevilla J, Gutierrez A, Grasa E, Pousa E, Huerta E, Pelaez T, Barrigon ML, Gonzalez F, Ruiz I, Cid J, Moritz S, Ochoa S. Persons with first episode psychosis have distinct profiles of social cognition and metacognition. *npj Schizophrenia*. 2021; 7(1):61. DOI:10.1038/s41537-021-00187-8. PMID:34887442. IF:5,200 (Q1/D3).

- Gasso P, Rodriguez N, Martinez A, Mezquida G, Ribeiro M, Gonzalez J, Zorrilla I, Martinez L, Rodriguez R, Corripio I, Sarro S, Ibanez A, Usall J, Lobo A, Moren C, Cuesta MJ, Parellada M, Gonzalez A, Berrocoso E, Bernardo M, Mas S. A longitudinal study of gene expression in first-episode schizophrenia; exploring relapse mechanisms by co-expression analysis in peripheral blood. *Translational Psychiatry*. 2021; 11(1):539. DOI:10.1038/s41398-021-01645-8. PMID:34667144. IF:6,222 (Q1/D2).
- Gonzalez C, Birules I, Pousa E, Barrigon ML, Lopez R, Lorente E, Ayesa R, Setien E, Barajas A, Grasa EM, Ruiz I, Gonzalez F, Cid J, Ochoa S. Moderators of cognitive insight outcome in metacognitive training for first-episode psychosis. *JOURNAL OF PSYCHIATRIC RESEARCH*. 2021; 141. DOI:10.1016/j.jpsychires.2021.06.040. PMID:34186271. IF:4,791 (Q1/D2).
- Gonzalez L, Garcia MP, Gutierrez M, Mezquida G, Cuesta MJ, Urbiola E, Amoretti S, Barcones F, Gonzalez A, Pina L, Corripio I, Vieta E, Baeza I, Toll A, Saiz PA, Bobes J, Bernardo M. Impact of previous tobacco use with or without cannabis on first psychotic experiences in patients with first-episode psychosis. *SCHIZOPHRENIA RESEARCH*. 2021; 236. DOI:10.1016/j.schres.2021.07.017. PMID:34365082. IF:4,939 (Q1/D2).
- Gorwood P, Benichou J, Moore N, Álvarez Martínez E, Mertens J, Aguglia E, Figueira ML, Falkai P, Olivier V, Watzet M, Picarel-Blanchot F, de Bodinat C. The safety of agomelatine in standard medical practice in depressed patients: A 26-week international multicentre cohort study. *HUMAN PSYCHOPHARMACOLOGY-CLINICAL AND EXPERIMENTAL*. 2021;36(1):1-11. DOI:10.1002/hup.2759. PMID: 32976677. IF:1,672 (Q4/D8).
- Gutiérrez F, Aluja A, Ruiz J, García LF, Gárriz M, Gutiérrez-Zotes A, Gallardo-Pujol D, Navarro-Haro MV, Alabèrnia-Segura M, Mestre-Pintó JI, Torrens M, Peri JM, Sureda B, Soler J, Pascual JC, Vall G, Calvo N, Ferrer M, Oltmanns JR, Widiger TA. Personality Disorders in the ICD-11: Spanish Validation of the PiCD and the SASPD in a Mixed Community and Clinical Sample. *Assessment*. 2021;28(3):759-772. DOI:10.1177/1073191120936357. PMID: 32583685. IF:4,667 (Q1/D2).
- Molina M, Fraguas D, del Rey A, Mezquida G, Sanchez AM, Amoretti S, Lobo A, Gonzalez A, Andreu A, Corripio I, Vieta E, Baeza I, Mane A, Cuesta M, de la Serna E, Paya B, Zorrilla I, Arango C, Bernardo M, Rapado M, Parellada M, PEPs GRP. The Role of Premorbid IQ and Age of Onset as Useful Predictors of Clinical, Functional Outcomes, and Recovery of Individuals with a First Episode of Psychosis. *Journal of Clinical Medicine*. 2021; 10(11):2474. DOI:10.3390/jcm10112474. PMID:34199653. IF:4,241 (Q1/D3).
- Navarra-Ventura G, Vicent-Gil M, Serra-Blasco M, Massons C, Crosas JM, Cobo J, Jubert A, Jodar M, Fernández-Gonzalo S, Goldberg X, Palao D, Lahera G, Vieta E, Cardoner N. Group and sex differences in social cognition in bipolar disorder, schizophrenia/schizoaffective disorder and healthy people. *Comprehensive Psychiatry*. 2021; 109:152258. DOI:10.1016/j.comppsy.2021.152258. PMID: 34252633. IF:3,735 (Q2/D4).
- Navarrete J, Herrero R, Soler J, Dominguez E, Banos R, Cebolla A. Assessing self-criticism and self-reassurance: Examining psychometric properties and clinical usefulness of the Short-Form of the Forms of Self-Criticizing/Attacking & Self-Reassuring Scale (FSCRS-SF) in Spanish sample. *PLoS One*. 2021; 16(5):e0252089. DOI:10.1371/journal.pone.0252089. PMID:34029355. IF:3,240 (Q2/D4).
- Pascual JC, Martin A, Soler J. Twenty-Year Trends in the Psychopharmacological Treatment of Outpatients with Borderline Personality Disorder: A Cross-Sectional Naturalistic Study in Spain. *CNS DRUGS*. 2021; 35(9). DOI:10.1007/s40263-021-00852-7. PMID:34370282. IF:5,749 (Q1/D2).
- Patel Y, Parker N, Shin J, Howard D, French L, Thomopoulos SI, Pozzi E, Abe Y, Abe C, Anticevic A, Alda M, Aleman A, Alloza C, Alonso S, Ameis SH, Anagnostou E, McIntosh AA, Arango C, Arnold PD, Asherson P, Assogna F, Auzias G, Ayesa R, Bakker G, Banaj N, Banaschewski T, Bandeira CE, Baranov A, Bargallo N, Bau CHD, Baumeister S, et al. [Portella MJ]. Virtual Histology of Cortical Thickness and Shared Neurobiology in 6 Psychiatric Disorders. *JAMA Psychiatry*. 2021; 78(1). DOI:10.1001/jamapsychiatry.2020.2694. PMID:32857118. IF:21,596 (Q1/D1).
- Roberto N, Portella MJ, Marquie M, Alegret M, Hernandez I, Mauleon A, Rosende M, Abdelnour C, de Antonio EE, Tartari JP, Vargas L, Lopez R, Bojaryn U, Espinosa A, Ortega G, Perez A, Sanabria A, Orellana A, de Rojas I, Moreno S, Montreal L, Alarcon E, Ruiz A, Tarraga L, Boada M, Valero S. Neuropsychiatric Profile as a Predictor of Cognitive Decline in Mild Cognitive Impairment. *Frontiers in Aging Neuroscience*. 2021; 13:718949. DOI:10.3389/fnagi.2021.718949. PMID:34955804. IF:5,750 (Q1/D2).
- Roberto N, Portella MJ, Marquie M, Alegret M, Hernandez I, Mauleon A, Rosende M, Abdelnour C, de Antonio EE, Gil S, Tartari JP, Vargas L, Espinosa A, Ortega G, Perez A, Sanabria A, Orellana A, de Rojas I, Moreno S, Montreal L, Alarcon E, Ruiz A, Tarraga L, Boada M, Valero S. Neuropsychiatric profiles and conversion to dementia in mild cognitive impairment, a latent class analysis. *Scientific Reports*. 2021; 11(1):6448. DOI:10.1038/s41598-021-83126-y. PMID:33742011. IF:4,379 (Q1/D3).
- Salagre E, Grande I, Jimenez E, Mezquida G, Cuesta MJ, Llorente C, Amoretti S, Lobo A, Gonzalez A, Carballo JJ, Corripio I, Verdolini N, Castro J, Legido T, Carvalho AF, Vieta E, Bernardo M, PEPs GRP. Trajectories of suicidal ideation after first-episode psychosis: a growth mixture modeling approach. *ACTA PSYCHIATRICA SCANDINAVICA*. 2021; 143(5). DOI:10.1111/acps.13279. PMID:33501646. IF:6,392 (Q1/D2).
- Salagre E, Grande I, Sole B, Mezquida G, Cuesta MJ, Diaz CM, Amoretti S, Lobo A, Gonzalez A, Moreno C, Pina L, Corripio I, Baeza I, Berge D, Verdolini N, Carvalho AF, Vieta E, Bernardo M. Exploring Risk and Resilient Profiles for Functional Impairment and Baseline Predictors in a 2-Year Follow-Up First-Episode Psychosis Cohort Using Latent Class Growth Analysis. *Journal*

of Clinical Medicine. 2021; 10(1):73. DOI:10.3390/jcm10010073. PMID:33379225. IF:4,241 (Q1/D3).

- Sampedro F, Farres C, Soler J, Elices M, Schmidt C, Corripio I, Dominguez E, Pomarol E, Salvador R, Pascual JC. Structural brain abnormalities in borderline personality disorder correlate with clinical severity and predict psychotherapy response. *Brain Imaging and Behavior*. 2021; 15(5). DOI:10.1007/s11682-021-00451-6. PMID:33634348. IF:3,978 (Q2/D4).

- Sampedro F, Roldan A, Alonso A, Grasa E, Portella MJ, Aguilar EJ, Nunez F, Gomez B, Corripio I. Grey matter microstructural alterations in schizophrenia patients with treatment-resistant auditory verbal hallucinations. *JOURNAL OF PSYCHIATRIC RESEARCH*. 2021; 138. DOI:10.1016/j.jpsychires.2021.03.037. PMID:33852993. IF:4,791 (Q1/D2).

- Sanchez Y, Portella MJ, Leal I, Salvat N, Etxandi M, de Arriba A, Urretavizcaya M, Pousa E, Toll A, Alvarez P, Soria V, Lopez P. Age at illness onset and physical activity are associated with cognitive impairment in patients with current diagnosis of major depressive disorder. *JOURNAL OF AFFECTIVE DISORDERS*. 2021; 279. DOI:10.1016/j.jad.2020.10.032. PMID:33099048. IF:4,839 (Q1/D2).

- Sastre A, Ochoa S, Lorente E, Barajas A, Grasa E, Lopez R, Luengo A, Ruiz I, Cid J, Gonzalez F, Sanchez S, Baca E, Barrigon ML, Spanish Metacognition Study GRP. Jumping to conclusions and suicidal behavior in depression and psychosis. *JOURNAL OF PSYCHIATRIC RESEARCH*. 2021; 137. DOI:10.1016/j.jpsychires.2021.03.024. PMID:33812324. IF:4,791 (Q1/D2).

- Schmidt C, Soler J, Farres C, Elices M, Dominguez E, Vega D, Pascual JC. Mindfulness in Borderline Personality Disorder: Decentering Mediates the Effectiveness. *PSICOTHEMA*. 2021; 33(3). DOI:10.7334/psicothema2020.437. PMID:34297670. IF:3,890 (Q1/D3).

- Seppala A, Pylvanainen J, Lehtiniemi H, Hirvonen N, Corripio I, Koponen H, Seppala J, Ahmed A, Isohanni M, Miettunen J, Jaaskelainen E. Predictors of response to pharmacological treatments in treatment-resistant schizophrenia - A systematic review and meta-analysis. *SCHIZOPHRENIA RESEARCH*. 2021; 236. DOI:10.1016/j.schres.2021.08.005. PMID:34496316. IF:4,939 (Q1/D2).

- Soler J, Montero J, Domínguez E, González S, Pascual JC, Cebolla A, Demarzo M, Analayo B, García J. Decentering, Acceptance, and Non-Attachment: Challenging the Question "Is It Me?". *Frontiers in Psychiatry*. 2021; 12:659835. DOI:10.3389/fpsyt.2021.659835. IF:4,157 (Q2/D3).

- Verdolini N, Amoretti S, Mezquida G, Cuesta MJ, Pina L, Garcia C, Lobo A, Gonzalez A, Merchan J, Corripio I, Salagre E, Baeza I, Berge D, Garriga M, Bioque M, Vallespir C, Serra M, Vieta E, Bernardo M. The effect of family environment and psychiatric family history on psychosocial functioning in first-episode psychosis at baseline and after 2 years. *EUROPEAN*

NEUROPSYCHOPHARMACOLOGY. 2021; 49. DOI:10.1016/j.euroneuro.2021.03.015. PMID:33857739. IF:4,600 (Q2/D3).

- Vicent M, Portella MJ, Serra M, Navarra G, Crivilles S, Aguilar E, Palao D, Cardoner N. Dealing with heterogeneity of cognitive dysfunction in acute depression: a clustering approach. *PSYCHOLOGICAL MEDICINE*. 2021; 51(16):PII S0033291720001567. DOI:10.1017/S0033291720001567. PMID:32476636. IF:7,723 (Q1/D1).

Other scientific production

- Diaz L, Garcia H, Lopez R, Ferrer M, Verdaguer M, Barrigon ML, Barajas A, Grasa E, Pousa E, Lorente E, Ruiz I, Gonzalez F, Cid J, Palma C, Moritz S, Ochoa S. Jumping to conclusions is differently associated with specific subtypes of delusional experiences: An exploratory study in first-episode psychosis. *SCHIZOPHRENIA RESEARCH*. 2021; 228. DOI:10.1016/j.schres.2020.12.037. PMID:33548835. IF:4,939 (Q1/D2).

Other publications

- Rodriguez R, Corripio I, Campos R, Paramo M, Franco M, Segura E, Gonzalez S, Martinez J. Structure and Functioning of Acute Inpatient Psychiatric Units in Spain: Qualitative Study. *Jmir Research Protocols*. 2021; 10(4):e26214. DOI:10.2196/26214. PMID:33729167.

Books or chapters with ISBN

- Portella MJ. Autisme: una immersió ràpida (Tibidabo Edicions, 2021). ISBN:978-84-1347-828-9

- Vicent M, Portella MJ. Determining the cognitive performance in the first episode of depression. In: Martin, C. R., Hunter, L-A., Patel, V. B., Preedy, V. R., Rajendram, R., The neuroscience of depression: genetics, cell biology, neurology, behaviour and diet. 1st ed., pp. 389–396. (Elsevier, 2021) ISBN: 978-0-12-817935-2 <https://doi.org/10.1016/B978-0-12-817935-2.00007-6>

Communication and dissemination activities

Scientific dissemination activities

- II Jornada de Hospitalización y Atención Domiciliaria, 30 April, 2021, On-line. Organizing committee: Ana Martín Blanco (president), Adriana Farré

- Jornades "Menorca, un laboratori per avançar idees en un món de pandèmies", 13 may, 2021, Institut Menorquí d'Estudis, Menorca, Spain. Invited speaker: Efectes psicològics i cognitius de la COVID-19. María J. Portella

- 10th International Congress of Cognitive Psychotherapy, 13-15 May, 2021, Virtual Congress. Oral communication: Adaptation of the Unified Protocol for the Transdiagnostic Treatment of Emotional Disorders to Schizophrenia. Eva M^a Grasa

- IX Jornada del grup Joves Psiquiatres de Catalunya, 20 May, 2021, On-line. Organizing committee: Ana Martín (Chairwoman “Agora amb usuaris”), Aina Àvila (Chairwoman “Apropant-nos a la perspectiva dels usuaris”), Carlo Alemany, Mar Carceller
 - Jornada: Intervención en crisis y hospitalización domiciliaria: tres experiencias pioneras, 9 June, 2021, Sevilla, Spain. Oral communication: Hospitalización domiciliaria en Barcelona ¿Qué hemos aprendido tras 4 años de experiencia? Ana Martín Blanco
 - 17ª Simposio Nacional sobre Tratamiento Asertivo, 21 June 2021, On-line. Oral communication: Hospitalización psiquiátrica a domicilio en Barcelona: reflexiones tras 4 años de experiencia. Ana Martín Blanco
 - XX Jornadas nacionales e internacionales de ANPIR, 21 may-22 october, 2021, online. Poster: Creación de una intervención grupal breve para reducir la sobrecarga del cuidador de pacientes ingresados en una Unidad de Hospitalización a Domicilio. Elisabet Casellas, Ana Martín Blanco. Symposium speaker: Experiencies in foreign centers of excellence. Elisabet Casellas
 - 34th ECNP Congress, 2-5 October, 2021, Lisbon, Portugal. Poster: Does concomitant substance use disorder hinder intensive home treatment for people experiencing an acute psychiatric episode? Insights from experience. Ana Martín Blanco, Adriana Farré
 - XXIV Congreso Nacional de Psiquiatría, 28 - 30 october, 2022, Valencia, Spain. Symposium: La Convivencia entre psicofármacos y psicoterapias: ¿amor o matrimonio de conveniencia?. Moderator: Enric Álvarez Martínez Oral Communications: Estudio específico de la respuesta en el área cerebral límbica a la terapia cognitivo-conductual para las alucinaciones auditivas: un estudio de resonancia magnética funcional. Iluminada Corripio, Eva Mª Grasa , Anna Alonso Solís. Efectos a largo plazo en el funcionamiento psicosocial de la rehabilitación integral para el tratamiento de la depresión (RIDEM). Muriel Vicent Gil. Cambios en neuroimagen asociados a psicoterapia en el trastorno límite de personalidad. Joaquim Soler ¿Qué sabemos acerca del uso de la Estimulación Cerebral Profunda en los trastornos mentales graves? Dolors Puigdemont Poster: Trastornos afectivos tras el COVID-19 y relación con marcadores inflamatorios. Carlo Alemany, Dolors Puigdemont, María J Portella, Javier de Diego Adeliño
 - 44th World Hospital Congress, 8-11 November, 2021, Barcelona, Spain. Poster: The challenge of treating acute psychiatric disorders at home. A collaborative work between hospital, community services, and users. Ana Martín Blanco
 - X Jornades Intensives en Patologies Resistentes. Benito Menni-FIDMAG Germanes Hospitalàries, 12 November, 2021, On-line. Oral communication: Refractariedad en la Esquizofrenia. Alexandra Roldán
 - III European Meeting on Women’s Mental Health (WMH psychosis and gender), 16-17 November, 2021, Virtual Meeting. Symposium: Challenges of early intervention in psychosis in women. Alexandra Roldán (Moderator). Ana Martín Blanco (Speaker)
 - Jornada de Cloenda del curs 2020-2021, Societat Catalana de Psiquiatria i Salut Mental, 18 & 19 November, 2021, Sitges, Spain. Organizing committee: Ana Martín Blanco
- Teaching**
- Curs de Formació Teòrica en Salut Mental: Psiquiatria, Psicologia i Infermeria 2020-2021, Acadèmia de Ciències Mèdiques. Speaker: Elisabet Casellas
 - Màster d’Urgències i Emergències Mèdiques. Urgències Psiquiàtriques. Institut d’Emergències Mèdiques (IEM). November, 2021, Barcelona, Spain. Professor: Alexandra Roldán.
- Outreach activities to society**
- Setmana de la innovació a Sant Pau, Barcelona, Spain. Video youtube: “Salut mental, experiència de pacient a Sant Pau”, 2021. Inmaculada Corripio <https://www.youtube.com/watch?v=LmWjXcvaoHo>
 - Participation in the Brain Awareness Week, March, 2021, Barcelona



Neurobiology of Dementia

Coordinator

Lleo Bisa, Alberto FGS
alleo@santpau.cat

Members

Alcolea Rodriguez, Daniel Andres	FGS	Muñoz Llahuna, Laia	CIBERNED
Altuna Azkargorta, Miren	IR	Padilla Franco, Concepción	IR
Arranz Martínez, Javier J.	IR	Palmieri, Marisa Alejandra	IR
Barroeta Espar, Isabel	FGS	Pegueroles Monllau, Jordi	IR
Bejanin, Alexandre Pierre A.	IR	Querol Vilaseca, Marta	CIBERNED
Belbin, Olivia	IR	Reyes Santiago, Daniel	CIBERNED
Blesa Gonzalez, Rafael	FGS	Reyes Vilasalo, Judith	IR
Carmona Iragui, Maria	FGS	Ribas Bellavista, Laia	IR
Cervantes González, Alba	CIBERNED	Ribosa Nogue, Roser	IR
Dols Icardo, Oriol	IR	Rubio Guerra, Sara	FGS
El Bounasri El Bennadi, Shaimaa	CIBERNED	Sala Matavera, Isabel	FGS
Escolà Lafontana, Concepció	FGS	Sánchez López, Oriol	CIBERNED
Estelles Pals, Maria Teresa	IR	Sanchez Saudinos, Maria Belen	IR
Ferrer Reventós, Paula	CIBERNED	Santos Santos, Miguel Ángel	FGS
Fortea Ormaechea, Juan	FGS	Sirisi Dolcet, Sonia	IR
Garzón Chávez, Diana	IR	Subirana Castillo, Andrea	IR
Illan Gala, Ignacio	FGS	Torres Alcalá, Soraya	IR
Iulita, María Florencia	IR	Valldeneu Castells, Silvia	IR
Marqués Kiderle, Sonia K.	IR	Valle Tamanyo, Natalia	IR
Montal Blancafort, Victor	IR	Videla Toro, Laura	IR
Mota Rodríguez, Cecilia	IR	Zhu, Noule	FGS

Main lines of research

- Biomarkers of Alzheimer's disease, Down syndrome and other neurodegenerative dementias: biofluid and imaging markers

- Clinical and Biomarker characterization of Alzheimer's disease in Down syndrome.

- Digital neuropathology applied to neurodegenerative diseases.

- The intersection between sleep, epilepsy and Alzheimer's disease
- Clinical trials in Alzheimer's disease and Down syndrome.
- Alzheimer's Disease, Frontotemporal dementia and Down syndrome

Scientific Challenges

- Maintain our scientific production and funding, prioritising the projects with higher impact.
- Consolidate our number of granted projects in European and international applications.
- Unfold the potential to collaborate with pharma and technological companies to foster additional patent applications and contracts.

Collaborations

Collaborations with other IIB Sant Pau research groups

- Genetics in Neurodegenerative Diseases (PI: Jordi Clarimon).
- Molecular Physiology of the Synapse (PI: Alex Bayes).
- Cerebrovascular Diseases (PI: Joan Marti-Fabregas).
- Neuromuscular Diseases (PI: Isabel Illa, Ricard Rojas).
- Parkinson disease and Movement Disorders (PI: Jaime Kulisevsky, Javier Pagonabarraga).
- Biochemistry Group (PI: Francisco Blanco, Mireia Tondo).
- Nuclear Medicine (PI: Ignasi Carrio, Valle Camacho).
- Multidisciplinary Sleep Unit (PI: Sandra Gimenez).

External collaborations

- Collaboration, article - Institute of Psychiatry, Psychology, and Neuroscience, Department of Forensic and Neurodevelopmental Sciences, King's College London, London, United Kingdom.
- Collaboration, article - Neurological Tissue Bank of the Biobank-Hospital Clinic-IDIBAPS, Barcelona, Spain. Division of Neuropathology and Neurochemistry, Department of Neurology, Medical University of Vienna, Austria.
- Collaboration, article - Department of Psychiatry, University of Oxford, Oxford,
- Collaboration, article - Department of Public Health and Caring Sciences, Geriatrics, Uppsala University, Uppsala, Sweden
- Collaboration, article - Alzheimer Center Rotterdam and Dept. of Neurology, Erasmus University Medical Center, Rotterdam, the Netherlands
- Collaboration, article - Assistance Publique-Hôpitaux de Paris (AP-HP) Department of Neurology, Sorbonne University, Paris, France; Institut du Cerveau, Sorbonne University, Paris, France.
- Collaboration, article - Washington University in St. Louis, Department of Neurology St. Louis Missouri USA.

- Collaboration, article - Department of Neurology and Alzheimer Center, University of Groningen, University Medical Center Groningen, Groningen, The Netherlands
- Collaboration, article - Department of Neurology, Weill Institute for Neurosciences, Memory and Aging Center, University of California, San Francisco (UCSF), San Francisco, California
- Collaboration, article - Gordon Center for Medical Imaging, Department of Radiology, Massachusetts General Hospital, Harvard Medical School, Boston, Massachusetts, USA.
- Collaboration, article - Lübeck Interdisciplinary Platform for Genome Analytics (LIGA), University of Lübeck, Lübeck, Germany
- Collaboration, article - Department of Neurology, Alzheimer Center Amsterdam, Amsterdam Neuroscience, Vrije Universiteit Amsterdam, Amsterdam UMC, Amsterdam -
- Collaboration, article - Neuromuscular Diseases Research Section, Laboratory of Neurogenetics, National Institute on Aging, Bethesda, MD 20892, USA; Reta Lila Weston Institute, UCL Queen Square Institute of Neurology, University College London, London WC1N 1PJ, UK; Department of Neurology, Johns Hopkins University Medical Center, Baltimore, MD 21287, USA
- Collaboration, article - Eisai Inc., Neurology Business Group, Woodcliff Lake, New Jersey, USA
- Collaboration, article - Department of Neurology, Memory & Aging Center, Weill Institute for Neurosciences, University of California, San Francisco, California, United States of America.-
- Collaboration, article - The Leslie and Susan Gonda Multidisciplinary Brain Research Center, Bar-Ilan University, 5290002, Ramat-Gan, Israel
- Collaboration, article - The Leslie and Susan Gonda Multidisciplinary Brain Research Center, Bar-Ilan University, 5290002, Ramat-Gan, Israel
- Collaboration, article - Department of Neurology and Neurosurgery, McGill University, Montreal, Canada; Department of Pharmacology and Therapeutics, McGill University, Montreal, Canada; Department of Anatomy and Cell Biology, McGill University, Montreal, Canada
- Collaboration, article - Department of Psychiatry and Neurochemistry, Institute of Neuroscience & Physiology, The Sahlgrenska Academy at the University of Gothenburg, Mölndal, Sweden
- Collaboration, article - Department of Anatomy and Cell Biology, McGill University, Montreal, Quebec, Canada
- Collaboration, article: The Leslie and Susan Gonda Multidisciplinary Brain Research Center, Bar-Ilan University, Ramat Gan, Israel
- Collaboration, article: LuMind IDSC Foundation, Burlington, MA, USA.
- Collaboration, article: Stroke Research Centre, University College London, National Hospital of Neurology and Neurosurgery, Institute of Neurology, Queen Square, London, WC1N, UK
- Collaboration, article: Department of Psychiatry, University of Oxford, Oxford, United Kingdom

- Collaboration, article: Alzheimer Center Amsterdam, Department of Neurology, Amsterdam Neuroscience, Amsterdam UMC, 1007 MB Amsterdam, The Netherlands.
- Collaboration, article: Waisman Center, University of Wisconsin-Madison, Madison, Wisconsin, USA.
- Collaboration, article: Knoebel Institute for Healthy Aging, University of Denver, Denver, CO 80208, USA.
- Collaboration, article: Department of Neurology, Radboud University Medical Center, Donders Institute for Brain, Cognition and Behaviour, Radboud Alzheimer Centre, P.O. Box 9101, 6500 HB, Nijmegen, The Netherlands.
- Collaboration, article: Massachusetts General Hospital, Harvard Medical School, Boston, MA, USA.
- Collaboration, article: Neuromuscular Diseases Research Section, Laboratory of Neurogenetics, National Institute on Aging, Bethesda, MD 20892, USA.
- Collaboration, article: Gordon Center for Medical Imaging, Department of Radiology, Massachusetts General Hospital, Harvard Medical School, Boston, USA
- Collaboration, article: Cambridge Intellectual & Developmental Disabilities Research Group, Department of Psychiatry, University of Cambridge, Cambridge CB2 8PQ, UK.
- Collaboration, article: Department of Psychiatry and Neurochemistry, Institute of Neuroscience and Physiology, The Sahlgrenska Academy, University of Gothenburg, Gothenburg, Sweden
- Collaboration, article: Department of Neurology, Radboud University Medical Center, Donders Institute for Brain, Cognition and Behaviour, Radboud Alzheimer Centre, P.O. Box 9101, 6500, HB, Nijmegen, The Netherlands
- Collaboration, article: Institute of Pharmaceutical Science, King's College London, London SE1 9NH, UK
- Collaboration, article: Alzheimer Centre Limburg, Department of Psychiatry and Neuropsychology, School for Mental Health and Neuroscience, Maastricht University, Maastricht, The Netherlands
- Collaboration, article: LBPC-PPC, Univ Montpellier, CHU Montpellier, INSERM, Montpellier, France.
- JUAN FORTEA ORMAECHEA. Estudios longitudinales de RM magnética, de difusión y funcional en la enfermedad de Alzheimer preclínica esporádica y asociada al síndrome de Down. PI17/01019. Instituto de Salud Carlos III. Duration 2018-2022. 127.000,00 €.
- JUAN FORTEA ORMAECHEA. The Role of Inflammation and NGF Dysfunction in the Evolution of Alzheimer Disease Pathology in Down syndrome. 2018-3570. The Regents of the University of California. Duration 2018-2023. 1.602.473,89 €.
- ALEXANDRE PIERRE ARMAND BEJANIN. Neuroimagen multimodal para estudiar los mecanismos fisiopatológicos de la enfermedad de Alzheimer y otras enfermedades neurodegenerativas. IJCI-2017-32609. Ministeri d'Economia i Competitivitat. Duration 2019-2021. 64.000,00 €.
- MARIA FLORENCIA IULITA. Discovery of novel biomarkers signalling NGF metabolic dysfunction and early AD-dementia in Down syndrome. JEROME LEJEUNE 2018-2. Jérôme Lejeune Fondation. Duration 2020-2022. 154.000,00 €.
- DANIEL ANDRES ALCOLEA RODRIGUEZ. Utilidad diagnóstica de Aβ42 y Aβ42/40 en LCR y plasma para detectar amiloidosis cerebral y correlación con marcadores subrogados de producción de β-amiloide en enf. de Alzheimer. PI18/00435. Instituto de Salud Carlos III. Duration 2019-2021. 122.000,00 €.
- OLIVIA BELBIN. Estudio multimodal de nuevos biomarcadores sinápticos en cohortes de la enfermedad de Alzheimer y la demencia frontotemporal. PI18/00327. Instituto de Salud Carlos III. Duration 2019-2021. 102.000,00 €.
- MARIA CARMONA IRAGUI. Estudio de biomarcadores bioquímicos y de imagen de angiopatía amiloide cerebral en el continuum de la enfermedad de Alzheimer esporádica y asociada al síndrome de Down. PI18/00335. Instituto de Salud Carlos III. Duration 2019-2021. 57.000,00 €.
- MARIA CARMONA IRAGUI. Domiciliary Alzheimer Visiting in Down syndrome. GBHI_ALZ-18-543740. ALTUM. Duration 2018-2022. 18.433,61 €.
- VICTOR MONTAL BLANCAFORT. Cambios longitudinales en la estructura y la función cerebral en el continuum de la enfermedad de Alzheimer y Síndrome de Down. FI18/00275. Instituto de Salud Carlos III. Duration 2019-2022. 82.400,00 €.
- MIGUEL ANGEL SANTOS SANTOS. Contratos Juan Rodés 2018. JR18/00018. Instituto de Salud Carlos III. Duration 2019-2023. 180.000,00 €.
- OLIVIA BELBIN. Estudio multimodal de nuevos biomarcadores sinápticos en cohortes de la enfermedad de Alzheimer y la demencia frontotemporal. CPI18/00011. Instituto de Salud Carlos III. Duration 2019-2022. 91.125,00 €.

Active grants

- RAFAEL BLESAS GONZALEZ. Estudio del trazador de tomografía por emisión de positrones (PET) para Tau [18F]THK-5351 en pacientes con diferentes Taupatías.. PI16/01825. Instituto de Salud Carlos III. Duration 2017-2021. 101.500,00 €.
- SONIA SIRISI DOLCET. Contractes postdoctorals "Sara Borrell" 2017. CD17/00055. Instituto de Salud Carlos III. Duration 2018-2021. 91.792,17 €.
- ALBERTO LLEO BISA. Aplicación de Tomografía de Array (AT) para el estudio sistemático a gran escala del daño sináptico en las demencias neurodegenerativas. . PI17/01896. Instituto de Salud Carlos III. Duration 2018-2021. 77.000,00 €.

- RAFAEL BLESAS GONZALEZ. Estudio pseudoexperimental sobre el efecto de la inflamación asociada a la obesidad sobre el sistema nervioso central y la enfermedad de Alzheimer. PI19/01512. Instituto de Salud Carlos III. Duration 2020-2022. 192.000,00 €.
- MIGUEL ANGEL SANTOS SANTOS. Afasia primaria progresiva: Caracterización multimodal de los síntomas, fisiopatología y progresión. PI19/00882. Instituto de Salud Carlos III. Duration 2020-2022. 92.000,00 €.
- MIREN ALTUNA AZKARGORTA. Contractes Rio Hortega 2019. CM19/00066. Instituto de Salud Carlos III. Duration 2020-2022. 53.732,00 €. MARIA TERESA ESTELLES PALS. Contractes Rio Hortega 2019. CM19/00017. Instituto de Salud Carlos III. Duration 2020-2021. 53.732,00 €.
- DANIEL ANDRES ALCOLEA RODRIGUEZ. Contractes per a la intensificació de l'activitat investigadora 2019.. INT19/00016. Instituto de Salud Carlos III. Duration 2020-2021. 60.000,00 €.
- ORIOL DOLS ICARDO. Identification of an RNA-based biomarker in FTD. AFTD 2019-003. Association for Frontotemporal Degeneration. Duration 2020-2021. 98.387,50 €.
- ALBERTO LLEO BISA. Proteínas en sangre para la discriminación precoz de las demencias. AC19/00103. Instituto de Salud Carlos III. Duration 2020-2022. 82.500,00 €.
- OLIVIA BELBIN. Early PROgnostic markers FOR Neurodegenerative Diseases (e-PROFOUND). . 2019 PROD 00088. Agència de Gestió d'Ajuts Universitaris i de Recerca. Duration 2020-2022. 76.172,00 €.
- JUAN FORTEA ORMAECHEA. Caracterización de la inflamación relacionada con amiloide: nuevos marcadores inflamatorios y su impacto en la macroestructural y microestructura cortical en la enfermedad de Alzheimer preclínica y prodrómica. PI20/01473. Instituto de Salud Carlos III. Duration 2021-2023. 177.500,00 €.
- ALBERTO LLEO BISA. Acúmulo de Proteína Precursora de Amiloide-C99 (APP-C99) como mecanismo de enfermedad en la enfermedad de Alzheimer: implicaciones terapéuticas. PI20/01330. Instituto de Salud Carlos III. Duration 2021-2023. 152.000,00 €.
- JUAN FORTEA ORMAECHEA. Clinical trials to prevent Alzheimer's Disease in Down Syndrome. 127636920. University of Southern California. Duration 2019-2021. 33.395,56 €.
- JUAN FORTEA ORMAECHEA. Ampliación "The Role of Inflammation and NGF Dysfunction in the Evolution of Alzheimer Disease Pathology in Down syndrome. 2018-3570-1. The Regents of the University of California. Duration 2019-2021. 247.506,93 €.
- IGNACIO ILLAN GALA. Contractes Juan Rodés 2020. JR20/00018. Instituto de Salud Carlos III. Duration 2021-2024. 180.000,00 €
- ALEXANDRE PIERRE ARMAND BEJANIN. Contractes Miguel Servet I 2020. CP20/00038. Instituto de Salud Carlos III. Duration 2021-2026. 202.500,00 €.
- ALEXANDRE PIERRE ARMAND BEJANIN. Proj. Assoc. a Contractes d'Investigadors Miguel Servet tipo I 2020.. CP20/00038-P. Instituto de Salud Carlos III. Duration 2021-2024. 40.000,00 €.
- CONCEPCION PADILLA FRANCO. Contractes Sara Borrell 2020.. CD20/00133. Instituto de Salud Carlos III. Duration 2021-2023. 80.598,00 €.
- SONIA SIRISI DOLCET. Ayudas para contratos Juan de la Cierva - Incorporación 2019. IJC2019-038962-I. Ministeri de Ciència, Innovació i Universitats. Duration 2021-2024. 93.000,00 €.
- MARIA CARMONA IRAGUI. Inflammatory biomarkers along the Alzheimer's disease continuum in down syndrome. JEROME LEJEUNE 2020. Jérôme Lejeune Fondation. Duration 2020-2022. 78.812,91 €.
- MARIA FLORENCIA IULITA. ProNGF and NFL in neuron-derived extracellular vesicles: the gateway to blood biomarker discovery for Alzheimer's disease prevention in Down syndrome. JEROME LEJEUNE 2020-1. Jérôme Lejeune Fondation. Duration 2020-2022. 36.000,00 €.
- ORIOL DOLS ICARDO. Estudio del transcriptoma de las células inmunitarias periféricas en la ELA. FUNDELA 2020. Fundació Espanyola per al Foment de la Investigació de l'Esclerosi Lateral Amiotròfica. Duration 2020-2021. 26.087,00 €.
- IGNACIO ILLAN GALA. MICROSTRUCTURAL CHANGES IN PRIMARY PROGRESSIVE APHASIA. GBHI ALZ UK-21-720973. Global Brain Health Institute. Duration 2020-2021. 19.218,97 €.
- JUAN FORTEA ORMAECHEA. Multidisciplinary Expert System for the Assessment & Management of Complex Brain Disorders. MES-CoBraD (GA 965422). Unió Europea. Duration 2021-2024. 386.217,00 €.
- MARIA CARMONA IRAGUI. Domiciliary Alzheimer Visiting in Down syndrome extension project (DAVIS-2).. SCN 2020. Societat Catalana de Neurologia. Duration 2021-2022. 9.091,00 €.
- ALBERTO LLEO BISA. Grup de Recerca en Demències: Sant Pau. 2017 SGR 547. Agència de Gestió d'Ajuts Universitaris i de Recerca. Duration 2020-2021. 20.455,42 €.

Note: Total amount granted to PI. It does not include indirect costs.

Other active grants

- PI: Oriol Dols -Collaborators: Belén Sánchez, Laia Muñoz, Ignacio Illán, Sònia Sirisi-Estudio transcriptómico de la demencia frontotemporal para la comprensión de sus bases moleculares e identificación de biomarcadores que reflejen su sustrato neuropatológico in vivo.- PI18/00326- Instituto de Salud Carlos III - Duration 2019-2021. 135.520€

- PI:Alberto Lleó-Tara Spires-Jones-Collaborators: Olivia Belbin, Sònia Sirisi, Marta Querol - NANOSYN: Unravelling synaptic pathology in Alzheimer's disease and Dementia with Lewy bodies using super-resolution microscopy (COEN-NANOSYN)- COEN5025 - CIBERNED as member of the Centres of Excellence in Neurodegeneration (CoEN). Pathfinder- Duration: 2020-2022. 180.000€.

- PI: Sandra Gimenez- Team members: Jordi Pegueroles, Susana Fernández, Miren Altuna, Laura Videla. Síndrome de apnea-hipopnea del sueño y síndrome de Down. Estudio multimodal del sueño y cognición, biomarcadores plasmáticos y de líquido cefalorraquídeo de enfermedad de Alzheimer y resonancia magnética craneal. PI20/00836 - Instituto de Salud Carlos III - Duration 2020-2023. 77.440€

- PI: Ann-Charlotte Granholm-Bentley-Advisor: Juan Fortea Ormaechea - Biological Correlates of Alzheimer in Down Syndrome - R21AG056974 (1 R21 AG056974-01) - NIH-NIA. National Institute of Aging - Duration: 2017-2021. 20.000€ (total 414.425€).

- PI: Ann-Charlotte Granholm-Bentley - Collaborator: Juan Fortea - International Brain Bank for DS-related AD - CA2018010 - BrightFocus Foundation - Duration: 2017-2022. 20000€.

- PI: Ann-Charlotte Granholm-Bentley, Margittai, Mufson - Advisor: Juan Fortea - Exosomal Tau Pathology in Down Syndrome - R01AG061566 - NIH-NIA. National Institute of Aging - Duration: 2018-2023. 10.000\$/year

- PI: Patrizia Vannini - Advisor: Juan Fortea - Novel Diffusion-Weighted MRI Assessment of Cortical Microstructural Changes and their Relationship to Amyloid, Tau and Cognition in Aging and Alzheimer's Disease - 1R21AG064348-01 - National Institute of Health (NIH) / NIA - Duration: 2019-2021. 9902,43€

- PI: J. Busciglio, J. Fortea - Impact of biological and sociodemographic risk factors related to COVID 19 in adults with DS. INCLUDE Supplement. (Supplement of the grant: The Role of Inflammation and NGF Dysfunction in the Evolution of Alzheimer Disease Pathology in Down Syndrome - Revision) - 3RF1AG056850-NOT-OD-20-129 - NIH/NIA - Duration: 2020-2021. \$563,694.00

Grants awarded in 2021

- JUAN FORTEA ORMAECHEA, Electroencefalograma de sueño y vigilia en la epilepsia asociada a enfermedad de Alzheimer en síndrome Down., TATIANA PEREZ GUZMAN 2020, Fundació Tatiana Pérez de Guzmán el Bueno, 2021 - 2024, 35.600,00 €.

- MIGUEL ANGEL SANTOS SANTOS, Rehabilitating Communication in bilingual Speakers with Language-Prominent Dementia, UT AUSTIN GRANT, UNIVERSITY OF TEXAS, 2021 - 2022, 18.811,00 €.

Note: Total amount granted to PI. It does not include indirect costs.

Other grants awarded in 2021

- Oriol Dols-Equip: Janina Turón-Sans, Andrea Subirana, Soraya Torres, Marta Querol-Vilaseca, Víctor Montal, Sònia Sirisi - Characterization of the transcriptomic and neuropathological profile of the postmortem tissue of amyotrophic lateral sclerosis patients carrying the C9orf72 hexanucleotide repeat expansion). PI21/01395- Instituto de Salud Carlos III - Duration 2021-2024. 87.120,00€

- Ignacio Illán- Equip: David Almenta Gallego, Isabel Sala Matavera, Judith Reyes Vilasalo, Concepción Padilla Franco, Marta Querol Vilaseca, Fernández Leon - Advancing the classification of frontotemporal dementia and amyotrophic lateral sclerosis with microstructural and functional neuroimaging, and blood-based biomarkers - PI21/00791 - Instituto de Salud Carlos III - Duration: 2021-2024. 129.470,00€

- PI: PJ Visser - Associate: Alberto Lleó, Juan Fortea, Daniel Alcolea - European Platform for Neurodegenerative Diseases (EPND) - IMI Call 22 - Neurodegenerative diseases - EATRIS contact - Duration: 2021/2025.

- PI: Oriol Dols Icardo- Collaborators: Ricardo Rojas García y Noemí de Luna - Longitudinal study of the role of peripheral immune cells in the evolution of ELA.- Fundación HNA - Duration: 2021-2023. 100.000,00€

- Sandra Gimenez- The impact of Alzheimer's disease on sleep in adults with Down syndrome - JLF1801 - Jerome Lejeune Fondation - Duration: 2021 - 80.000€.

Awards

- Oriol Dols, Premio de Investigación Científica de Salud de Fundación hna- 08/06/2021

- Illán-Gala, I. Premio (Young Clinical Investigator Award) CIBERNED - 08/07/2021

- Fortea J, Premi de Leon al Científic Senior en Neuroimagen en AIC21- 02/08/2021 (de Leon Prize in Neuroimaging).

- Juan Fortea, Premio Dr. Font, otorgado por Fundació Mutua Médica, enmarcado dentro de los XXXI Premios Mutua Médica a la Investigación 2021, por su artículo "Clinical and biomarker changes of Alzheimer's disease in adults with Down syndrome: a cross-sectional study" - 10/12/2021.

Patents

- Olivia Belbin, Alberto Lleó, Alex Bayes, Juan Fortea, Daniel Alcolea., Markers of Synaptopathy in Neurodegenerative Disease. WO 2019/175379, Markers of Synaptopathy in Neurodegenerative Disease., 16/03/2018.

Transfer products

- EISAI Inc- Contract For The Provision Of Services By The Fundació Institut De Recerca Del Hospital De La -Santa Creu I Sant Pau To Eisai- CSF Biomarker, Clinical, and Cognitive Function data-2021-26.400€

- IBEAS - Fundació Miguel Servet - Navarrabiomed -Prestación de Servicios a Fundació Miguel Servet- Navarrabiomed-21/07/2021- 21/09/2021-3.255 €

- TFS Trial Form Support - A Multicenter, Randomized, Double blind, Placebo-controlled, 24 months study in Patients with amnesic Mild Cognitive Impairment or very Mild Alzheimer's Disease to Investigate the Safety, Tolerability, and Immune Response of Repeated Subcutaneous Injections of ABvac40. Laboratory Services-07/06/2021 -31/12/2021-: 99.735,6 €

- European Dementia with Lewy Bodies (E-DLB) Consortium-01/06/2021-0 €

- QUBIOTECH- Cuantificación de imagen cerebral para el diagnóstico diferencial de la FTD. 08/2021-0 € (acord de col·laboració)

- DREAMER: Detección pREcoz AlzheiMER - Instituto Medico Privado (IMP)- 01/2021-233.759,0 €

- AGENT- Collaboration on plasma markers for Alzheimer's disease using multiplex platforms. 2019-2021-43.500€

- Cortexyme- Detection of P. Gingivalis in samples of patients with Down syndrome and Alzheimer's disease. 2019-2021-27.000€

Scientific production

- Alcolea D, Delaby C, Munoz L, Torres S, Estelles T, Zhu N, Barroeta I, Carmona M, Illan I, Santos MA, Altuna M, Sala I, Sanchez MB, Videla L, Valldeneu S, Subirana A, Pegueroles J, Hirtz C, Vialaret J, Lehmann S, Karikari TK, Ashton NJ, Blennow K, Zetterberg H, Belbin O, Blesa R, Clarimon J, Fortea

J, Lleo A. Use of plasma biomarkers for AT(N) classification of neurodegenerative dementias. *JOURNAL OF NEUROLOGY NEUROSURGERY AND PSYCHIATRY*. 2021; 92(11). DOI:10.1136/jnnp-2021-326603. PMID:34103344. IF:10,154 (Q1/D1).

- Altuna M, Gimenez S, Fortea J. Epilepsy in Down Syndrome: A Highly Prevalent Comorbidity. *Journal of Clinical Medicine*. 2021; 10(13):2776. DOI:10.3390/jcm10132776. PMID:34202784. IF:4,241 (Q1/D3).

- Aschenbrenner AJ, Baksh RA, Benejam B, Beresford JA, Coppus A, Fortea J, Handen BL, Hartley S, Head E, Jaeger J, Levin J, Loosli SV, Rebillat AS, Sacco S, Schmitt FA, Thurlow KE, Zaman S, Hassenstab J, Strydom A. Markers of early changes in cognition across cohorts of adults with Down syndrome at risk of Alzheimer's disease. *Alzheimer's & Dementia: Diagnosis, Assessment & Disease Monitoring*. 2021; 13(1):e12184. DOI:10.1002/dad2.12184. PMID:33969175.

- Ashton NJ, Janelidze S, Al Khleifat A, Leuzy A, van der Ende EL, Karikari TK, Benedet AL, Pascoal TA, Lleo A, Parnetti L, Galimberti D, Bonanni L, Pilotto A, Padovani A, Lycke J, Novakova L, Axelsson M, Velayudhan L, Rabinovici GD, Miller B, Pariente C, Nikkheslat N, Resnick SM, Thambisetty M, Scholl M, Fernandez G, Gil FJ, de Munain AL, Al A, Rosa P, et al. A multicentre validation study of the diagnostic value of plasma neurofilament light. *Nature Communications*. 2021; 12(1):3400. DOI:10.1038/s41467-021-23620-z. IF:14,919 (Q1/D1).

- Barranco N, Pla V, Alcolea D, Sanchez I, Fischer R, Ferrer I, Lleo A, Aguado F. Dense core vesicle markers in CSF and cortical tissues of patients with Alzheimer's disease. *Translational Neurodegeneration*. 2021; 10(1):37. DOI:10.1186/s40035-021-00263-0. PMID:34565482. IF:8,014 (Q1/D1).

- Bejanin A, Iulita MF, Vilaplana E, Carmona M, Benejam B, Videla L, Barroeta I, Fernandez S, Altuna M, Pegueroles J, Montal V, Valldeneu S, Gimenez S, Gonzalez S, Munoz L, Padilla C, Aranha MR, Estelles T, Illan I, Belbin O, Camacho V, Wilson LR, Annus T, Osorio RS, Videla S, Lehmann S, Holland AJ, et al. [Alcolea D, Clarimon J, Blesa R, Lleo A, Fortea J]. Association of Apolipoprotein E epsilon 4 Allele With Clinical and Multimodal Biomarker Changes of Alzheimer Disease in Adults With Down Syndrome. *JAMA Neurology*. 2021; 78(8). DOI:10.1001/jamaneurol.2021.1893. PMID:34228042. IF:18,302 (Q1/D1).

- Blauwendraat C, Iwaki H, Makarious MB, Bandres S, Leonard HL, Grenn FP, Lake J, Krohn L, Tan M, Kim JJ, Gibbs JR, Hernandez DG, Ruskey JA, Pihlstrom L, Toft M, van JJ, Marinus J, Schulte C, Brockmann K, Sharma M, Siitonen A, Majamaa K, Eerola J, Tienari PJ, Grosset DG, Lesage S, Corvol JC, Brice A, et al. [Clarimon J, Dols O, Kulisevsky J, Pagonabarraga J]. Investigation of Autosomal Genetic Sex Differences in Parkinson's Disease. *ANNALS OF NEUROLOGY*. 2021; 90(1). DOI:10.1002/ana.26090. PMID:33901317. IF:10,422 (Q1/D1).

- Bostrom G, Freyhult E, Virhammar J, Alcolea D, Tumani H, Otto M, Brundin RM, Kilander L, Lowenmark M, Giedraitis V, Lleo A, von C, Kultima K, Ingelsson M. Different Inflammatory

Signatures in Alzheimer's Disease and Frontotemporal Dementia Cerebrospinal Fluid. *JOURNAL OF ALZHEIMERS DISEASE*. 2021; 81(2). DOI:10.3233/JAD-201565. PMID:33814444. IF:4,472 (Q2/D4).

- Bueicheku E, Gonzalez JM, Ortiz L, Montal V, Uquillas FD, De Marcos L, Orwig W, Kim CM, Ortiz E, Basaia S, Diez I, Sepulcre J. Divergent connectomic organization delineates genetic evolutionary traits in the human brain. *Scientific Reports*. 2021; 11(1):19692. DOI:10.1038/s41598-021-99082-6. PMID:34608211. IF:4,379 (Q1/D3).

- Calabria M, Jefferies E, Sala I, Morenas-Rodríguez E, Illan-Gala I, Montal V, Fortea J, Lleo A, Costa A. Multilingualism in semantic dementia: language-dependent lexical retrieval from degraded conceptual representations. *APHASIOLOGY*. 2021; 35(2):240-266. DOI:10.1080/02687038.2019.1693025. IF:2,773 (Q1/D2).

- Carmona M, Alcolea D, Barroeta I, Videla L, Munoz L, Van KL, Schmitt FA, Lightner DD, Koehl LM, Jicha G, Sacco S, Mircher C, Pape SE, Hithersay R, Clare I, Holland AJ, Nubling G, Levin J, Zaman SH, Strydom A, Rebillat AS, Head E, Blesa R, Lleo A, Fortea J. Diagnostic and prognostic performance and longitudinal changes in plasma neurofilament light chain concentrations in adults with Down syndrome: a cohort study. *LANCET NEUROLOGY*. 2021; 20(8). DOI:10.1016/S1474-4422(21)00129-0. PMID:34302785. IF:44,182 (Q1/D1).

- Chen ZB, Zhang D, Reynolds RH, Gustavsson EK, Garcia S, D'Sa K, Fairbrother A, Vandrovicova J, Hardy J, Houlden H, Taliun S, Botia J, Ryten M, Clarimón J, Dols O, Kulisevsky J, Pagonabarraga J, Int Parkinson's Dis Genomics C. Human-lineage-specific genomic elements are associated with neurodegenerative disease and APOE transcript usage. *Nature Communications*. 2021; 12(1):2076. DOI:10.1038/s41467-021-22262-5. PMID:33824317. IF:14,919 (Q1/D1).

- Chia R, Sabir MS, Bandres S, Saez S, Reynolds RH, Gustavsson E, Walton RL, Ahmed S, Viollet C, Ding JH, Makarios MB, Diez M, Portley MK, Shah Z, Abramzon Y, Hernandez DG, Blauwendraat C, Stone DJ, Eicher J, Parkkinen L, Ansorge O, Clark L, Honig LS, Marder K, Lemstra A, St George P, Londos E, Morgan K, et al. [Lleo A, Fortea J, Alcolea D, Clarimon J]. Genome sequencing analysis identifies new loci associated with Lewy body dementia and provides insights into its genetic architecture. *NATURE GENETICS*. 2021; 53(3). DOI:10.1038/s41588-021-00785-3. PMID:33589841. IF:38,330 (Q1/D1).

- De Asua DR, Mayer MA, Ortega MD, Borrel JM, Bermejo TD, Gonzalez D, Manso C, Moldenhauer F, Carmona M, Huls A, Sherman SL, Strydom A, de la Torre R, Dierssen M, Spanish Trisomy Res Soc COVID 21. Comparison of COVID-19 and Non-COVID-19 Pneumonia in Down Syndrome. *Journal of Clinical Medicine*. 2021; 10(16):3748. DOI:10.3390/jcm10163748. PMID:34442043. IF:4,241 (Q1/D3).

- De Kort AM, Kuiperij HB, Alcolea D, Kersten I, Versleijen A, Greenberg SM, Stoops E, Schreuder FHBM, Klijn CJM, Lleo A, Claassen J, Verbeek MM. Cerebrospinal fluid levels of the neurotrophic factor neuroleukin are increased in early

Alzheimer's disease, but not in cerebral amyloid angiopathy. *Alzheimers Research & Therapy*. 2021; 13(1):160. DOI:10.1186/s13195-021-00899-0. PMID:34560885. IF:6,982 (Q1/D2).

- De Rojas I, Moreno S, Tesi N, Grenier B, Andrade V, Pedersen NL, Stringa N, Zettergren A, Hernandez I, Montreal L, Antunez C, Antonell A, Tankard RM, Bis JC, Sims R, Bellenguez C, Quintela I, Gonzalez A, Calero M, Franco E, Macias J, Blesa R, Cervera L, Menendez M, Frank A, Royo JL, Moreno F, Vilas RH, et al. [Alcolea D, Fortea J, Lleo A, Clarimon J]. Common variants in Alzheimer's disease and risk stratification by polygenic risk scores. *Nature Communications*. 2021; 12(1):3417. DOI:10.1038/s41467-021-22491-8. PMID:34099642. IF:14,919 (Q1/D1).

- Dekker AD, Ulgiati AM, Groen H, Boxelaar VA, Sacco S, Falquero S, Carfi A, di A, Benejam B, Valldeu S, Fopma R, Oosterik M, Hermelink M, Beugelsdijk G, Schippers M, Henstra H, Scholten M, Willink J, de Ruyter L, Willems L, Loonstra A, Coppus A, Tollenaere M, Fortea J, Onder G, Rebillat AS, Van D, De Deyn PP. The Behavioral and Psychological Symptoms of Dementia in Down Syndrome Scale (BPSD-DS II): Optimization and Further Validation. *JOURNAL OF ALZHEIMERS DISEASE*. 2021; 81(4). DOI:10.3233/JAD-201427. PMID:33967040. IF:4,472 (Q2/D4).

- Delaby C, Julian A, Page G, Ragot S, Lehmann S, Paccalin M. NFL strongly correlates with TNF-R1 in the plasma of AD patients, but not with cognitive decline. *Scientific Reports*. 2021;11(1):10283. DOI:10.1038/s41598-021-89749-5. PMID:33986423. IF:4,379 (Q1/D3).

- Delaby C, Vialaret J, Hirtz C, Lefebvre T, Herkert M, Puy H, Lasocki S, Lehmann S; HEPCIDANE study group. Analytical comparison of ELISA and mass spectrometry for quantification of serum hepcidin in critically ill patients. *Bioanalysis*. 2021;13(13):1029-1035. DOI:10.4155/bio-2021-0069. PMID:34100293. IF:2,681 (Q3/D7).

- Dewan R, Chia R, Ding JH, Hickman RA, Stein TD, Abramzon Y, Ahmed S, Sabir MS, Portley MK, Tucci A, Ibanez K, Shankaracharya F, Keagle P, Rossi G, Caroppo P, Tagliavini F, Waldo ML, Johansson PM, Nilsson CF, Rowe JB, Benussi L, Binetti G, Ghidoni R, Jabbari E, Viollet C, Glass JD, Singleton AB, Silani V, Ross OA, Ryten M, et al. [Clarimón J, Dols O, Illan I, Lleó A]. Article Pathogenic Huntingtin Repeat Expansions in Patients with Frontotemporal Dementia and Amyotrophic Lateral Sclerosis. *NEURON*. 2021; 109(3). DOI:10.1016/j.neuron.2020.11.005. PMID:33242422. IF:17,173 (Q1/D1).

- Dierssen M, Herault Y, Helguera P, de Lagran MM, Vazquez A, Christian B, Carmona M, Wiseman F, Mobley W, Fisher E, Brault V, Esbensen A, Jacola LM, Potier MC, Hamlett ED, Abbeduto L, Soriano LD, Busciglio J, Iulita MF, Crispino J, Malinge S, Barone E, Perluigi M, Costanzo F, Delabar JM, Bartesaghi R, Dekker AD, De Deyn P, Ormaechea JF, et al. Building the Future Therapies for Down Syndrome: The Third International Conference of the T21 Research Society. *Molecular Syndromology*. 2021; 12(4). DOI:10.1159/000514437. PMID:34421499. IF:1,631 (Q4/D9).

- Dubois B, Villain N, Frisoni GB, Rabinovici GD, Sabbagh M, Cappa S, Bejanin A, Bombois S, Epelbaum S, Teichmann M, Habert MO, Nordberg A, Blennow K, Galasko D, Stern Y, Rowe CC, Salloway S, Schneider LS, Cummings JL, Feldman HH. Clinical diagnosis of Alzheimer's disease: recommendations of the International Working Group. *LANCET NEUROLOGY*. 2021; 20(6). DOI:10.1016/S1474-4422(21)00066-1. PMID:33933186. IF:44,182 (Q1/D1).
- Falgas N, Illan I, Allen IE, Mumford P, Essanaa YM, Le MM, You M, Grinberg LT, Rosen HJ, Neylan TC, Kramer JH, Walsh CM. Specific cortical and subcortical grey matter regions are associated with insomnia severity. *PLoS One*. 2021; 16(5):e0252076. DOI:10.1371/journal.pone.0252076. PMID:34038462. IF:3,240 (Q2/D4).
- Ferrer P, Beyer K. Alternative platelet activation pathways and their role in neurodegenerative diseases. *NEUROBIOLOGY OF DISEASE*. 2021; 159:105512. DOI:10.1016/j.nbd.2021.105512. PMID:34537329. IF:5,996 (Q1/D2).
- Flores L, Lulita MF, Orciani C, Tanna N, Yang JY, Bennett DA, Cuello AC. Cognitive and brain cytokine profile of non-demented individuals with cerebral amyloid-beta deposition. *Journal of Neuroinflammation*. 2021; 18(1):147. DOI:10.1186/s12974-021-02169-0. PMID:34218796. IF:8,322 (Q1/D1).
- Fortea J, Zaman SH, Hartley S, Rafii MS, Head E, Carmona M. Alzheimer's disease associated with Down syndrome: a genetic form of dementia. *LANCET NEUROLOGY*. 2021; 20(11). DOI:10.1016/S1474-4422(21)00245-3. PMID:34687637. IF:44,182 (Q1/D1).
- Frederiksen KS, Nielsen TR, Appollonio I, Andersen BB, Riverol M, Boada M, Ceccaldi M, Dubois B, Engelborghs S, Frölich L, Hausner L, Gabelle A, Gabryelewicz T, Grimmer T, Hanseeuw B, Hort J, Hugon J, Jelic V, Koivisto A, Kramberger MG, Lebouvier T, Lleó A, de Mendonça A, Nobili F, Ousset PJ, Pernecky R, Olde Rikkert M, Robinson D, et al. Biomarker counseling, disclosure of diagnosis and follow-up in patients with mild cognitive impairment: A European Alzheimer's disease consortium survey. *INTERNATIONAL JOURNAL OF GERIATRIC PSYCHIATRY*. 2021;36(2):324-333. DOI:10.1002/gps.5427. PMID: 32896040. IF:3,485 (Q1/D3).
- Gimenez S, Altuna M, Blessing E, Osorio RM, Fortea J. Sleep Disorders in Adults with Down Syndrome. *Journal of Clinical Medicine*. 2021; 10(14):3012. DOI:10.3390/jcm10143012. PMID:34300177. IF:4,241 (Q1/D3).
- Hong SJ, Dobricic V, Ohlei O, Bos I, Vos SJB, Prokopenko D, Tijms BM, Andreasson U, Blennow K, Vandenberghe R, Gabel S, Scheltens P, Teunissen CE, Engelborghs S, Frisoni G, Blin O, Richardson JC, Bordet R, Lleó A, Alcolea D, Popp J, Clark C, Peyratout G, Martinez P, Tainta M, Dobson RJB, Legido C, Sleegers K, Van C, Tanzi RE, ten M, Wittig M, et al. TMEM106B and CPOX are genetic determinants of cerebrospinal fluid Alzheimer's disease biomarker levels. *Alzheimers & Dementia*. 2021; 17(10). DOI:10.1002/alz.12330. PMID:33991015. IF:21,566 (Q1/D1).
- Horta A, Pagonabarraga J, Martinez S, Busteed L, Pascual B, Illan I, Marin J, Aracil I, Perez J, Sampedro F, Bejr H, Kulisevsky J. Cognitive and behavioral profile of progressive supranuclear palsy and its phenotypes. *JOURNAL OF NEUROLOGY*. 2021; 268(9). DOI:10.1007/s00415-021-10511-y. PMID:33704556. IF:4,849 (Q1/D3).
- Hostettler IC, Wilson D, Fiebelkorn CA, Aum D, Ameriso SF, Eberbach F, Beitzke M, Kleinig T, Phan T, Marchina S, Schneckenburger R, Carmona M, Charidimou A, Mourand I, Parreira S, Ambler G, Jager HR, Singhal S, Ly J, Ma H, Touze E, Gerales R, Fonseca AC, Melo T, Labauge P, Lefevre PH, Viswanathan A, Greenberg SM, Fortea J, et al. Risk of intracranial haemorrhage and ischaemic stroke after convexity subarachnoid haemorrhage in cerebral amyloid angiopathy: international individual patient data pooled analysis. *JOURNAL OF NEUROLOGY*. 2022; 269(3). DOI:10.1007/s00415-021-10706-3. PMID:34272978. IF:4,849 (Q1/D3).
- Illan I, Casaletto KB, Borrego S, Arenaza EM, Wolf A, Cobigo Y, Goh SYM, Staffaroni AM, Alcolea D, Fortea J, Blesa R, Clarimon J, Lulita MF, Brugulat A, Llado A, Grinberg LT, Possin K, Rankin KP, Kramer JH, Rabinovici GD, Boxer A, Seeley WW, Sturm VE, Gorno ML, Miller BL, Sanchez R, Perry DC, Lleó A, Rosen HJ. Sex differences in the behavioral variant of frontotemporal dementia: A new window to executive and behavioral reserve. *Alzheimers & Dementia*. 2021; 17(8). DOI:10.1002/alz.12299. PMID:33590953. IF:21,566 (Q1/D1).
- Illan I, Falgas N, Friedberg A, Castro S, Keret O, Rogers N, Oz D, Nigro S, Quattrone A, Quattrone A, Wolf A, Younes K, Santos M, Borrego S, Cobigo Y, Dols O, Llado A, Sanchez R, Clarimon J, Blesa R, Alcolea D, Fortea J, Lleó A, Grinberg LT, Spina S, Kramer JH, Rabinovici GD, Boxer A, Tempini MLG, Miller BL, Seeley WW, Rosen HJ, Perry DC. Diagnostic Utility of Measuring Cerebral Atrophy in the Behavioral Variant of Frontotemporal Dementia and Association With Clinical Deterioration. *JAMA Network Open*. 2021; 4(3):e211290. DOI:10.1001/jamanetworkopen.2021.1290. PMID:33704477. IF:8,483 (Q1/D1).
- Illan I, Lleó A, Karydas A, Staffaroni AM, Zetterberg H, Sivasankaran R, Grinberg LT, Spina S, Kramer JH, Ramos EM, Coppola G, La Joie R, Rabinovici GD, Perry DC, Gorno ML, Seeley WW, Miller BL, Rosen HJ, Blennow K, Boxer AL, Rojas JC. Plasma Tau and Neurofilament Light in Frontotemporal Lobar Degeneration and Alzheimer Disease. *NEUROLOGY*. 2021; 96(5). DOI:10.1212/WNL.0000000000011226. PMID:33199433. IF:9,910 (Q1/D1).
- Illouz T, Biragyn A, Frenkel M, Weissberg O, Gorohovski A, Merzon E, Green I, Lulita F, Flores L, Dierssen M, De Toma I, Lifshitz H, Antonarakis SE, Yu EE, Herault Y, Potier MC, Botte A, Roper R, Sredni B, Sarid R, London J, Mobley W, Strydom A, Okun E. Specific Susceptibility to COVID-19 in Adults with Down Syndrome (Mar, 10.1007/s12017-021-08651-5, 2021).

NEUROMOLECULAR MEDICINE. 2021; 23(4). DOI:10.1007/s12017-021-08657-z. PMID:33948879. IF:3,843 (Q2/D5).

- Illouz T, Biragyn A, Iulita MF, Flores L, Dierssen M, De Toma I, Antonarakis SE, Yu E, Herault Y, Potier MC, Botte A, Roper R, Sredni B, London J, Mobley W, Strydom A, Okun E, COVID T21RS. Immune Dysregulation and the Increased Risk of Complications and Mortality Following Respiratory Tract Infections in Adults With Down Syndrome. *Frontiers in Immunology*. 2021; 12:621440. DOI:10.3389/fimmu.2021.621440. PMID:34248930. IF:7,561 (Q1/D2).
- Kia DA, Zhang D, Guelfi S, Manzoni C, Hubbard L, Reynolds RH, Botia J, Ryten M, Ferrari R, Lewis PA, Williams N, Trabzuni D, Hardy J, Wood NW, Clarimón J, Dols O, Kulisevsky J, Pagonabarraga J, United B, Int Parkinsons Dis G. Identification of Candidate Parkinson Disease Genes by Integrating Genome-Wide Association Study, Expression, and Epigenetic Data Sets. *JAMA Neurology*. 2021; 78(4). DOI:10.1001/jamaneurol.2020.5257. PMID:33523105. IF:18,302 (Q1/D1).
- Kim CM, Montal V, Diez I, Orwig W, Sepulcre J, Alzheimer's N. Network interdigitations of Tau and amyloid-beta deposits define cognitive levels in aging. *HUMAN BRAIN MAPPING*. 2021; 42(10). DOI:10.1002/hbm.25350. PMID:33955621. IF:5,038 (Q1/D2).
- Lage C, Lopez S, Bejanin A, Kazimierczak M, Aracil I, Calvo A, Pozueta A, Garcia M, Fernandez A, Bravo M, Jimenez J, Banzo I, Irure J, Pegueroles J, Illan I, Fortea J, Rodriguez E, Lleo A, Garcia CE, Sanchez P. Distinctive Oculomotor Behaviors in Alzheimer's Disease and Frontotemporal Dementia. *Frontiers in Aging Neuroscience*. 2021; 12:603790. DOI:10.3389/fnagi.2020.603790. PMID:33613262. IF:5,750 (Q1/D2).
- Lawingco T, Chaudhury S, Brookes KJ, Guetta T, Guerreiro R, Bras J, Hardy J, Francis P, Thomas A, Belbin O, Morgan K. Genetic variants in glutamate-, A beta-, and tau-related pathways determine polygenic risk for Alzheimer's disease. *NEUROBIOLOGY OF AGING*. 2021; 101. DOI:10.1016/j.neurobiolaging.2020.11.009. PMID:33303219. IF:4,673 (Q2/D3).
- Ledreux A, Thomas S, Hamlett ED, Trautman C, Gilmore A, Hager ER, Paredes DA, Margittai M, Fortea J, Granholm AC. Small Neuron-Derived Extracellular Vesicles from Individuals with Down Syndrome Propagate Tau Pathology in the Wildtype Mouse Brain. *Journal of Clinical Medicine*. 2021; 10(17):3931. DOI:10.3390/jcm10173931. PMID:34501378. IF:4,241 (Q1/D3).
- Lleo A, Carmona M, Videla L, Fernandez S, Benejam B, Pegueroles J, Barroeta I, Altuna M, Valldeneu S, Xiao MF, Xu DS, Nunez R, Querol M, Sirisi S, Bejanin A, Iulita MF, Clarimon J, Blesa R, Worley P, Alcolea D, Fortea J, Belbin O. VAMP-2 is a surrogate cerebrospinal fluid marker of Alzheimer-related cognitive impairment in adults with Down syndrome. *Alzheimers Research & Therapy*. 2021; 13(1):119. DOI:10.1186/s13195-021-00861-0. PMID:34183050. IF:6,982 (Q1/D2).
- Lleo A, Zetterberg H, Pegueroles J, Karikari TK, Carmona M, Ashton NJ, Montal V, Barroeta I, Lantero J, Videla L, Altuna M, Benejam B, Fernandez S, Valldeneu S, Garzon D, Bejanin A, Iulita MF, Camacho V, Medrano S, Belbin O, Clarimon J, Lehmann S, Alcolea D, Blesa R, Blennow K, Fortea J. Phosphorylated tau181 in plasma as a potential biomarker for Alzheimer's disease in adults with Down syndrome. *Nature Communications*. 2021; 12(1):4304. DOI:10.1038/s41467-021-24319-x. PMID:34262030. IF:14,919 (Q1/D1).
- Martin L, Camps P, Lleixa C, Pascual E, Diaz J, Rojas R, De Luna N, Gallardo E, Cortes E, Munoz L, Alcolea D, Lleo A, Casasnovas C, Homedes C, Gutierrez G, Jimeno MC, Berciano J, Sedano MJ, Garcia T, Pardo J, Marquez C, Rojas I, Jerico I, Martinez E, de la Tassa GM, Dominguez C, Illa I, Querol L. Serum neurofilament light chain predicts long-term prognosis in Guillain-Barre syndrome patients. *JOURNAL OF NEUROLOGY NEUROSURGERY AND PSYCHIATRY*. 2021; 92(1). DOI:10.1136/jnnp-2020-323899. PMID:33154183. IF:10,154 (Q1/D1).
- Montal V, Barroeta I, Bejanin A, Pegueroles J, Carmona M, Altuna M, Benejam B, Videla L, Fernandez S, Padilla C, Aranha MR, Iulita MF, Vidal D, Alcolea D, Blesa R, Lleo A, Fortea J. Metabolite Signature of Alzheimer's Disease in Adults with Down Syndrome. *ANNALS OF NEUROLOGY*. 2021; 90(3). DOI:10.1002/ana.26178. PMID:34309066. IF:10,422 (Q1/D1).
- Montal V, Vilaplana E, Pegueroles J, Bejanin A, Alcolea D, Carmona M, Clarimon J, Levin J, Cruchaga C, Graff NR, Noble JM, Lee JH, Allegri R, Karch CM, Laske C, Schofield PR, Salloway S, Ances B, Benzinger T, McDale E, Bateman R, Blesa R, Sanchez R, Lleo A, Fortea J, D. Biphasic cortical macro- and microstructural changes in autosomal dominant Alzheimer's disease. *Alzheimers & Dementia*. 2021; 17(4). DOI:10.1002/alz.12224. PMID:33196147. IF:21,566 (Q1/D1).
- Moreno S, Fernandez MV, de Rojas I, Garcia P, Hernandez I, Farias F, Budde JP, Quintela I, Madrid L, Gonzalez A, Montreal L, Alarcon E, Alegret M, Maronas O, Pineda JA, Macias J, Marquie M, Valero S, Benaque A, Clarimon J, Bullido MJ, Garcia G, Pastor P, Sanchez P, Alvarez V, Pinol G, Garcia JM, Royo JL, Franco E, Mir P, et al. [Blesa R, Fortea J, Lleó A]. Long runs of homozygosity are associated with Alzheimer's disease. *Translational Psychiatry*. 2021; 11(1):142. DOI:10.1038/s41398-020-01145-1. PMID:33627629. IF:6,222 (Q1/D2).
- Pagonabarraga J, Horta A, Busteed L, Bejr H, Illan I, Aracil I, Marin J, Pascual B, Perez J, Campolongo A, Izquierdo C, Martinez S, Sampedro F, Kulisevsky J. Quantitative evaluation of oculomotor disturbances in progressive supranuclear palsy. *PARKINSONISM & RELATED DISORDERS*. 2021; 85. DOI:10.1016/j.parkreldis.2021.03.002. PMID:33744691. IF:4,891 (Q1/D3).
- Pegueroles J, Montal V, Bejanin A, Vilaplana E, Aranha M, Santos MA, Alcolea D, Carrio I, Camacho V, Blesa R, Lleo A, Fortea J. AMYQ: An index to standardize quantitative amyloid load across PET tracers. *Alzheimers & Dementia*. 2021; 17(9). DOI:10.1002/alz.12317. PMID:33797846. IF:21,566 (Q1/D1).
- Pentz R, Iulita MF, Ducatenzeiler A, Videla L, Benejam B, Iragui MC, Blesa R, Lleo A, Fortea J, Cuellar AC. Nerve growth factor

(NGF) pathway biomarkers in Down syndrome prior to and after the onset of clinical Alzheimer's disease: A paired CSF and plasma study. *Alzheimers & Dementia*. 2021; 17(4). DOI:10.1002/alz.12229. PMID:33226181. IF:21,566 (Q1/D1).

• Pentz R, Iulita MF, Mikutra M, Ducatenzeiler A, Bennett DA, Cuello AC. A new role for matrix metalloproteinase-3 in the NGF metabolic pathway: Proteolysis of mature NGF and sex-specific differences in the continuum of Alzheimer's pathology. *NEUROBIOLOGY OF DISEASE*. 2021; 148:105150. DOI:10.1016/j.nbd.2020.105150. PMID:33130223. IF:5,996 (Q1/D2).

• Pentz R, Iulita MF. The NGF Metabolic Pathway: New Opportunities for Biomarker Research and Drug Target Discovery NGF Pathway Biomarkers and Drug Targets. *Advances in Experimental Medicine and Biology*. 2021; 1331. DOI:10.1007/978-3-030-74046-7_4. PMID:34453291. IF:2,622 (Q2/D5).

• Petersen ME, Rafii MS, Zhang F, Hall J, Julovich D, Ances BM, Schupf N, Krinsky SJ, Mapstone M, Silverman W, Lott I, Klunk W, Head E, Christian B, Foroud T, Lai F, Rosas HD, Zaman S, Wang MC, Tycko B, Lee JH, Handen B, Hartley S, Fortea J, O'Bryant S, Alzheimers C. Plasma Total-Tau and Neurofilament Light Chain as Diagnostic Biomarkers of Alzheimer's Disease Dementia and Mild Cognitive Impairment in Adults with Down Syndrome. *JOURNAL OF ALZHEIMERS DISEASE*. 2021; 79(2). DOI:10.3233/JAD-201167. PMID:33337378. IF:4,472 (Q2/D4).

• Peyron PA, Colomb S, Becas D, Adriansen A, Gauchotte G, Tiers L, Marin G, Lehmann S, Baccino E, Delaby C, Hirtz C. Cytokines as new biomarkers of skin wound vitality. *INTERNATIONAL JOURNAL OF LEGAL MEDICINE*. 2021;135(6):2537-2545. DOI:10.1007/s00414-021-02659-z. PMID: 34313846. IF:2,686 (Q1/D3).

• Peyron PA, Hirtz C, Baccino E, Ginestet N, Tiers L, Martinez AY, Lehmann S, Delaby C. Tau protein in cerebrospinal fluid: a novel biomarker of the time of death? *INTERNATIONAL JOURNAL OF LEGAL MEDICINE*. 2021;135(5):2081-2089. DOI:10.1007/s00414-021-02558-3. PMID: 33740116. IF:2,686 (Q1/D3).

• Reus LM, Pasaniuc B, Posthuma D, Boltz T, Pijnenburg Y, Ophoff RA, Lleó A, Blesa R, Ophoff RA. Gene Expression Imputation Across Multiple Tissue Types Provides Insight Into the Genetic Architecture of Frontotemporal Dementia and Its Clinical Subtypes. *BIOLOGICAL PSYCHIATRY*. 2021; 89(8). DOI:10.1016/j.biopsych.2020.12.023. PMID:33637304. IF:13,382 (Q1/D1).

• Rodriguez E, Montal V, Sepulcre J, Lois C, Hanseeuw B, Vilaplana E, Schultz AP, Properzi MJ, Scott MR, Amariglio R, Papp KV, Marshall GA, Fortea J, Johnson KA, Sperling RA, Vannini P. Association of cortical microstructure with amyloid-beta and tau: impact on cognitive decline, neurodegeneration, and clinical progression in older adults. *MOLECULAR PSYCHIATRY*. 2021; 26(12). DOI:10.1038/s41380-021-01290-z. PMID:34588623. IF:15,992 (Q1/D1).

• Rosas I, Martínez C, Coto E, Clarimón J, Lleó A, Illán-Gala I, Dols-Icardo O, Borroni B, Almeida MR, van der Zee J, Van Broeckhoven C; EU EOD Consortium, Bruni AC, Anfossi M, Bernardi L, Maletta R, Serpente M, Galimberti D, Scarpini E, Rossi G, Caroppo P, Benussi L, Ghidoni R, Binetti G, Nacmias B, Sorbi S, Piaceri I, Bagnoli S, Antonell A, et al. Genetic variation in APOE, GRN, and TP53 are phenotype modifiers in frontotemporal dementia. *Neurobiology of Aging*. 2021;99:99.e15-99.e22. DOI:10.1016/j.neurobiolaging.2020.08.018. PMID: 32972771. IF:4,673 (Q2/D3).

• Rujeedawa T, Félez EC, Clare ICH, Fortea J, Strydom A, Rebillat A-S, Coppus A, Levin J, Zaman SH. The clinical and neuropathological features of sporadic (Late-onset) and genetic forms of alzheimer's disease. *Journal of Clinical Medicine*. 2021; 10(19):4582. DOI:10.3390/jcm10194582. PMID:34640600. IF:4,241 (Q1/D3).

• Shi L, Buckley NJJ, Bos I, Engelborghs S, Sleegers K, Frisoni GB, Wallin A, Lleo A, Popp J, Martinez P, Legido C, Barkhof F, Zetterberg H, Visser PJ, Bertram L, Lovestone S, Nevado AJ. Plasma Proteomic Biomarkers Relating to Alzheimer's Disease: A Meta-Analysis Based on Our Own Studies. *Frontiers in Aging Neuroscience*. 2021; 13:712545. DOI:10.3389/fnagi.2021.712545. PMID:34366831. IF:5,750 (Q1/D2).

• Shi L, Winchester LM, Westwood S, Baird AL, Anand SN, Buckley NJ, Hye A, Ashton NJ, Bos I, Vos SJB, ten M, Scheltens P, Teunissen CE, Vandenberghe R, Gabel S, Meersmans K, Engelborghs S, De Roeck EE, Sleegers K, Frisoni GB, Blin O, Richardson JC, Bordet R, Molinuevo JL, Rami L, Wallin A, Kettunen P, Tsolaki M, Verhey F, Lleo A, Sala I, et al. Replication study of plasma proteins relating to Alzheimer's pathology. *Alzheimers & Dementia*. 2021; 17(9). DOI:10.1002/alz.12322. PMID:33792144. IF:21,566 (Q1/D1).

• Solana E, Martinez E, Montal V, Vilaplana E, Lopez E, Radua J, Sola N, Montejo C, Blanco Y, Pulido I, Sepulveda M, Andorra M, Berenguer J, Villoslada P, Martinez EH, Prados F, Saiz A, Fortea J, Llufrú S. Regional grey matter microstructural changes and volume loss according to disease duration in multiple sclerosis patients. *Scientific Reports*. 2021; 11(1):16805. DOI:10.1038/s41598-021-96132-x. PMID:34413373. IF:4,379 (Q1/D3).

• Stantonyonge N, Martinez S, Sampedro F, Sanchez MB, Chico A. Defective involuntary attention to novelty in type 1 diabetes and impaired awareness of hypoglycaemia. *DIABETES RESEARCH AND CLINICAL PRACTICE*. 2021; 177:108898. DOI:10.1016/j.diabres.2021.108898. PMID:34098058. IF:5,602 (Q1/D3).

• Storm CS, Kia DA, Almrhamhi MM, Bandres S, Finan C, Hingorani AD, Wood NW, Clarimón J, Dols O, Kulisevsky J, Marín J, Pagonabarraga J, Lynch TL. Finding genetically-supported drug targets for Parkinson's disease using Mendelian randomization of the druggable genome. *Nature Communications*. 2021; 12(1):7342. DOI:10.1038/s41467-021-26280-1. PMID:34930919. IF:14,919 (Q1/D1).

- Tort A, Valech N, Laine M, Olives J, Leon M, Ecay M, Estanga A, Martinez P, Fortea J, Molinuevo JL, Sanchez R, Rodriguez A, Rami L. Accelerated long-term forgetting in individuals with subjective cognitive decline and amyloid-beta positivity. *INTERNATIONAL JOURNAL OF GERIATRIC PSYCHIATRY*. 2021; 36(7). DOI:10.1002/gps.5539. PMID:33792089. IF:3,485 (Q1/D3).
- Tort-Merino A, Laine M, Valech N, Olives J, León M, Ecay-Torres M, Estanga A, Martínez-Lage P, Fortea J, Sánchez-Valle R, Rami L, Rodríguez-Fornells A. Accelerated long-term forgetting over three months in asymptomatic APOE ϵ 4 carriers. *Annals of Clinical and Translational Neurology*. 2021;8(2):477-484. DOI:10.1002/acn3.51245. PMID: 33369208. IF:4,511 (Q2/D3).
- Van der Ende EL, Morenas E, McMillan C, Grossman M, Irwin D, Sanchez R, Graff C, Vandenberghe R, Pijnenburg Y, Laforce R, Le I, Lleo A, Haass C, Suarez M, van JC, Seelaar H. CSF sTREM2 is elevated in a subset in GRN-related frontotemporal dementia. *NEUROBIOLOGY OF AGING*. 2021; 103. DOI:10.1016/j.neurobiolaging.2021.02.024. PMID:33896652. IF:4,673 (Q2/D3).
- Van LJCV, Ghafoorian M, van E, Claassen J, Arighi A, Bozzali M, Cannas J, Cavedo E, Eusebi P, Farotti L, Fenoglio C, Fortea J, Frisoni GB, Galimberti D, Greco V, Herukka SK, Liu YW, Lleo A, de Mendonca A, Nobili FM, Parnetti L, Picco A, Pikkarainen M, Salvadori N, Scarpini E, Soininen H, Tarducci R, Urbani A, Vilaplana E, Meulenbroek O, Platel B, Verbeek MM, Kuiperij HB. White Matter Hyperintensities Are No Major Confounder for Alzheimer's Disease Cerebrospinal Fluid Biomarkers. *JOURNAL OF ALZHEIMERS DISEASE*. 2021; 79(1). DOI:10.3233/JAD-200496. PMID:33252070. IF:4,472 (Q2/D4).
- Ximelis T, Marin A, Espinosa JC, Erana H, Charco JM, Hernandez I, Riveira C, Alcolea D, Gonzalez E, Aldecoa I, Molina L, Parchi P, Rossi M, Castilla J, Ruiz R, Gelpi E, Torres JM, Sanchez R. Homozygous R136S mutation in PRNP gene causes inherited early onset prion disease. *Alzheimers Research & Therapy*. 2021; 13(1):176. DOI:10.1186/s13195-021-00912-6. PMID:34663460. IF:6,982 (Q1/D2).
- Xu J, Green R, Kim M, Lord J, Ebshiana A, Westwood S, Baird AL, Nevado AJ, Shi L, Hye A, Snowden SG, Bos I, Vos SJB, Vandenberghe R, Teunissen CE, Kate MT, Scheltens P, Gabel S, Meersmans K, Blin O, Richardson J, De Roeck EE, Engelborghs S, Sleegers K, Bordet R, Rami L, Kettunen P, Tsolaki M, Verhey FRJ, Alcolea D, Lleo A, Peyratout G, et al. Sex-Specific Metabolic Pathways Were Associated with Alzheimer's Disease (AD) Endophenotypes in the European Medical Information Framework for AD Multimodal Biomarker Discovery Cohort. *Biomedicines*. 2021; 9(11):1610. DOI:10.3390/biomedicines9111610. PMID:34829839. IF:6,081 (Q1/D2).
- Younes K, Rojas JC, Wolf A, Sheng GM, Paoletti M, Toller G, Caverzasi E, Mandelli ML, Illan I, Kramer JH, Cobigo Y, Miller BL, Rosen HJ, Geschwind MD. Selective vulnerability to atrophy in sporadic Creutzfeldt-Jakob disease. *Annals of Clinical and Translational Neurology*. 2021; 8(6). DOI:10.1002/acn3.51290. PMID:33949799. IF:4,511 (Q2/D3).
- Zhu N, Santos M, Illan I, Montal V, Estelles T, Barroeta I, Altuna M, Arranz J, Munoz L, Belbin O, Sala I, Sanchez MB, Subirana A, Videla L, Pegueroles J, Blesa R, Clarimon J, Carmona M, Fortea J, Lleo A, Alcolea D. Plasma glial fibrillary acidic protein and neurofilament light chain for the diagnostic and prognostic evaluation of frontotemporal dementia. *Translational Neurodegeneration*. 2021; 10(1):50. DOI:10.1186/s40035-021-00275-w. PMID:34893073. IF:8,014 (Q1/D1).

Other scientific production

- De Kort AM, Kuiperij HB, Alcolea D, Kersten I, Versleijen A, Greenberg SM, Stoops E, Schreuder FHBM, Klijn CJM, Lleo A, Claassen J, Verbeek MM. Correction to: Cerebrospinal fluid levels of the neurotrophic factor neuroleukin are increased in early Alzheimer's disease, but not in cerebral amyloid angiopathy (vol 13, 160, 2021). *Alzheimers Research & Therapy*. 2021; 13(1):189. DOI:10.1186/s13195-021-00929-x. PMID:34784952. IF:6,982 (Q1/D2).
- Dekker AD, Ulgiati AM, Groen H, Boxelaar VA, Sacco S, Falquero S, Carfi A, di A, Benejam B, Valldeneu S, Fopma R, Oosterik M, Hermelink M, Beugelsdijk G, Schippers M, Henstra H, Scholten M, Willink J, de Ruiter L, Willems L, Loonstra A, Coppus A, Tollenaere M, Fortea J, Onder G, Rebillat AS, Van D, De Deyn PP. The Behavioral and Psychological Symptoms of Dementia in Down Syndrome Scale (BPSD-DS II): Optimization and Further Validation (vol 81, pg 1505, 2021). *JOURNAL OF ALZHEIMERS DISEASE*. 2021; 82(3). DOI:10.3233/JAD-219007. PMID:34308929. IF:4,472 (Q2/D4).
- Gelpi E, Aldecoa I, Lopez D, Abellan MT, Mercadel P, Fortea J, Ribosa R, Morenas E, Gomez B, Molina L, Ximelis T, Borrego S, Antonell A, Rovelet A, Klotz S, Andres P, Sanchez R, Ferrer I. Atypical astroglial pTDP-43 pathology in astroglial predominant tauopathy. *NEUROPATHOLOGY AND APPLIED NEUROBIOLOGY*. 2021; 47(7). DOI:10.1111/nan.12707. PMID:33730418. IF:8,090 (Q1/D1).
- Lleo A, Suarez M. Race and Alzheimer Disease Biomarkers A Neglected Race. *Neurology-Genetics*. 2021; 7(2):e574. DOI:10.1212/NXG.0000000000000574. PMID:33688581. IF:3,485 (Q2/D5).

Other publications

- Altuna M, Sánchez-Saudinós MB, Lleó A. Cognitive symptoms after COVID-19. *Neurology Perspectives*. 2021; 1(S1):S16-S24.
- Hendrix JA, Amon A, Abbeduto L, Agiovlasis S, Alsaied T, Anderson HA, Bain LJ, Baumer N, Bhattacharyya A, Bogunovic D, Botteron KN, Capone G, Chandan P, Chase I, Chicoine B, Cieuta C, DeRuisseau LR, Durand S, Esbensen A, Fortea J, Giménez S, Granholm AC, Hahn LJ, Head E, Hillerstrom H, Jacola LM, Janicki MP, Jasien JM, Kamer AR, Kent RD, et al. Opportunities, barriers, and recommendations in down syndrome research. *Translational Science Of Rare Diseases*. 2021; 5(3-4). DOI:10.3233/trd-200090. PMID:34268067.

- Huls A, Costa A, Dierssen M, Baksh RA, Bargagna S, Baumer NT, Brandao AC, Carfi A, Carmona M, Chicoine BA, Ghosh S, Lakhanpaul M, Manso C, Mayer MA, Ortega MD, de Asua DR, Rebillat AS, Russell LA, Sgandurra G, Valentini D, Sherman SL, Strydom A. Medical vulnerability of individuals with Down syndrome to severe COVID-19—data from the Trisomy 21 Research Society and the UK ISARIC4C survey. *Eclinicalmedicine*. 2021; 33:100769. DOI:10.1016/j.eclinm.2021.100769. PMID:33644721.
- Lleo A. BIOMARKERS IN NEUROLOGICAL DISORDERS: A FAST-GROWING MARKET. *Brain Communications*. 2021; 3(2):86. DOI:10.1093/braincomms/fcab086. PMID:33977270.
- Tijms BM, Gobom J, Teunissen C, Dobricic V, Tsolaki M, Verhey F, Popp J, Martinez P, Vandenberghe R, Lleo A, Molinuevo JL, Engelborghs S, Freund Y, Froelich L, Bertram L, Lovestone S, Streffer J, Vos S, Blennow K, Scheltens P, Zetterberg H, Visser PJ, A. CSF Proteomic Alzheimer's Disease—Predictive Subtypes in Cognitively Intact Amyloid Negative Individuals. *Proteomes*. 2021; 9(3):36. DOI:10.3390/proteomes9030036. PMID:34449748.

Books or chapters with ISBN

- Estellés T, Sala I. Trastornos cognitivos y conducción. En: Arias Rivas S, Iñíguez Martínez C, Láinez Andrés JM. (Ed. SEN). Manual de neurología y conducción (1era Ed, Cap. 3.6, pp:153-176). 2021. ISBN: 978-84-946708-6-2
- Lulita MF, Granholm AC, Carmona M, Hamlett ED, Fortea J, Ledreux A. Fluid biomarkers for Alzheimer's disease in Down syndrome: Current status and novel trends. En: The Neurobiology Of Aging And Alzheimer Disease In Down Syndrome. Elsevier. 2021. p. 97-128.

Communication and dissemination activities

Oral Communications at Congresses

- Lulita MF, Bejanin A, Vilaplana E, Carmona Iragui M, Benejam B, Videla L, Barroeta I, Fernandez S, Altuna M, Pegueroles J, Montal V, Valldeneu S, Gimenez S, Gonzalez-Ortiz S, Muñoz L, Estelles T, Illan-Gala I, Belbin O, Valle Tamayo N, Camacho V, Wilson LR, Annus T, Osorio RS, Videla S, Lehmann S, Holland AJ, Alcolea D, Clarimon J, Zaman SH, Blesa R, Lleó A, Fortea J. Effect of biological sex on clinical, biochemical and neuroimaging biomarkers of Alzheimer's disease in adults with Down syndrome: a cross-sectional study. Selected for an oral presentation, AD/PD Meeting, March 2021
- Sirisi S, Querol-Vilaseca M, Dols-Icardo O, Muñoz L, Torres S, Pegueroles J, Montal V, Lulita MF, Blesa R, Belbin O, Fortea J, Clarimon J, Lleó A. Oligodendroglial abnormalities in FTLN-C9orf72. AD/PD: Alzheimer's & Parkinson's Diseases Conference. Barcelona, 9-14 March 2021

- Videla L, Benejam B, Pegueroles J, Bejanin A, Carmona-Iragui M, Fernandez S, Barroeta I, Altuna M, Valldeneu S, Lulita F, Garzón D, Videla S, Alcolea D, Blesa R, Lleó A, Fortea J. Progression along the Alzheimer disease continuum and longitudinal cognitive decline in adults with Down syndrome. AD/PD: Alzheimer's & Parkinson's Diseases Conference. Barcelona, 9-14 March 2021.
- Ferrer-Raventos P, Querol-Vilaseca M, Sirisi Dolcet S, Nuñez Llaves R, Pegueroles J, Lulita MF, Belbin O, Fortea J, Lleó A. APP-C99 accumulation in synapses in Alzheimer's disease. AD/PD: Alzheimer's & Parkinson's Diseases Conference. Barcelona, 9-14 March 2021.
- Olivia Belbin, Julie Goossens, Nele Dewit, Alba Cervantes-González, Estrella Morenas-Rodríguez, Isabel Sala-Matavera, Juan Fortea, Rafael Blesa, Daniel Alcolea, Eugeen Vanmechelen, Alberto Lleó. Evaluation of cerebrospinal fluid levels of the synaptic protein, Vamp-2, in Lewy Body Dementia patients. AD/PD: Alzheimer's & Parkinson's Diseases Conference. Barcelona, 9-14 March 2021.
- Laura Cervera-Carles, Antonio Díaz, Ignacio Illán-Gala, Daniel Alcolea, Laia Muñoz-Llahuna, Oriol Dols-Icardo, Isabel Sala, M Belén Sánchez-Saudinós, Yaroslau Compta, M José Martí, Ana Gámez-Valero, Katrin Beyer, Patricia Llorente, Jesús Aldudo, M Jesús Bullido, Alfredo Miñano, José Rodríguez-Alvarez, Rafael Blesa, Juan Fortea, Alberto Lleó, Ana María Cuervo, Jordi Clarimón - Micro-RNA chances in CSF vesicles of 4R-tauopathy patients disrupt autophagic activity - AD/PD: Alzheimer's & Parkinson's Diseases Conference. Barcelona, 9-14 March 2021.
- Ignacio Illán-Gala, Victor Montal, Sergi Borrego-Écija, Neus Falgàs, Maria Luisa Mandelli, Ariane E. Welch, Jordi Pegueroles, Daniel Alcolea, M^a Belén Sánchez-Saudinós, Jordi Clarimón, Nuria Bargalló, Sofía González-Ortiz, Albert Lladó, Rafael Blesa, Bradford C. Dickerson, Howard J. Rosen, Bruce L. Miller, Maria Luisa Gorno-Tempini, Raquel Sánchez-Valle, Alberto Lleó, Juan Fortea - American Academy of Neurology 2021 Annual Meeting. 19 April 2021. Comunicación oral titulada: "Cortical Microstructure in Primary Progressive Aphasia: a multicenter study", selected for the merit of distinction in 2021.
- Ignacio Illán-Gala, Alberto Lleó, Anna Karydas, Adam M. Staffaroni, Henrik Zetterberg, Rajeev Sivasankaran, Lea T. Grinberg, Salvatore Spina, Joel H. Kramer, Eliana M. Ramos, Giovanni Coppola, Renaud La Joie, Gil D. Rabinovici, David C. Perry, Maria Luisa Gorno-Tempini, William W. Seeley, Bruce L. Miller, Howard J. Rosen, Kaj Blennow, Adam L. Boxer, and Julio C. Rojas American Academy of Neurology 2021 Annual Meeting. 20 April 2021. Comunicación oral titulada: "A Comparative Study of Plasma t-tau and Neurofilament Light Chain in Frontotemporal Lobar Degeneration and Alzheimer's Disease ", selected for the merit of distinction in 2021
- Ignacio Illán-Gala, Kaitlin B Casaletto, Sergi Borrego-Écija, Eider M Arenaza-Urquijo, Amy Wolf, Yann Cobigo, Sheng-Yang

Matthew Goh, Adam M. Staffaroni, Daniel Alcolea, Juan Fortea, Rafael Blesa, Jordi Clarimón, M. Florencia Iulita, Anna Brugulat-Serrat, Albert Lladó, Lea T. Grinberg, Kate Possin, Katherine P Rankin, Joel H Kramer, Gil D. Rabinovici, Adam L. Boxer, William W. Seeley, Virginia Sturm, Maria Luisa Gorno Tempini, Bruce L. Miller, Raquel Sanchez-Valle, David C. Perry, Alberto Lleó, and Howard J. Rosen- Comunicación oral titulada "Sex differences in the behavioral variant of frontotemporal dementia: a new window to executive and behavioral reserve".- FTD PIA: Scientific Session/Business Meeting. 17 September 2021.

- Marta Querol-Vilaseca, Érika Sánchez-Aced, Jordi Pegueroles, Teodora Andrian, Sònia Sirisia, Paula Ferrer-Raventós, Martí Colom-Cadena, Olivia Belbin, Juan Fortea, Tara Spires-Jones, Sílvia Pujals and Alberto Lleó. Super-resolution microscopy methods applied to human neurodegenerative diseases. Heat-Net, September 2021, Göttingen.
- Paula Ferrer-Raventós, David Puertollano-Martín, Marta Querol-Vilaseca, Sònia Sirisi Dolcet, Erika Sanchez-Aced, Raúl Nuñez Llaves, Jordi Pegueroles, Maria Florencia Iulita, Olivia Belbin, Juan Fortea, and Alberto Lleó-APP-C99 ACCUMULATION IN SYNAPSES IN ALZHEIMER'S DISEASE. HEAT-net Meeting-University Medical Center Göttingen-Sept 6-8.
- Alberto Lleó-CSF biomarkers in early Alzheimer's disease. HEAT-net Meeting-University Medical Center Göttingen-Sept 6-8.
- Ignacio Illán-Gala -Cortical microstructure and microstructural architecture in FTLD: looking beyond atrophy - XV Foro Cibernet - Sept 21
- Alberto Lleó - Novel Fluid Biomarkers in Alzheimer's disease - XV Foro Cibernet - Sept 21
- Ignacio Illán - Sex Differences in FTD el 05/03/21-12th International Conference on Frontotemporal Dementias and 1st International Society for Frontotemporal Dementias Congress - International Society for Frontotemporal Dementias (ISFTD) 2021 Live Stream: March 3 - 5, 2021
- Albert Lladó, Daniel Alcolea, Lorena Bajo, Joan Bello, Mercè Boada, Anuncia Boltes, Teresa Casadevall, Jose Contador, Susana Fernández, Lourdes Ispuerto, Yurek Krupinski, Albert Lleó, M Dolores Lopez-Villegas, Rogelio Lopez, Ana Malagelada, Teresa Osuna, Oscar Pardiña, Albert Puig, Francesc Pujadas, Marta Rubio, Antoni Turón, Cristina Udina, Gerard Piñol-Ripoll- Atenció a les persones amb alteració cognitiva d'inici primerenc a Catalunya: Resultats qüestionari i presentació de la Xarxa Catalana de Demències neurodegeneratives d'inici primerenc-XXV REUNIÓ ANUAL DE LA SOCIETAT CATALANA DE NEUROLOGIA 2a REUNIÓ VIRTUAL. 3-7 May 2021
- Ignacio Illán-Gala, Victor Montal, Sergi Borrego-Écija, Neus Falgàs, Maria Luisa Mandelli, Ariane E. Welch, Jordi Pegueroles, Daniel Alcolea, M^a Belén Sánchez-Saudinós, Jordi Clarimón, Nuria Bargalló, Sofía González-Ortiz, Albert Lladó, Rafael Blesa, Bradford C. Dickerson, Howard J. Rosen, Bruce L. Miller, Maria Luisa Gorno-Tempini, Raquel Sánchez-Valle, Alberto Lleó, Juan

Fortea -Cortical microstructure in primary progressive aphasia subtypes: a multicenter study-XXV REUNIÓ ANUAL DE LA SOCIETAT CATALANA DE NEUROLOGIA 2a REUNIÓ VIRTUAL 3-7 May 2021.

- Ignacio Illán-Gala ; Neus Falgas ; Adit Friedberg ; Sheila Castro-Suárez ; Ophir Keret ; Nicole Rogers ; Didem Oz ; Salvatore Nigro; Andrea Quattrone ; Aldo Quattrone ; Amy Wolf; Kyan Younes; Julio Rojas; Miguel Santos-Santos; Sergi Borrego-Écija ; Anna Karydas ; Yann Cobigo; Raquel Sánchez-Valle ; Juan Fortea; Alberto Lleó ; Lea T. Grinberg ; Salvatore Spina; Joel H. Kramer; Gil D. Rabinovici; Adam Boxer; Maria Luisa Gorno-Tempini; Bruce L. Miller ; William W. Seeley ; Howard J. Rosen; David C. Perry - Diagnostic Utility of Measuring Cerebral Atrophy in the Behavioral Variant of Frontotemporal Dementia and Association With Clinical Deterioration-XXV REUNIÓ ANUAL DE LA SOCIETAT CATALANA DE NEUROLOGIA 2a REUNIÓ VIRTUAL 3-7 May 2021.

Scientific Posters at Congresses

- Alcolea D, Delaby C, Muñoz L, Torres S, Estellés T, Zhu N, Barroeta I, Carmona-Iragui M, Illán-Gala I, Santos M, Altuna M, Sala I, Sánchez-Saudinós MB, Videla L, Valldeneu S, Subirana A, Hirtz C, Vialaret J, Lehmann S, Blennow K, Zetterberg H, Belbin O, Blesa R, Clarimón J, Fortea J, Lleó A. Plasma biomarkers in the AT(N) categories for the detection of Alzheimer's disease. AD/PD: Alzheimer's & Parkinson's Diseases Conference. Barcelona, 9-14 March 2021.
- De Kort, B. Kuiperij, D. Alcolea, I. Kersten, A. Versleijen, F. Schreuder, A. Lleó, J. Claassen, M. Verbeek - Increased neuroleukin levels in cerebrospinal fluid of alzheimer's patients - AD/PD: Alzheimer's & Parkinson's Diseases Conference. Barcelona, 9-14 March 2021
- Miñano-Molina, D. Siedlecki-Wullich, J. Català-Solsona, C. Fábregas-Ordóñez, I. Hernandez, J. Clarimón, A. Lleó, M. Boada, C. Saura, J. Rodríguez-Álvarez - Altered micrnas related to synaptic function as potential plasma biomarkers for early stages of alzheimer's disease - AD/PD: Alzheimer's & Parkinson's Diseases Conference. Barcelona, 9-14 March 2021
- N. Zhu, M. Santos, V. Montal, T. Estellés, I. Illán-Gala, I. Barroeta, M. Altuna, O. Belbin, I. Sala, M.B. Sánchez-Saudinós, A. Subirana, L. Videla, J. Clarimón, M. Carmona-Iragui, R. Blesa, J. Fortea, D. Alcolea, A. Lleó - Plasma glial fibrillary acidic protein and neurofilament, and their combination as biomarkers in frontotemporal dementia - AD/PD: Alzheimer's & Parkinson's Diseases Conference. Barcelona, 9-14 March 2021
- O. Dols-Icardo, S. Sirisi-Dolcet, V. Montal, B. Sabariego, L. Cervera-Carles, L. Molina-Porcel, L. Muñoz, R. Blesa, J. Fortea, A. Lleó, J. Clarimón - Transcriptome characterization of the frontal cortex in frontotemporal lobar degeneration - AD/PD: Alzheimer's & Parkinson's Diseases Conference. Barcelona, 9-14 March 2021
- A.Tort-Merino, N. Valech, M. Laine, J. Olives, M. León, M. Ecay-Torres, A. Estanga, P. Martínez-Lage, J. Fortea, J.L. Molinuevo,

R. Sánchez-Valle, A. Rodríguez-Fornells, L. Rami - Accelerated long-term forgetting in individuals with subjective cognitive decline and amyloid-beta positivity - AD/PD: Alzheimer's & Parkinson's Diseases Conference. Barcelona, 9-14 March 2021

- Altuna M., Videla L., Barroeta I., Fernández S., Benejam B., Padilla C., Carmona M., Pegueroles J., Garzón D., Iulita MF., Blesa R., Lleó A., Fortea J. - Progressive worsening of balance, gait and motor coordination along the Alzheimer's disease continuum in Down syndrome - 4th International Conference. 21 Trisomy Research Society, Virtual Conference". Fechas: 8-10 June. Formato virtual.

- Ignacio Illán-Gala, Kaitlin B Casaletto, Sergi Borrego-Écija, Eider M Arenaza-Urquijo, Amy Wolf, Yann Cobigo, Sheng-Yang Matthew Goh, Adam M. Staffaroni, Daniel Alcolea, Juan Fortea, Rafael Blesa, Jordi Clarimón, M. Florencia Iulita, Anna Brugulat-Serrat, Albert Lladó, Lea T. Grinberg, Kate Possin, Katherine P Rankin, Joel H Kramer, Gil D. Rabinovici, Adam L. Boxer, William W. Seeley, Virginia Sturm, Maria Luisa Gorno Tempini, Bruce L. Miller, Raquel Sanchez-Valle, David C. Perry, Alberto Lleó, and Howard J. Rosen - "Sex differences in the behavioral variant of frontotemporal dementia: a new window to executive and behavioral reserve" - Alzheimer's Association International Conference. 26 July 2021.

- Belbin, DJ Irwin, D Alcolea, I Illán-Gala, MAngel Santos-Santos, CT McMillan, S Sirisi-Dolcet, O Dols-Icardo, A Cervantes-González, M Querol-Vilaseca, R Blesa, J Fortea, EB Lee, JQ Trojanowski, M Grossman, A Lleó. -Alzheimer's Association International Conference (AAIC-2021 Virtual). Calsyntenin 1 is a cerebrospinal fluid marker of frontotemporal dementia-related synapse degeneration. Poster P57453.

- D. Alcolea; C. Delaby; L. Muñoz; S. Torres; T. Estellés; N. Zhu; I. Barroeta; M. Carmona-Iragui; I. Illán-Gala; M.A. Santos-Santos; M. Altuna; I. Sala; M.B. Sánchez-Saudinós; L. Videla; S. Valldeneu; A. Subirana; J. Pegueroles; C. Hirtz; J. Vialaret; S. Lehmann; T. Karikari; N. Ashton; K. Blennow; H. Zetterberg; O. Belbin; R. Blesa; J. Clarimón; J. Fortea; A. Lleó- Plasma biomarkers for the AT(N) classification and for the detection of Alzheimer's disease- Alzheimer's Association International Conference- ON LINE-26-30 July 2021

- Marta Querol-Vilaseca, Érika Sánchez-Aced, Jordi Pegueroles, Teodora Andrian, Sònia Sirisia, Paula Ferrer-Raventós, Martí Colom-Cadena, Olivia Belbin, Juan Fortea, Tara Spires-Jones, Sílvia Pujals and Alberto Lleó. Super-resolution microscopy methods applied to human neurodegenerative diseases. Heat-Net, Sept 6-8, Göttingen.

- Paula Ferrer-Raventós, David Puertollano-Martín, Marta Querol-Vilaseca, Sònia Sirisi Dolcet, Erika Sanchez-Aced, Raúl Nuñez Llavés, Jordi Pegueroles, Maria Florencia Iulita, Olivia Belbin, Juan Fortea, and Alberto Lleó-APP-C99 ACCUMULATION IN SYNAPSES IN ALZHEIMER'S DISEASE. HEAT-net Meeting- University Medical Center Göttingen-Sept 6-8

- Miren Altuna, Alba Sierra, Roser Ribosa-Nogué, Susana Boronat, Sandra Giménez, Juan Fortea. Prevalencia de epilepsia en población adulta con síndrome de Down y su relación con la enfermedad de Alzheimer.- VII Congreso de la Sociedad Española de Epilepsia. Presencial. Santander, Cantabria, España. 21-23 Oct 2021

- Alba Cervantes-González, David J Irwin, Daniel Alcolea, Corey T McMillan, Alice Chen-Plotkin, David Wolk, Sònia Sirisi-Dolcet, Oriol Dols-Icardo, Marta Querol-Vilaseca, Ignacio Illán-Gala, Miguel Angel Santos-Santos, Juan Fortea, Edward B Lee, John Q Trojanowski, Murray Grossman, Alberto Lleó, Olivia Belbin-A novel set of cerebrospinal fluid biomarkers of synapse degeneration in TDP-43 related frontotemporal lobar degeneration- VIII Congreso Internacional de Investigación e Innovación en Enfermedades Neurodegenerativas, celebrado en Madrid los días 21-22 Sept 2021.

- O. Dols-Icardo, S. Sirisi, V. Montal, B. Sabariego, L. Cervera-Carles, L. Muñoz, L. Molina-Porcel, R. Blesa, J.Fortea, A. Lleó, J. Clarimón. Transcriptome wide characterization of the frontal cortex in FTLD (Póster en Alzheimer's Association International Conference 2021 (AAIC 2021)).

- O. Dols-Icardo, S. Sirisi, V. Montal, L. Molina-Porcel, R. Blesa, J.Fortea, A. Lleó, J. Clarimón. Transcriptome characterization of the frontal cortex in Frontotemporal Lobar Degeneration (Póster en Alzheimer's & Parkinson's Diseases Conference (ADPD2021)).

- A Cervantes-González, DJ Irwin, D Alcolea, CT McMillan, A Chen-Plotkin, D Wolk, S Sirisi-Dolcet, O Dols-Icardo, M Querol-Vilaseca, I Illán-Gala, MA Santos-Santos, J Fortea, EB Lee, JQ Trojanowski, M Grossman, A Lleó, O Belbin. XV FORO CIBERNED, 21-22 September 2021 - Madrid. - Cerebrospinal fluid levels of calsyntenin-1 and neurexin-2a reflect post-mortem TDP-43 pathology in a pathological cohort of frontotemporal lobar degeneration.

Talks - Invited speakers

- Fortea J. "Biochemical biomarkers and natural history of Down syndrome associated Alzheimer's disease". 2021 Global Down Syndrome Forum, March 16th 2021.
- Lleó A. "Controversias en torno a aducanumab". Round Table. CIBERNED. 22.6.21.
- Lleó, A.- "COVID-19 y alteraciones cognitivas". Feb 2021. Curso Neuropills.
- Lleó, A.- "Dementias" - Organised by Neurología al día 2021. May 2021.
- Illán I. - "Marcadores en fluidos biológicos de tau"-Reunión Anual Asociación Madrileña de Neurología -Oct 2021
- Illán I. - "Novedades en biomarcadores en los síndromes relacionados con la degeneración lobular frontotemporal" - 27º Curso Internacional de Investigación en Neurociencias Modalidad Virtual. 20th August 2021 - 2021-Perú
- Illán Gala I. "Microestructura cortical en los diferentes subtipos de afasia progresiva primaria: un estudio multicéntrico". LXXIII Reunión Anual de la SEN - 22/11/2021 to 02/12/2021

- Illán Gala I. "Valor de la resonancia magnética estructural para el diagnóstico de la parálisis supranuclear progresiva y la degeneración corticobasal: un estudio neuropatológico". LXXIII Reunión Anual de la SEN - 22/11/2021 to 02/12/2021
- Miren Altuna. "Sesión plenaria de las sociedades médicas-científicas". IX Congreso Nacional de Alzheimer. Organizador: CEAFA (Confederación Española de Alzheimer)- Vitoria-Gasteiz, País Vasco-10/11/2021
- Alberto Lleó- Novel fluid biomarkers in Alzheimer's disease- UIMP-IBIS SCHOOL OF BIOMEDICINE MECHANISMS OF NEURODEGENERATION: from genes to neural networks Seville, December 2nd and 3rd, 2021. Instituto de Biomedicina de Sevilla (IBiS) Campus HUVR, Sevilla.
- Daniel Alcolea - Marcadores bioquímicos para el diagnóstico de la enfermedad de Alzheimer: Actualización- XV Congreso Nacional de Laboratorio Clínico - Workshop-Virtual- 08/11/2021- Organiser: Fujirebio Iberia.
- Daniel Alcolea - Positioning of the core CSF biomarkers of Alzheimer's disease: a clinician's perspective - CSF-based biomarkers to support the diagnosis of Alzheimer's disease -Virtual- 27/10/2021- Organiser: Fujirebio-Europe.
- Bejanin A. Neuroimaging Research in Alzheimer Disease and Related Disorder: A Year In Review. Alzheimer's Association International Conference, July 26-30, 2021, Denver and Virtual event.

Outreach activities

- Talk "Crisis epilépticas de inicio tardo en síndrome de Down y su relación con la enfermedad de Alzheimer". Miren Altuna - invited speaker at Centro de Investigación Médica Aplicada de la Clínica Universitaria de Navarra (online), Pamplona - 5/2/2021
- Talk "Fer ciència i tot el que això comporta" - Referencia: C0118122613 - Centro: IES JOAN COROMINES Nivell: 4º ESO - Barcelona -Ponent: Paula Ferrer Raventós. Feb. 2021
- Talk "Towards the early detection of Alzheimer's disease." - Speaker: Olivia Belbin
- Course 2020/21 "Diagnòstic de la malaltia d'Alzheimer amb marcadors bioquímics: present i futur" - Speaker: Dr Daniel Alcolea Rodríguez.(online) . 18/03/2021 - <https://hsantpau.webex.com/hsantpau/j.php?MTID=mb4a3f644a494320410ba7862bc292fc9>
- Talk "Biomarcadores de plasma para el diagnóstico de la enfermedad de Alzheimer. Una revolución a la vuelta de la esquina"- Speaker: Daniel Alcolea - On line - Event: Neuropills, actualización en demencias - Organiser: Laboratorios Dr Esteve, S.A.- 04/03/2021
- Talk "Marcadores en biofluidos en las enfermedades neurodegenerativas: nuestra experiencia en la última década" - Speaker: Dr. Daniel Alcolea Rodríguez - 29/04/2021 - Online. Organiser: CIBERNED.
- Talk "Neurodegeneración en epilepsia. Un camino de ida y vuelta" - Speaker: Miren Altuna - 28/04/2021 - on line. Organiser: Sociedad Española de Epilepsia.
- Talk "Alfa- sinucleopatías. Aspectos diagnósticos, clínicos y terapéuticos" - Speaker: Juan Fortea-06/05/2021- on line, Organiser: Laboratorios Esteve.
- Los trastornos del lenguaje en el adulto [online video]. Speaker: Concepción Padilla Franco.
- Talk "Formación en enfermedad de Alzheimer"-Speaker: Daniel Alcolea - Santa Perpètua de Mogoda, Cataluña, España -13/05/2021- Event: Formación en enfermedad de Alzheimer- Organiser: Zambon, S.A.
- Talk: "Epilepsia y otras comorbilidades en contexto de enfermedad de Alzheimer en síndrome de Down"-on line- Servicio de Neurología de Complejo Hospitalario de Navarra. 01.10.2021- Speaker: Miren Altuna.
- Talk: "Biomarcadores de plasma para el diagnóstico de la enfermedad de Alzheimer"-Speaker: Daniel Alcolea- Barcelona, 28/10/2021- online event: MeetAlzheimer-Organiser: Laboratorios Dr. Esteve, S.A.
- Talk: "Genética de las demencias neurodegenerativas"- Ponent: Olivia belbin, 26/10/2021- Medical Residents Course: Sociedad Española de Neurología, Barcelona.

Courses, Seminars and Workshops

- Neuro Meet-ups Bern - 06/10/2021- Bern, Switzerland (online)- Title: Clinical application of fluid markers of synapse degeneration- Speaker: Olivia Belbin
- Curso de residentes en demencias neurodegenerativas de la Sociedad Española de Neurociencias. 25 - 26 Oct 2021 - Hospital de Sant Pau, Barcelona.
- Title: Biomarcadores de imagen en enfermedad de Alzheimer- Speaker: María Carmona
- Title: Conceptualización de la DLFT. Clasificación clínica y neuropatológica-Speaker: Alberto Lleó
- Title: DLFT-parkinsonismo: Taupatías 4R: CBS y PSP. Clínica, diagnóstico, biomarcadores, estrategias terapéuticas-Speaker: Ignacio Illán
- Title: Genética de las demencias neurodegenerativas -Speaker: Olivia Belbin.
- Title: Sinucleinopatías que cursan con deterioro cognitivo: Demencia con cuerpos de Lewy y Parkinson-demencia. Clínica, diagnóstico, biomarcadores, estrategias terapéuticas, neuropatología -Speaker: Daniel Alcolea
- Title: Demencia en el Síndrome de Down. Programa DABNI. Hospital de Sant Pau-Speaker: Juan Fortea.
- Memory Unit Seminar for Residents. Title: Abordaje de la patología neurológica en el Sd. de Down- 08/11/2021-Speaker: Miren Altuna
- IIB-SantPau Scientific Retreat 2021- 15/12/2021-Barcelona, Spain-Title: Technological Transfer of synapse degeneration biomarkers - Speaker: Olivia Belbin.



Neuroradiology

Coordinator

Gomez Anson, Beatriz Maria FGS
bgomeza@santpau.cat

Members

De Medina Iglesias, M. Victoria	FGS	Mendez Escalante, Jorge E.	FGS
Gómez Chiari, Marta C.	FGS	Merino Peña, Elisa	FGS
Lozano Martínez, Gloria Andrea	FGS	Tecame, Mario	FGS

Main lines of research

Ours is a multidisciplinary research group, which has the added value of combining neuroimaging skills of the members of the Neuroradiology clinical unit at Hospital de la Santa Creu i Sant Pau with technological knowledge from PIC/IFAE investigators at the Universitat Autònoma de Barcelona (Spain) and University College London (UCL, UK).

Our focus are:

- Neuroimaging biomarkers in diseases involving the central nervous system, including neurodegenerative and neuropsychiatric conditions
- Automatic procedures and software tools, especially those of Deep Learning/Artificial Intelligence, in neuroradiology.

Scientific Challenges

- To achieve visibility of our research group and of neuroradiology –often considered by clinicians more a technical tool rather than a discipline in itself– as a defined field of knowledge.
- To add knowledge in clinical Neuroradiology to the development and implementation of Artificial Intelligence in Diagnostic Imaging

Scientific production

- Best JG, Ambler G, Wilson D, Lee KJ, Lim JS, Shiozawa M, Koga M, Li LX, Lovelock C, Chabriat H, Hennerici M, Wong YK, Mak HKF, Prats L, Martinez A, Inamura S, Yoshifuji K, Arsava EM, Horstmann S, Purrucker J, Lam BYK, Wong A, Kim YD, Song TJ, Lemmens R, Eppinger S, Gattringer T, Uysal E, Tanriverdi Z, Bornstein NM, et al. [Gomez B, Marti J].

Development of imaging-based risk scores for prediction of intracranial haemorrhage and ischaemic stroke in patients taking antithrombotic therapy after ischaemic stroke or transient ischaemic attack: a pooled analysis of individual patient data from cohort studies. *LANCET NEUROLOGY*. 2021; 20(4). PMID:33743239. IF:44,182 (Q1/D1).

• Gras JR, Rodriguez F, Gomez B, Cubero JM, Martel M, Granell E, Lopez M, Montserrat JR, Masegur H. Management of Patients With Graves Orbitopathy Using Endonasal Endoscopic Techniques. *JOURNAL OF CRANIOFACIAL SURGERY*. 2021; 32(4). DOI:10.1097/SCS.00000000000007107. PMID:33170828. IF:1,046 (Q4/D9).

• Martinez-Horta S, Sampedro F, Horta-Barba A, Perez-Perez J, Pagonabarraga J, Gomez-Anson B, Kulisevsky J. Structural brain correlates of irritability and aggression in early manifest Huntington's disease. *Brain Imaging and Behavior*. 2021;15(1):107-113. DOI:10.1007/s11682-019-00237-x. PMID: 31898092. IF:3,978 (Q2/D4).

• Sampedro F, Martinez S, Perez J, Perez R, Horta A, Campolongo A, Aracil I, Gomez B, Kulisevsky J. Interaction between sex and neurofilament light chain on brain structure and clinical severity in Huntington's disease. *Annals of Clinical and Translational Neurology*. 2021; 8(12). DOI:10.1002/acn3.51460. PMID:34761569. IF:4,511 (Q2/D3).

• Sampedro F, Perez J, Martinez S, Perez R, Horta A, Campolongo A, Izquierdo C, Pagonabarraga J, Gomez B, Kulisevsky J. Cortical microstructural correlates of plasma neurofilament light chain in Huntington's disease. *PARKINSONISM & RELATED DISORDERS*. 2021; 85. DOI:10.1016/j.parkreidis.2021.03.008. PMID:33770670. IF:4,891 (Q1/D3).

• Sampedro F, Roldan A, Alonso A, Grasa E, Portella MJ, Aguilar EJ, Nunez F, Gomez B, Corripio I. Grey matter microstructural alterations in schizophrenia patients with treatment-resistant auditory verbal hallucinations. *JOURNAL OF PSYCHIATRIC RESEARCH*. 2021; 138. DOI:10.1016/j.jpsychires.2021.03.037. PMID:33852993. IF:4,791 (Q1/D2).

• Stantonoyonge N, Sampedro F, Mendez J, Martinez S, Chico A, Gomez B. Structural Gray and White Matter Differences in Patients With Type 1 Diabetes and Impaired Awareness of Hypoglycemia. *JOURNAL OF CLINICAL ENDOCRINOLOGY & METABOLISM*. 2021; 106(2). DOI:10.1210/clinem/dgaa832. PMID:33180907. IF:5,958 (Q1/D2).

Other scientific production

• Gelpi E, Aldecoa I, Lopez D, Abellan MT, Mercadel P, Fortea J, Ribosa R, Morenas E, Gomez B, Molina L, Ximelis T, Borrego S, Antonell A, Rovelet A, Klotz S, Andres P, Sanchez R, Ferrer I. Atypical astroglial pTDP-43 pathology in astroglial predominant tauopathy. *NEUROPATHOLOGY AND APPLIED NEUROBIOLOGY*. 2021; 47(7). DOI:10.1111/nan.12707. PMID:33730418. IF:8,090 (Q1/D1).



Addictive Behaviours

Coordinator

Trujols Albet, Joan
jtrujols@santpau.cat

FGS

Members

Alvarado Carrera, Pedro José
Batlle Batlle, Francesca
Bauza Ramis, Joana Maria
Costa Juste, Silvia Maria
De Andres Muñoz, Sandra
Duran-Sindreu Terol,
Santiago Francisco
Garcia Barrachina, Marina
Guardia Serecigni, Josep

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Madre Rull, Mercè
Mallorquí Bagué, Núria
Pinet Ogue, Maria Cristina
Remis Rebollo, Sergio
Ribalta Corona, Elisa
Roca Tutusaus, Francisco Javier J.
Sancho Navarro, Marta
Tome Pérez, José Alberto

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Main lines of research

Alcohol

- Pharmaco-epidemiological, non-interventive, prospective, multicenter study with Selincro® in alcohol dependence, to determine patterns of use and consumption of alcohol in routine clinical practice in Spain.
- Prospective observational study for reducing the negative consequences associated with excessive alcohol use (RINCA) through the treatment program to reduce alcohol consumption with nalmefene.

Cocaine

- Evaluation of cocaine craving during hospitalization conditions.

Tobacco

- Evaluation of the neuropsychiatric safety and efficacy of varenicline and bupropion hydrochloride for smoking cessation in subjects with and without a history of psychiatric disorders.
- Non-treatment follow-up for cardiac assessments following use of smoking

cessation treatments in subjects with and without a history of psychiatric disorders.

- Effectiveness of a telephone intervention for smoking cessation in patients with mental disorder: a pragmatic clinical trial.

Opiates

- Patient satisfaction concerning maintenance treatment with opioid agonists (methadone and buprenorphine/naloxone).
- Satisfaction of the heroin-dependent patient regarding methadone and methadone pharmacogenetics.

Behavioral addictions

- Effectiveness of a Mindfulness-Based Cognitive-Behavioral Therapy for Gambling Disorder. A randomized controlled trial.
- Effectiveness of a combined treatment for Hypersexual Disorder.
- Impact of the gambling advertising in general and clinical population.
- Effectiveness of the Cognitive-Behavioral Therapy for behavioral addictions.

Detoxification Hospital Unit

- Retention of treatment in detoxification and dehabitation hospital units.

Scientific Challenges

- Establish bidirectional links between clinical practice and investigation both to suggest hypotheses and incorporate recent advances.
- Participate in controlled clinical trials on the treatment of addictive disorders.
- Develop clinical research studies into the perspective of patients with addictions.
- Integrate clinical research in routine medical practice to assess the effectiveness of procedures.
- Evaluate the validity and reliability of frequently used clinical assessment procedures.

Collaborations

Collaborations with other IIB Sant Pau research groups

- Clinical Epidemiology and Healthcare Services.
- Mental Health.
- Genetic Diseases.

External collaborations

- Area of Psychiatric and Mental Health Nursing, Sant Pau School of Nursing, Autonomous University of Barcelona, Barcelona, Spain.
- Monash Institute of Cognitive and Clinical Neurosciences, Monash University, Clayton, Victoria, Australia.
- Department of Neurosciences, University of Cádiz, Cádiz, Spain.
- DeustoPsych, R+D+I in Psychology and Health, University of Deusto, Bilbao, Spain.
- Laboratory of Psychopathology and Health Processes, Psychological Institute, Paris Descartes University, Paris, France

Active grants

- JOAN TRUJOLS ALBET. Calidad de vida desde la perspectiva del paciente en tratamiento con agonistas opioides: síntesis de estudios cualitativos y desarrollo de una escala centrada en el paciente. PI16/00056. Instituto de Salud Carlos III. Duration 2017-2021. 28.500,00 €.
 - JOSE CARLOS PEREZ DE LOS COBOS PERIS. Estudio transversal y multicéntrico para el desarrollo de un modelo de predicción clínico y farmacogenético de la satisfacción del paciente dependiente de heroína con la metadona como un medicamento. SLT006/17/00179. Departament de Salut. Duration 2018-2021. 119.480,93 €.
 - NURIA MALLORQUI BAGUE. Ensayo clínico aleatorizado para la mejora del tratamiento del trastorno por consumo de cocaína mediante la implementación de un tratamiento basado en una web de terapia cognitivo conductual. PI20/00929. Instituto de Salud Carlos III. Duration 2021-2023. 26.500,00 €.
- Note: Total amount granted to PI. It does not include indirect costs.

Other active grants

- FRANCESCA BATLLE BATLLE. A pilot, randomized, placebo controlled, three arms, dose finding, parallel study to evaluate the use of nabiximols (THC + CBD, Sativex®) for cannabis detoxification treatment vs treatment as usual. IIBSP-SAT-2020-05. Almirall. Duration: 2021-2023. 56.600€.
- SANTIAGO DURAN-SINDREU TEROL. Satisfaction with medication, treatment burden and quality of life of patients on buprenorphine treatment: Differences between treatment with conventional sublingual buprenorphine and treatment with extended-release injectable solution. IIBSP-BUP-2021-113. Camurus AB. Duration: 2022-2025. 21.896€.

Scientific production

- Feliu A, de Diego J, Luciano JV, Iraurgi I, Alemany C, Puigdemont D, Perez V, Portella MJ, Trujols J. Unhappy While Depressed: Examining the Dimensionality, Reliability and Validity of the Subjective Happiness Scale in a Spanish Sample of Patients with Depressive Disorders. *International Journal of Environmental Research and Public Health*. 2021; 18(20):10964. DOI:10.3390/ijerph182010964. PMID:34682709. IF:3,390 (Q1/D3).
- Mallorqui N, Lozano M, Vintro C, Forcano L, Diaz A, Galera A, Fernandez R, Granero R, Jimenez S, Corella D, Pinto X, Cuenca A, Bullo M, Salas J, de la Torre R, Fernandez F. Effects of a psychosocial intervention at one-year follow-up in a PREDIMED-plus sample with obesity and metabolic syndrome. *Scientific Reports*. 2021; 11(1):9144. DOI:10.1038/s41598-021-88298-1. PMID:33911087. IF:4,379 (Q1/D3).
- Mallorqui N, Mestre G, Lozano M, Granero R, Vintro C, Fernandez F, Gomez M, Moragas L, Del Pino A, Menchon JM, Jimenez S. Gender and gambling disorder: Differences in compulsivity-related neurocognitive domains. *ADDICTIVE BEHAVIORS*. 2021; 113:106683. DOI:10.1016/j.addbeh.2020.106683. PMID:33038679. IF:3,913 (Q1/D3).
- Pérez de Los Cobos J, Alcaraz S, Verdejo-García A, Muñoz L, Siñol N, Fernández-Serrano MJ, Fernández P, Martínez A, Duran-Sindreu S, Batlle F, Trujols J. Factors associated with the absence of cocaine craving in treatment-seeking individuals during inpatient cocaine detoxification. *AMERICAN JOURNAL OF DRUG AND ALCOHOL ABUSE*. 2021;47(1):127-138. DOI:10.1080/00952990.2020.1833340. PMID: 33164558. IF:3,829 (Q2/D3).
- Sancho M, Bonnaire C, Costa S, Casale G, Vera J, Rodriguez RC, Duran S, Trujols J. Impulsivity, Emotion Regulation, Cognitive Distortions and Attentional Bias in a Spanish Sample of Gambling Disorder Patients: Comparison between Online and Land-Based Gambling. *International Journal of Environmental Research and Public Health*. 2021; 18(9):4869. DOI:10.3390/ijerph18094869. PMID:34063619. IF:3,390 (Q1/D3).

Other scientific production

- Trujols J, Cadafalch J, Alvarado PJ, Duran S. Prioritizing COVID-19 vaccination for people with addictive disorders. *Adicciones*. 2021; 33(3). PMID:34171116. IF:2,979 (Q3/D6).

Other publications

- Agüera Z, Lozano-Madrid M, Mallorquí-Bagué N, Jiménez-Murcia S, Menchón JM, Fernández-Aranda F. A review of binge eating disorder and obesity. *Neuropsychiatrie*. 2021;35(2):57-67. DOI:10.1007/s40211-020-00346-w. PMID: 32346850.

Books and chapters with ISBN

- **Guardia J.** Cómo superar los problemas con la bebida. Un procedimiento basado en los conocimientos científicos

actuales. Sant Cugat del Vallès: Editorial Siglantana; 2021. ISBN: 978-84-18556-00-5.

Communication and dissemination activities

Outreach activities

- Duran-Sindreu S. RAC-1 “Versió Rac-1”. Relació entre el consum d’alcohol i la creativitat. Radio interview. 15 April 2021.
- Duran-Sindreu S. Trastorns addictius. Course/Seminar. Màster en Infermeria Psiquiàtrica i Salut Mental. Universitat Autònoma de Barcelona. Barcelona, Spain. 3 February 2021.
- Duran-Sindreu S. TV Interview at TVE a Catalunya – “En Línia”. Maneig terapèutic de les addiccions. TV interview. 4 May 2021.
- Sancho M. Online talk to secondary school students about addictions. Escola Valldaura. Barcelona, Spain. 14 May 2021.
- Duran-Sindreu S. Tractament dels trastorns addictius. Course/Seminar. Curs en Addiccions: Intervenció infermera. Universitat Autònoma de Barcelona. Barcelona, Spain. 16 June 2021.
- Sancho M. Online session about behavioral addictions. Lecture at a school. Escola Valldaura. Barcelona, Spain. 3 September 2021.
- Guardia J. Problemes relacionats amb el consum excessiu d’alcohol. Course/Seminar. Màster en Infermeria Psiquiàtrica i Salut Mental. Universitat Autònoma de Barcelona. Barcelona, Spain. 3 and 10 March 2021.
- Guardia J. Alcohol, tabac i drogues. Course/Seminar. Màster en Infermeria de Cures Avançades a la Persona amb Problemes Cardiovasculars. Barcelona, Spain. 7 and 14 October 2021.

Scientific dissemination

- Sotero A, Guardiola-Ripoll M, Almodóvar-Payá C, Hostalet N, Salgado-Pineda P, Salvador T, Ortiz-Gil J, Sarró S, McKenna PJ, Madre M, Pomarol-Clotet E, Fatjó-Vilas M. DISC1 gene and brain activity: a genetic neuroimaging association study. Oral communication. 2021 Congress of the Schizophrenia International Research Society. 17-21 April 2021.
- Almodóvar-Payá C, Garcia-Torrents E, Guardiola-Ripoll M, Canales-Rodríguez E, Hostalet N, Gallego C, Martín-Subero M, Madre M, Pomarol-Clotet E, Fatjó-Vilas M. The role of NR1 gene in schizophrenia: analysis of its genetic variability in cortical thickness. Oral communication. 20th WPA World Congress of Psychiatry. 10-13 March 2021.
- Sánchez O, Larrabeiti A, Trujols J. Mayor flexibilidad en la dispensación de metadona para llevar a casa durante la pandemia de COVID19: ¿Debería incorporarse este cambio en la práctica clínica habitual? Poster presentation. XXXVIII Congreso Nacional de Enfermería de Salud Mental. 5-7 May 2021.

- Bauzá J, De Andrés S, Alvarado PJ, Tomé AJ, Madrid MT, Duran-Sindreu S, Trujols J. History of abuse and post traumatic

stress disorder in patients admitted to an addictive disorders day hospital. Poster presentation. 34th European College of Neuropsychopharmacology Congress. 2-5 October 2021.

- Madre M, Fuentes-Claramonte P, Palau P, Sáez N, Moro M, Blanch C, Verdolini N, Garcia-Leon MA, Fera I, Munuera J, Sarró S, Raduà J, Salvador R, Mckenna P, Pomarol-Clotet E. Brain correlates of impaired goal management in bipolar mania. Poster presentation. 21st WPA World Congress of Psychiatry. 18-21 October 2021.

- Martínez C, Ballbè M, Feliu A, Enríquez, M, Saura J, Andreu M, Barrio P, Mondon S, Pinet C, Costa S, Suelves JM, Bernabeu J, Raich A, Nieva G, Roca X, Hernández-Ribas R, Cabezas C, Guydish J, Fernández E. Efectividad del "061 Quit Mental" tras la hospitalización en unidades de psiquiatría de agudos. Oral communication. 3rd International Congress of Socidrogalcohol. 21-23 October 2021.

- Duran-Sindreu S. Resistencia asociada al trastorno por el uso de sustancias. Oral communication. Jornadas Intensivas sobre Patologías Resistentes (10ª edición). 5, 12, and 19 November 2021.

- Madre M. Trastorn obsessiu-compulsiu. Oral communication. Jornadas Intensivas sobre Patologías Resistentes (10ª edición). 5, 12, and 19 November 2021.

- García M, Palaus T, Remis S. Impacto de una intervención enfermera sobre el insight, la motivación para el cambio y la adherencia al tratamiento en pacientes con patología dual ingresados en una Unidad Hospitalaria de Desintoxicación. Oral communication. VI Jornades d'Infermeria de l'Hospital de Sant Pau. 17-18 November 2021.

- Duran-Sindreu S. Avaluació d'usuaris de Chem-Sex. Oral communication. Jornada de Cloenda del Curs 2020-2021 de la Societat Catalana de Psiquiatria i Salut Mental. 19 November 2021.

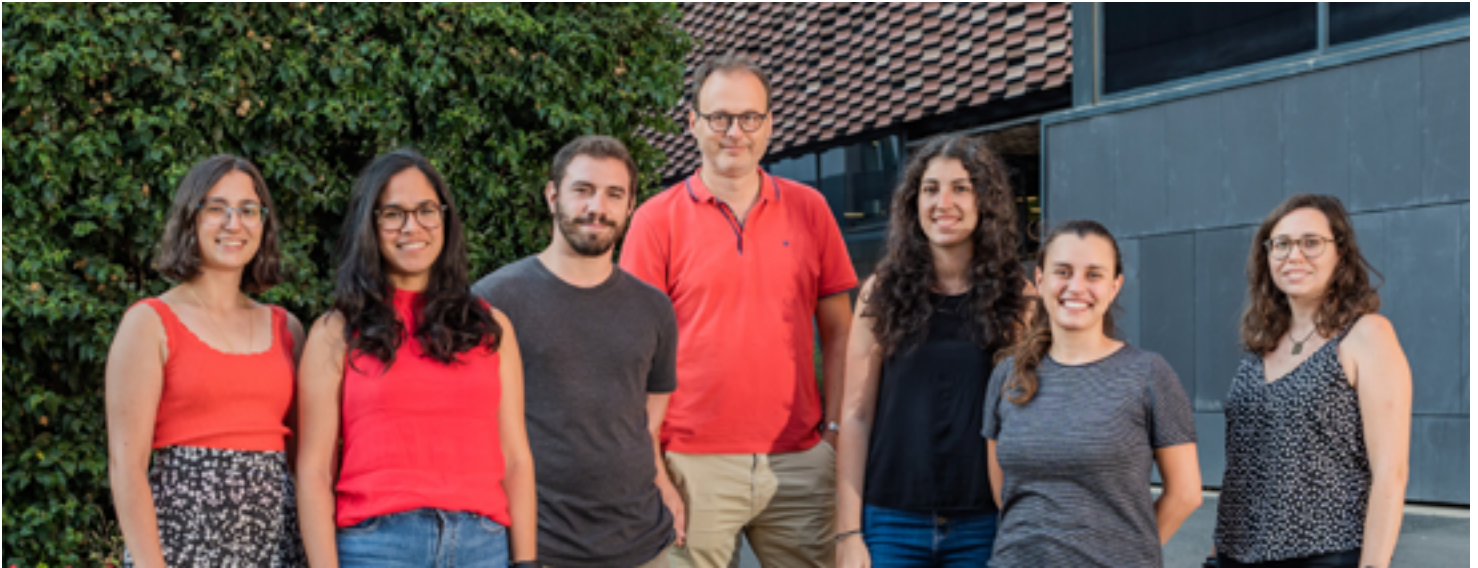
- Marimón E, Arias L, Batlle F, De Andrés S, Alvarado P, Bauzá J, Duran-Sindreu S, Madre M. TOC y adicciones: Descripción de una muestra de pacientes con patología dual que ingresan para desintoxicación. Poster presentation. 3rd International Congress of Socidrogalcohol. 21-23 October 2021.

- Bauzá J, Alvarado P, Roca X, de Andrés S, Madrid M, Tomé JA, Campins S, Duran-Sindreu S. Un diagnóstico de Trastorno de Estrés Postraumático para un tratamiento adecuado. Poster presentation. XXIV Congreso Nacional de Psiquiatría. 28-30 October 2021.

- Trujols J, Solà I, Robleda G, Selva-Olid C, Pérez de los Cobos J. Quality of life and well-being from the perspective of patients on opioid agonist maintenance treatment: A synthesis of qualitative studies. Poster presentation. 14th European Congress on Heroin Addiction & Related Clinical Problems. 19-21 November 2021.

- Trujols J, Alcaraz S, Siñol N, González-Saiz F, Vergara-Moragues E, Pérez de los Cobos J. Towards a common metric for assessing heroin-dependent patient satisfaction with medications: Satisfaction with methadone as gold standard?. Poster presentation. 14th European Congress on Heroin Addiction & Related Clinical Problems. 19-21 November 2021.

- Pinet C. Tabaco y trastornos mentales. Posicionamiento de la Sociedad Española de Psiquiatría. Oral communication. 23 Congreso de la Sociedad Española de Patología Dual. 25-27 November 2021.



Molecular Physiology of the Synapse

Coordinator

Bayes Puig, Alejandro IR
 abayesp@santpau.cat

Members

Del Castillo Berges, Diego IR
 Peñuela Suárez, Amalia IR

Main lines of research

- Molecular and cellular dysfunctions underlying intellectual disability and autism.
- Research into animal models of mental and behavioural disorders.
- Development of new biochemical methods to study the synapse.
- Molecular and cellular analyses of the vertebrate synapse.

Scientific Challenges

- Characterize the molecular roots of cognition and behaviour.
- Identify the synaptic molecules and mechanisms involved in mental and behavioural disorders, mainly intellectual disabilities and autism spectrum disorders.

- Identify drugs which might help treat mental and behavioural disorders.
- Study the reversibility after birth of neurodevelopmental disorders affecting cognition.

Collaborations

Collaborations with other IIB Sant Pau research groups

- Neurobiology of Dementia. Dr Alberto Lleó Bisa
- Neurosurgery. Dr Cristian de Quintana Schmidt
- Pediatrics. Dr Susana Boronat

External collaborations

- Dr Àngels García-Cazorla. Hospital Sant Joan de Déu, Barcelona.
- Dr Nerea Roher, Universitat Autònoma de Barcelona, Bellaterra.
- Dr Carles Sindreu, Universitat de Barcelona, Barcelona.

- Dr David Soto, Universitat de Barcelona, Barcelona.
- Dr Xavier Altafaj, Bellvitge Biomedical Research Institute (IDIBELL), Barcelona
- Dr Liset Menendez de la Prida, Instituto Cajal, Madrid
- Dr Angel Barco, Instituto de Neurociencias, Alicante
- Prof. Seth GN Grant, Edinburgh University (UK)
- Dr Gavin Rumbaugh, The Scripps Research Institute (USA)
- Dr Hector Escribà, CNRS/University Pierre et Marie Curie (France)
- Dr Richard D Emes Nottingham University (UK).
- Prof. Guus Smith, Vrije University, Amsterdam (The Netherlands)
- Prof. Matthijs Verhague, Vrije University, Amsterdam (The Netherlands)
- Prof. Daniel Choquet, Institut Interdisciplinaire de Neurosciences, Bourdeaux (France)
- Prof. Oliver Brüstle, Institute of Reconstructive Neurobiology, Bonn (Germany)
- Dr Barbara Treutlein, Max Plank Institute for Evolutionary Anthropology, Leipzig (Germany)
- Prof. Jacques Michaud, CHU Ste-Justine-Université de Montreal, Montreal (Canada)

Active grants

- ALEJANDRO BAYES PUIG. Synaptic Dysfunction in Intellectual Disability Caused by SYNGAP1. Translational Research to Develop Human Models and Advance Pharmacological Treatments. AC17/00005. Instituto de Salud Carlos III. Duration 2018-2021. 123.500,00 €.
- ALEJANDRO BAYES PUIG. Grup de Senyalització Sinàptica. 2017 SGR 01776. Agència de Gestió d'Ajuts Universitaris i de Recerca. Duration 2017-2021. 0,00 €.
- ALEJANDRO BAYES PUIG. Red para el estudio de la sinapsis en el contexto de la disfunción cognitiva. SAF2017-90664-REDT. Ministeri d'Economia i Competitivitat. Duration 2018-2021. 19.000,00 €.
- ALEJANDRO BAYES PUIG. Hacia un tratamiento farmacológico para la deficiencia en SYNGAP1. Estudios preclínicos para investigar la eficacia de 4 fármacos en el rescate de los principales fenotipos. RTI2018-097037-B-100. Ministeri de Ciència, Innovació i Universitats. Duration 2019-2021. 140.000,00 €.
- DIEGO DEL CASTILLO BERGES. Developmental molecular pathophysiology related to SYNGAP1 haploinsufficiency. Studies in human and mouse models of disease. 2020 FI_B 00130. Agència de Gestió d'Ajuts Universitaris i de Recerca. Duration 2020-2023. 44.549,94 €.

Note: Total amount granted to PI. It does not include indirect costs.

Other active grants

- 2020 Asociacion SYNGAP1 España - BAYES PUIG ALEJANDRO. 2020-2022 16.000€

Doctoral theses

- David Ramos Vicente, Phylogenetic Studies of Glutamate Receptors and their Auxiliary Subunits Update their Classifications and Uncover their Diverse Metazoan Evolutionary Histories, Universitat Uatònoma de Barcelona, Àlex Bayés, 09/07/2022

Patents

- J. Fortea, D. Alcolea, À. Bayés, O. Belbin and A. Lleó, Markers of Synaptopathy in Neurodegenerative Disease, EP-3765854-A1, European, 20/01/2021

Transfer products

- Research collaboration and patent license agreement on a set of biomarkers of synaptic loss in Alzheimer's Disease; Company Name: ADx Neuroscience (Belgium); Principal Investigators: J. Fortea, D. Alcolea, À Bayés, O. Belbin and A. Lleó (IIB Sant Pau); Start: 01/07/18; Finish: 12/12/2025.

Scientific production

- Cazorro A, Marce A, Correa M, Salazar A, Vanegas MI, Macaya A, Alex B, Perez B. epsilon-Sarcoglycan: Unraveling the Myoclonus-Dystonia Gene. *MOLECULAR NEUROBIOLOGY*. 2021; 58(8). DOI:10.1007/s12035-021-02391-0. PMID:33886091. IF:5,590 (Q1/D3).
- Cid E, Marquez A, Valero M, Gal B, Medeiros DC, Navarron CM, Ballesteros L, Reig R, Morales AV, Fernandez I, Gomez D, Sato M, Hayashi Y, Alex B, Barco A, Lopez JP, de la Prida LM. Sublayer- and cell-type-specific neurodegenerative transcriptional trajectories in hippocampal sclerosis. *Cell Reports*. 2021; 35(10):109229. DOI:10.1016/j.celrep.2021.109229. PMID:34107264. IF:9,423 (Q1/D2).
- Ramos D, Grant SGN, Alex B. Metazoan evolution and diversity of glutamate receptors and their auxiliary subunits. *NEUROPHARMACOLOGY*. 2021; 195:108640. DOI:10.1016/j.neuropharm.2021.108640. PMID:34116111. IF:5,250 (Q1/D2).
- Watkins JC, Evans RH, Alex B, Booker SA, Gibb A, Mabb AM, Mayer M, Mellor JR, Molnar E, Niu L, Ortega A, Pankratov Y, Ramos D, Rodriguez A, Rodriguez A, Wang LY, Wang YT, Wollmuth L, Wyllie D, Zhuo M, Frenguelli BG. 21st century excitatory amino acid research: A Q & A with Jeff Watkins and Dick Evans. *NEUROPHARMACOLOGY*. 2021; 198:108743. DOI:10.1016/j.neuropharm.2021.108743. PMID:34363811. IF:5,250 (Q1/D2).

Communication and dissemination activities

Meetings Organised:

- 2021 The 4th SYNGO Meeting. 2-3 October 2021, Madrid, Spain.
- 2021 The Synaptic Dimension of Brain Disorders. 4-6 October 2021, Baeza, Spain. Universidad Internacional de Andalucía.
- 2021 2º Congreso de familias españolas afectadas por el déficit en SYNGAP1. 14.11.2021. Madrid Spain.

Invited Speaker in Scientific Meetings:

- Patología Molecular Sináptica en la Encefalopatía Epiléptica del Desarrollo causada por SYNGAP1. 13 Noviembre 2021. 2ª Reunión de la asociación Syngap España.

- Synaptic Molecular Pathology in SYNGAP1-DEE. 4-6 October 2021, Baeza
- La 'Encefalopatía Epiléptica del Neurodesarrollo' Causada por SYNGAP1: una Sinaptopatía. 15 May 2021 XLIII Reunión Sociedad Española de Neuropediatría SENEP
- A systems biology approach to elucidate the postsynaptic molecular alterations resulting from Syngap1 Deficiency. European SYNGAP1 Symposium. 15-16 March 2021
- Alteraciones Moleculares en el Proteoma Sináptico Causadas por la Deficiencia de SYNGAP1. Primer Congreso Científico Virtual SYNGAP1 en Español. 19 February 2021
- E-sarcoglicano, Nuevas Lineas de Investigación. Reunión de Familias con el Síndrome de Mioclonus Dístonia. 22 January 2021, Barcelona.



Stroke Pharmacogenomics and Genetics

Coordinator

Fernández Cadenas, Israel IR
ifernandezc@santpau.cat

Members

Cárcel Márquez, Jara	IR	Martín Campos, Jesús María	IR
Guasch Jimenez, Marina	IR	Muiño Acuña, Elena	IR
Lledós De Benito, Miquel	IR		

Main lines of research

- Genetic and epigenetic risk factors for stroke.
- Pharmacogenetics of neurovascular diseases.
- Genetic and epigenetic risk factors associated with stroke outcome: neurological deterioration, disability and cognitive decline.
- Omics to find potential drug targets and treatments in stroke. Bioinformatics, scRNA seq, Integromics and Multi-Trait analysis.
- CADASIL and other orphan diseases associated with stroke.
- Genetic risk factors associated with SARS-CoV-2 infection and COVID-19 severity. COVID-19 and stroke.

- Gut microbiome and stroke.

Scientific Challenges

The objectives for the next years are: At a scientific level

- Increase the impact factor of the group's publications.
- Consolidate the group as one of the groups with more experience in epigenetic and pharmacogenomic studies in stroke.
- Find genetic factors associated with neurological risk and post-stroke disability that are potential therapeutic targets.
- To consolidate a line in microbiome and COVID-19 research.

At the organizational level

- Consolidate the group by presenting a constant number of researchers.
- Get European or American international grants.
- Maintain or improve the position within the International Genetics Consortium (ISGC).

Collaborations

Collaborations with other IIB Sant Pau research groups

We have collaborations with researchers from the neurology unit and other groups involved in genetics of complex diseases: Joan-Martí Fabregas, Alberto Lleó, Olivia Belvín, Álex Bayés, Maria Sabater.

External collaborations

We have collaborations with groups from the Spanish Stroke Network (RICORS): H. del Mar, H. Virgen del Rocio, H. Clínic, H. Germans Tries i Pujols, H de Basurto, H. de Albacete, H. Son Espases, H de Valladolid, H Mutua de Terrassa, etc.

We have collaborations with national groups from the CSIC and other centers: Anna Planas (Barcelona), Jordi Pérez Tur (Valencia), Marta López de Diego (Madrid), Ángel Carracedo (Galicia), Fran Campos (Galicia), etc.

We have international collaborations: Jin-Moo Lee (US), Carlos Cruchaga (US), John Cole (US), Raj Dhar (US), Rufus Ankiyemi (Nigeria), Arne Lindgren (Sweden), Amy Brodtman (Australia), Stéphanie Debette (France), Martin Dichgans (Germany), Andrea Ganna (Finland), etc.

Active grants

- ISRAEL FERNANDEZ CADENAS. Contractes "Miguel Servet II" 2017. CPII17/00021. Instituto de Salud Carlos III. Duration 2018-2021. 110.625,00 €.
- ISRAEL FERNANDEZ CADENAS. Proyecto MAESTRO: Análisis del interactoma: asociación de la MetAgenómica, genómica y Epigenómica con la evolución neurológica y la discapacidad después de un ictus isquémico. . PI18/01338. Instituto de Salud Carlos III. Duration 2019-2021. 81.200,00 €.
- ELENA MUIÑO ACUÑA. Estudis genètics i epigenètics en l'ictus. CM18/00198. Instituto de Salud Carlos III. Duration 2019-2021. 64.926,17 €.
- JARA CARCEL MARQUEZ. Recerca de nous tractaments per millorar el deteriorament neurològic i la discapacitat post-ictus mitjançant estudis genètics i epigenètics massius. 2019FI_B00853. Agència de Gestió d'Ajuts Universitaris i de Recerca. Duration 2019-2022. 61.917,53 €.

- MIQUEL LLEDOS DE BENITO. Contractes PFIS: Contractes Predoctorals de Formació en Recerca en Salut 2019. F119/00309. Instituto de Salud Carlos III. Duration 2020-2024. 82.400,00 €.

- ISRAEL FERNANDEZ CADENAS. iBioStroke: Identificación y validación clínica de biomarcadores para la evolución clínica post-ictus. AC19/00106. Instituto de Salud Carlos III. Duration 2020-2022. 77.000,00 €.

- MARINA GUASCH JIMENEZ. Contractes Rio Hortega 2020. CM20/00056. Instituto de Salud Carlos III. Duration 2021-2023. 53.732,00 €.

- ISRAEL FERNANDEZ CADENAS. CNV and Stroke (CaNVAS). TBD 2020. University of Maryland. Duration 2020-2024. 35.302,57 €. Note: Total amount granted to PI. It does not include indirect costs.

Scientific production

- Armstrong NMD, Chen WM, Hsu FC, Brewer MS, Cullell N, Fernandez I, Williams SR, Sale MM, Worrall BB, Keene KL. DNA methylation analyses identify an intronic ZDHHC6 locus associated with time to recurrent stroke in the Vitamin Intervention for Stroke Prevention (VISP) clinical trial. *PLoS One*. 2021; 16(7):e0254562. DOI:10.1371/journal.pone.0254562. PMID:34252155. IF:3,240 (Q2/D4).
- Camps P, Jimenez E, Soler M, Puig N, Aguilera A, Marin R, Prats L, Delgado R, Martinez A, Guisado D, Guasch M, Marti J. Endothelial Progenitor Cells Count after Acute Ischemic Stroke Predicts Functional Outcome in Patients with Carotid Atherosclerosis. *Journal of Stroke & Cerebrovascular Diseases*. 2021; 30(12):106144. DOI:10.1016/j.jstrokecerebrovasdis.2021.106144. PMID:34649037. IF:2,136 (Q4/D8).
- Carcel J, Cullell N, Muino E, Gallego C, Lledos M, Ibanez L, Krupinski J, Montaner J, Cruchaga C, Lee JM, Gill D, Pare G, Mola M, Roquer J, Jimenez J, Marti J, Fernandez I. Causal Effect of MMP-1 (Matrix Metalloproteinase-1), MMP-8, and MMP-12 Levels on Ischemic Stroke A Mendelian Randomization Study. *STROKE*. 2021; 52(7). DOI:10.1161/STROKEAHA.120.033041. PMID:33902302. IF:7,914 (Q1/D1).
- Carrera C, Carcel J, Cullell N, Torres N, Muino E, Castillo J, Sobrino T, Campos F, Rodriguez E, Lucia L, Millan M, Munoz L, Lopez E, Bustamante A, Ribo M, Alvarez J, Jimenez J, Roquer J, Giralt E, Soriano C, Mola M, Vives C, Navarro RD, Tur S, Obach V, Arenillas JF, Segura T, Serrano G, Marti J, Delgado R, Freijo MM, Moniche F, et al. [Gallego C, Fernandez I]. Single nucleotide variations in ZBTB46 are associated with post-thrombotic parenchymal haematoma. *BRAIN*. 2021; 144. DOI:10.1093/brain/awab090. PMID:33723576. IF:13,501 (Q1/D1).
- Cole JW, Adigun T, Akinyemi R, Akpa OM, Bell S, Chen BW, Conde JJ, Dobao UL, Fernandez I, Fornage M, Gallego C, Jern C, Krawczak M, Lindgren A, Markus HS, Melander O, Owolabi

- M, Schlicht K, Soderholm M, Srinivasasainagendra V, Tarraga CS, Stenman M, Tiwari H, Corasaniti M, Fecteau N, Guizzardi B, Lopez H, Nguyen K, Gaynor B, O'Connor T, et al. The copy number variation and stroke (CaNVAS) risk and outcome study. *PLoS One*. 2021; 16(4):e0248791. DOI:10.1371/journal.pone.0248791. PMID:33872305. IF:3,240 (Q2/D4).
- Cullell N, Carcel J, Gallego C, Muino E, Lluçia L, Lledos M, Amaut K, Krupinski J, Fernandez I. Sleep/wake cycle alterations as a cause of neurodegenerative diseases: a mendelian randomization study. *NEUROBIOLOGY OF AGING*. 2021; 106. DOI:10.1016/j.neurobiolaging.2021.05.008. PMID:34130902. IF:4,673 (Q2/D3).
 - De Moura MC, Davalos V, Planas L, Alvarez D, Arribas C, Ruiz M, Aguilera S, Troya J, Valencia J, Velez V, Rodriguez A, Villar J, Horcajada JP, Albu S, Casasnovas C, Rull A, Reverte L, Dietl B, Dalmau D, Arranz MJ, Lluçia L, Planas AM, Perez J, Fernandez I, Villares P, Tenorio J, Colobran R, Martin A, Soler P, Vidal F, Pujol A, Esteller M. Epigenome-wide association study of COVID-19 severity with respiratory failure. *EBioMedicine*. 2021; 66:103339. DOI:10.1016/j.ebiom.2021.103339. PMID:33867313. IF:8,143 (Q1/D2).
 - Guasch M, Prats L, Martinez A, Delgado R, Camps P, Guisado D, Abilleira S, Marti J. Patterns of Admission and Outcomes for Patients with Intracranial Hemorrhage in Catalonia, Spain. *World Neurosurgery*. 2021; 149. DOI:10.1016/j.wneu.2020.12.129. PMID:33412328. IF:2,104 (Q3/D6).
 - Heitsch L, Ibanez L, Carrera C, Binkley MM, Strbian D, Tatlisumak T, Bustamante A, Ribo M, Molina C, Davalos A, Lopez E, Munoz L, Soriano C, Giralte E, Obach V, Slowik A, Pera J, Lapicka K, Derbisz J, Sobrino T, Castillo J, Campos F, Rodriguez E, Arias S, Segura T, Serrano G, Vives C, Diaz R, Tur S, Jimenez C, Marti J, Delgado R, et al. [Cullell N, Muino E, Carcel J, Fernandez I]. Early Neurological Change After Ischemic Stroke Is Associated With 90-Day Outcome. *STROKE*. 2021; 52(1). DOI:10.1161/STROKEAHA.119.028687. PMID:33317415. IF:7,914 (Q1/D1).
 - Hodcroft EB, Zuber M, Nadeau S, Vaughan TG, Crawford KHD, Althaus CL, Reichmuth ML, Bowen JE, Walls AC, Corti D, Bloom JD, Veessler D, Mateo D, Hernando A, Comas I, Candelas FG, Stadler T, Neher RA, Rabella N, Navarro F, Miró E, Fernandez I, Parra M. Spread of a SARS-CoV-2 variant through Europe in the summer of 2020. *NATURE*. 2021; 595(7869). DOI:10.1038/s41586-021-03677-y. PMID:34098568. IF:49,962 (Q1/D1).
 - Lee JM, Fernandez I, Lindgren AG. Using Human Genetics to Understand Mechanisms in Ischemic Stroke Outcome From Early Brain Injury to Long-Term Recovery. *STROKE*. 2021; 52(9). DOI:10.1161/STROKEAHA.121.032622. PMID:34399587. IF:7,914 (Q1/D1).
 - Lluçia L, Muino E, Gallego C, Carcel J, Martin J, Lledos M, Cullell N, Fernandez I. Pharmacogenetics studies in stroke patients treated with rtPA: a review of the most interesting findings. *PHARMACOGENOMICS*. 2021; 22(16). DOI:10.2217/pgs-2021-0100. PMID:34698533. IF:2,533 (Q3/D8).
 - Lopez MG, Chiner A, de Viedma DG, Ruiz P, Bracho MA, Cancino I, D'Auria G, de Marco G, Garcia N, Goig GA, Gomez I, Jimenez S, Martinez L, Ruiz P, Ruiz L, Torres M, Alberola J, Albert E, Zaldumbide MA, Bea MP, Boga JA, Bordoy AE, Canut A, Carvajal A, Eguluz GC, Rodriguez MLC, Costa JJ, de Toro M, et al. [Rabella N, Navarro F, Miró E, Fernandez I, Martínez L]. The first wave of the COVID-19 epidemic in Spain was associated with early introductions and fast spread of a dominating genetic variant. *NATURE GENETICS*. 2021; 53(10). DOI:10.1038/s41588-021-00936-6. PMID:34594042. IF:38,330 (Q1/D1).
 - Mapping the human genetic architecture of COVID-19. *NATURE*. 2021; 600(7889). DOI:10.1038/s41586-021-03767-x. PMID:34237774. IF:49,962 (Q1/D1).
 - Marti J, Guisado D, Delgado R, Martinez A, Prats L, Guasch M, Cardona P, Nunez A, Requena M, Rubiera M, Olive M, Bustamante A, Gomis M, Amaro S, Llull L, Ustrell X, de Oliveira GC, Sero L, Gomez M, Mena L, Serena J, Vitorro SB, Purroy F, Vicente M, Rodriguez A, Ois A, Catena E, Garcia MC, Barrachina O, Palomeras E, Krupinski J, et al. [Camps P]. Impact of COVID-19 Infection on the Outcome of Patients With Ischemic Stroke. *STROKE*. 2021; 52(12). DOI:10.1161/STROKEAHA.121.034883. PMID:34455823. IF:7,914 (Q1/D1).
 - Martin JM. Genetic Determinants of Plasma Low-Density Lipoprotein Cholesterol Levels: Monogenicity, Polygenicity, and "Missing" Heritability. *Biomedicines*. 2021; 9(11):1728. DOI:10.3390/biomedicines9111728. PMID:34829957. IF:6,081 (Q1/D2).
 - Muino E, Carcel J, Carrera C, Lluçia L, Gallego C, Cullell N, Lledos M, Castillo J, Sobrino T, Campos F, Rodriguez E, Millan M, Munoz L, Bustamante A, Lopez E, Ribo M, Alvarez J, Jimenez J, Roquer J, Giralte E, Soriano C, Vives C, Navarro RD, Tur S, Obach V, et al. [Marti J, Delgado R, Camps P, Prats L, Guisado D, Guasch M, Marin R, Martinez A, Fernandez I]. RP11-362K2.2:RP11-767I20.1 Genetic Variation Is Associated with Post-Reperfusion Therapy Parenchymal Hematoma. A GWAS Meta-Analysis. *Journal of Clinical Medicine*. 2021; 10(14):3137. DOI:10.3390/jcm10143137. PMID:34300314. IF:4,241 (Q1/D3).
 - Muino E, Fernandez I, Arboix A. Contribution of "Omic" Studies to the Understanding of Cadasil. A Systematic Review. *INTERNATIONAL JOURNAL OF MOLECULAR SCIENCES*. 2021; 22(14):7357. DOI:10.3390/ijms22147357. PMID:34298974. IF:5,923 (Q1/D3).
 - Muino E, Maisterra O, Jimenez J, Cullell N, Carrera C, Torres NP, Carcel J, Gallego C, Lledos M, Gonzalez J, Olmos F, Espejo E, March A, Pujol R, Rodriguez A, Romeral G, Krupinski J, Marti J, Montaner J, Roquer J, Fernandez I. Genome-wide transcriptome study in skin biopsies reveals an association of E2F4 with cadasil and cognitive impairment. *Scientific Reports*. 2021; 11(1):6846. DOI:10.1038/s41598-021-86349-1. PMID:33767277. IF:4,379 (Q1/D3).
 - Nakanishi T, Pigazzini S, Degenhardt F, Cordioli M, Butler G, Maya D, Bujanda L, Bouysran Y, Niemi M, Palom A, Ellinghaus

D, Khan A, Martinez M, Rolker S, Amitrano S, Tato LR, Fava F, Spinner CD, Prati D, Bernardo D, Garcia F, Darcis G, Fernandez I, Holter JC, Banales JM, Frithiof R, Kiryluk K, Duga S, Asselta R, Pereira AC, Romero M, Nafria B, Hov JR, et al. Age-dependent impact of the major common genetic risk factor for COVID-19 on severity and mortality. *JOURNAL OF CLINICAL INVESTIGATION*. 2021; 131(23). DOI:10.1172/JCI152386. PMID:33758887. IF:14,808 (Q1/D1).

- Traylor M, Persyn E, Tomppo L, Klasson S, Abedi V, Bakker MK, Torres N, Li LX, Bell S, Rutten L, Tozer DJ, Griessenauer CJ, Zhang YF, Pedersen A, Sharma P, Jimenez J, Rundek T, Grewal RP, Lindgren A, Meschia JF, Salomaa V, Havulinna A, Kourkoulis C, Crawford K, Marini S, Mitchell BD, Kittner SJ, Rosand J, Dichgans M, Jern C, Strbian D, Fernandez I, Zand R, et al. Genetic basis of lacunar stroke: a pooled analysis of individual patient data and genome-wide association studies. *LANCET NEUROLOGY*. 2021; 20(5). DOI:10.1016/S1474-4422(21)00031-4. PMID:33773637. IF:44,182 (Q1/D1).

- Zuber V, Cameron A, Myserlis EP, Bottolo L, Fernandez I, Burgess S, Anderson CD, Dawson J, Gill D. Leveraging Genetic Data to Elucidate the Relationship Between COVID-19 and Ischemic Stroke. *Journal of the American Heart Association*. 2021; 10(22):e022433. DOI:10.1161/JAHA.121.022433. PMID:34755518. IF:5,501 (Q1/D3).

Books or chapters

- Popa-Wagner A., Udristoiu I., Gresita A., Lledós M., Cadenas I.F. (2021) Post-stroke Depression: Genetics, Mechanisms, and Treatment. In: Riederer P., Laux G., Nagatsu T., Le W., Riederer C. (eds) *NeuroPsychopharmacotherapy*. Springer, Cham. https://doi.org/10.1007/978-3-319-56015-1_434-1

Communication and dissemination activities

Scientific dissemination activities

- Natalia Cullell, Jara Cárcel-Márquez, Cristina Gallego-Fábrega, Elena Muiño, Jonathan González-Sánchez, Miquel Lledós, Karol Enrique Uscamaita Amaut, Jerzy Krupinski, Israel Fernández-Cadenas. Title: Can sleep/wake cycle patterns cause ND?. 15th International Conference on Alzheimer's and Parkinson's Diseases. 9-14 March 2021.

- Natalia Cullell, Carolina Soriano-Tárraga, Cristina Gallego-Fábrega, Jara Cárcel, Elena Muiño, Laia Lluçia, Miquel Lledós, Manel Esteller, Manuel Castro de Moura, Roberto Elosúa, Alba Fernández-Sanlés, Robert Beal, Stephen White, Jerzy Krupinski, Jaume Roquer, Jordi Jiménez-Conde, Israel Fernández-Cadenas. Title: Multi-omic integration and in vitro modelling of stroke risk. 7th European Stroke Organisation Conference (ESOC2021). 1-3 September 2021.

- Natalia Cullell, Elena Muiño, Jara Cárcel-Márquez, Miquel Lledós, Laia Lluçia-Carol, Cristina Gallego-Fábrega, Jessica

Molina, Sarah Besora, Eva Giralt, Jordi Jiménez-Conde, Juan Antonio Cabezas, Joan Montaner, Joan Martí-Fabregas, Pol Camps-Renom, Luis Prats-Sánchez, Francisco Purroy, Silvia Tur, Elena López-Cancio, Víctor Obach, Juan F. Arenillas, Guillaume Paré, Israel Fernández-Cadenas, Jerzy Krupinski. Title: Influencia genética en el perfil eficacia/seguridad de acenocumarol y dabigatran. V Congreso Anual - Red INVICTUS+. 18-19 November 2021.

- Jara Cárcel-Márquez*, Elena Muiño*, Cristina Gallego-Fabrega, Natalia Cullell, Miquel Lledós, Laia Lluçia-Carol, Tomás Sobrino, Francisco Campos, José Castillo, Marimar Freijo, Juan Francisco Arenillas, Victor Obach, José Álvarez-Sabín, Carlos Molina, Marc Ribó, Jordi Jiménez-Conde, Jaume Roquer, Lucia Muñoz-Narbona, Elena Lopez-Cancio, Antoni Dávalos, Rosa Diaz-Navarro, Cristòfol Vives-Bauza, Gemma Serrano-Heras, Tomás Segura, Laura Ibañez, Laura Heitsch, Jerzy Krupinski, Raquel Delgado-Mederos, Luis Prats-Sánchez, Pol Camps-Renom, Natalia Blay, Lauro Sumoy, Rafael de Cid, Joan Montaner, Carlos Cruchaga, Jin-Moo Lee, Joan Martí-Fàbregas, Israel Fernández-Cadenas. On behalf GeneStroke Consortium and International Stroke Genetics Consortium. Title: Analisis multitrait de ictus cardioembólico expande los factores de riesgo genéticos a 45 loci asociados. IV Congreso Anual - Red INVICTUS+. Santiago de Compostela, Galicia, España. 28/01/2021. Organiser: Red INVICTUS+

- Jara Cárcel-Márquez; Elena Muiño; Cristina Gallego-Fabrega; Natalia Cullell; Miquel Lledós; Laia Lluçia-Carol; Tomás Sobrino; Francisco Campos; José Castillo; Marimar Freijo; Juan Francisco Arenillas; Victor Obach; José Álvarez-Sabín; Carlos Molina; Marc Ribó; Jordi Jiménez-Conde; Jaume Roquer; Lucia Muñoz-Narbona; Elena Lopez-Cancio; Antoni Dávalos; Rosa Diaz-Navarro; Cristòfol Vives-Bauza; Gemma Serrano-Heras; Tomás Segura; Laura Ibañez; Laura Heitsch; Jerzy Krupinski; Raquel Delgado-Mederos; Luis Prats-Sánchez; Pol Camps-Renom; Natalia Blay; Lauro Sumoy; Rafael de Cid; Joan Montaner; Carlos Cruchaga; Jin-Moo Lee; Joan Martí-Fàbregas; Israel Fernández-Cadenas. "Análisis multitrait de ictus cardioembólico expande los factores de riesgo genéticos a 45 loci asociados".

- Autores: Jara Cárcel-Márquez^{1,2*} MSc, Elena Muiño^{1*} PhD, Cristina Gallego-Fabrega^{1,3} PhD, Natalia Cullell^{1,3} MSc, Miquel Lledós¹ MSc, Laia Lluçia-Carol¹ MSc, Tomás Sobrino⁴ PhD, Francisco Campos⁴ PhD, José Castillo⁴ PhD, Marimar Freijo⁵ PhD, Juan Francisco Arenillas⁶ PhD, Victor Obach⁷ PhD, José Álvarez-Sabín⁸ PhD, Carlos A. Molina⁸ PhD, Marc Ribó⁸ PhD, Jordi Jiménez-Conde⁹ PhD, Jaume Roquer⁹ PhD, Lucia Muñoz-Narbona¹⁰ PhD, Elena Lopez-Cancio¹¹ PhD, Antoni Dávalos¹⁰ PhD, Rosa Diaz-Navarro¹² PhD, Cristòfol Vives-Bauza¹² PhD, Gemma Serrano-Heras¹³ PhD, Tomás Segura¹³ PhD, Laura Ibañez¹⁴ PhD, Laura Heitsch¹⁵ PhD, Rajat Dhar¹⁵, Jerzy Krupinski³ PhD,¹⁶ PhD, Raquel Delgado-Mederos¹⁷ PhD, Luis Prats-Sánchez¹⁷ PhD, Pol Camps-Renom¹⁷ PhD, Natalia Blay¹⁸ PhD, Lauro Sumoy¹⁹ PhD, Rafael de Cid¹⁸ PhD, Joan Montaner²⁰ PhD, Carlos Cruchaga²¹ PhD, Jin-Moo Lee²² PhD,

Joan Martí-Fàbregas¹⁷ PhD, Israel Fernández-Cadenas^{1†} PhD. On behalf GeneStroke Consortium and International Stroke Genetics Consortium. Title: Multitrait Analysis Expands Genetic Risk Factors in Cardioembolic Stroke. 7th European Stroke Organisation Conference (ESOC2021). Online. 1-3/09/2021. Organiser: European Stroke Organisation.

- Congreso ESOC. Fecha y lugar: 1-3 Sept 2021, Virtual Conference. Title: Mendelian Randomization Analysis of Hemostatic Factors and their Contribution to Acute and Long-term Outcome After Ischemic Stroke.

- Reunión INVICTUS +. 18 - 19 November 2021, Santiago de Compostela. Title: Aceleración de la edad biológica: menor en mujeres con ictus isquémico en comparación con hombres.

- ESOC 2021. Oral presentation. GENETIC RISK FACTORS ASSOCIATED WITH POST-STROKE RESPIRATORY INFECTIONS. Miquel Lledós MSc; Jara Cárcel-Márquez MSc; Elena MuiñoMD,

PhD; Cristina Gallego-Fabrega PhD; Natalia Cullell MSc; Laia Lluçà-Carol MSc; Cristòfol Vives-Bauza MD, PhD; Silvia Tur MD, PhD; Isabel Fernández-Pérez MD, PhD; Jaume Roquer MD, PhD; Joan Montaner MD, PhD; Alejandro Bustamante MD, PhD; Pol Camps-Renom MD, PhD; Luis Prats-Sanchez MD, PhD; Julia Faura; Raquel Delgado-Mederos MD, PhD; Joan Martí-Fabregas MD, PhD; Jerzy Krupinski MD, PhD; Carlos Cruchaga PhD; Laura Heitsch MD, PhD; Laura Ibáñez PhD; Jordi Jiménez-Conde MD, PhD; Jin-Moo Lee MD, PhD; Israel Fernandez-CadenasPhD.

- Charla ESCOLAB to secondary school students about genetics and its application to stroke research. Institut de Recerca de la Santa Creu y Sant Pau. 17/11/2022

- Isquemia y Patologías Neurovasculares del Máster de Neurociencias de la UB. Title: Stroke genetics. Lecturer: Israel Fernández Cadenas. Feb 2021.Hospital Clínic, Barcelona.



Genetic Diseases

Coordinator

Gallano Petit, Maria Pia FGS
pgallano@santpau.cat

Members

Baena Gimeno, Manel	FGS	Rodriguez Fernandez, Maria Jose	FGS
Bernal Noguera, Sara	FGS	Rodríguez Santiago, Benjamín	FGS
Cliville Santano, Núria	FGS	Rojas Rodríguez, Ester	FGS
Cornet Ciurana, Monica	FGS	Serra Juhe, Clara	FGS
Gonzalez Quereda, Lidia	CIBERER	Tejero Laguna, Eudald	IR
Lasa Laborde, Adriana Maria	FGS		
Riera Armengol, Pau	FGS		

Main lines of research

- Congenital Myopathies, Congenital and Adult Muscular Dystrophies, including Limb-girdle muscle dystrophies, and Congenital Myasthenic Syndromes
 - Identification of mutations and genetic variants.
 - Studies of molecular pathology and disease mechanisms of neuromuscular diseases-related genes.
 - Transcriptome analyses by RNASeq technology.
 - Functional studies on DMD gene to determine the pathogenic effect of the identified variants.
 - Long Read Sequencing by ONT technology to characterize long repeat expansions in size and composition.
- Spinal atrophy and SMN genes
 - Studies of molecular pathology, disease mechanisms and SMN gene expression.
 - Identification of modifying genes.
 - Study of biomarkers for validation processing in spinal muscular atrophy.
 - Study of the neuromuscular junction in human development.
- Hereditary breast cancer and BRCA mutations:
 - Identification of mutations and genetic variants.
 - Molecular characterization of circulating tumor cells (CTCSS) through expression profiles in patients with breast cancer.

- Analysis of free circulating tumor DNA (cfDNA) as a predictor of response to the treatment of breast cancer.
- Pharmacogenetics: adverse reactions to medications.
- Congenital coagulopathies: molecular pathology of haemophilias.
- Duchenne and Becker muscular dystrophy: molecular pathology of DMD gene.
- Identification of the molecular alterations responsible for hereditary hearing loss
- Studies of the molecular pathology causing ataxias

Scientific Challenges

- Pharmacogenetics
 - Colorectal and lung cancer treatments.
 - Chronic inflammatory disease treatment.
 - HIV infection treatment.
- Muscular Dystrophies
 - Post-transcriptional regulation of the dystrophin gene using nonsense-mediated decay analysis in DNA from patients with Duchenne muscular dystrophy.
 - Genes associated with new phenotypic forms of limb girdle muscular dystrophy.
 - Workflow development for the analysis of DMD gene by NGS techniques.
- Hereditary Breast/Ovarian Cancer
 - DNA studies to classify DNA variants found in the BRCA genes as pathogenic
 - Or neutral.
 - CTCs as prognostic markers in patients with locally advanced and disseminated breast cancer.
 - Workflow development for the analysis of BRCA1 and BRCA2 genes by NGS techniques.
- Hereditary Motor Neurone Diseases
 - Development of neuromuscular junction studies in health and disease.
 - Broadening of the spectrum of motor neuron diseases to include bulbar and spinal muscular atrophy, distal muscular atrophies and amyotrophic lateral sclerosis.

Collaborations

Collaborations with other IIB Sant Pau research groups

We collaborate with other research groups at IIB Sant Pau:

- Pediatrics group (Dr Boronat)
- Neuromuscular Diseases (Dr Olive) and Parkinson's Disease and Movement Disorders (Dr Kulisesky), at the

Neurology Service.

- Pneumology group (Dr Crespo)
- Cancer predisposition and DNA repair systems group (Dr Surrallés).
- Thrombosis and haemostasis group (Dr Vilalta, Dr Mateo)
- Clinical Oncology group (Dr Barnadas).
- Pharmacy group (Dr Mangues).
- Aortic pathology group (Dr Barros)
- Clinical and Translational Cardiology group (Dr Guerra)
- Women and Perinatal Health group (Dr Llurba, Dr Parra, Dra Alejos)

We also take part in several committees and Functional Units within the Hospital de la Santa Creu i Sant Pau:

- Multidisciplinary committees: Cardiogenetics, Fetal Medicine, Tuberous sclerosis, Neurogenetics, Clinic – Molecular (in coordination with Hospital del Mar), Breast and ovarian hereditary cancer.
- Functional Units: Aortic Pathology, Pediatrics Genodermatosis, Neurosensorial hearing loss, Rare diseases that occur with Movement Disorders, and CSUR-ERN-XUEC of Neuromuscular Diseases.

External collaborations

University

Universitat Autònoma de Barcelona. Lecturers of several degrees (Genetics and Biology) and master degrees (Medical Genetics, Neuropsychology) as well as mentoring students in their final degree projects.

Health research institutes

- Institut Recerca Hospital Sant Joan de Deu, Barcelona: Servicio de Neuropediatría, Dr. A. Nascimento, Dr. C. Ortez and Dr. D. Natera.
- VHIR, Hospital Vall d'Hebrón, Barcelona: Dr E. Tizzano, Dra. F. Munell.
- Hospital de Navarra, Navarra: Dept. Neurología, Dra. I. Jericó
- BIODONOSTIA, Hospital de Donostia, San Sebastián: Neurology Dept. Dr. A. López de Munáin.
- Instituto de investigación del Hospital 12 de Octubre, Madrid Dra. C. Domínguez, Dr A Hernandez-Lain
- Instituto de Investigación del Hospital de Basurto de Bilbao, Dra. S. Kapetanovic.

Scientific and Patient Organisations

- Fundació Catalana d'Hemofilia
- Federación Española de Hemofilia (FEDHEMO)
- Comisión Científica Real Fundación Victoria Eugenia
- BENE (Asociación de familiares y afectados por enfermedades neuromusculares de Bizkaia)
- FUNDAME (Fundación Atrofia Muscular Espinal)
- AEGH (Asociación Española de Genética Humana)
- AEP (Asociación Española de Pediatría)
- SEN (Sociedad Española de Neurología)
- SEG (Sociedad Española de Genética)

- SEQC (Sociedad Española de Bioquímica Clínica y Patología Molecular)
- SEFF (Sociedad Española de Farmacogenética y Farmacogenómica)
- AERES (agence d'évaluation de la recherche et de l'enseignement supérieur). Committee: "Laboratoire de génétique médicale"
- Comité Científico de la Asociación de Enfermedades Neuromusculares ASEM Catalunya.
- Red catalana de diagnóstico y seguimiento de hemoglobinopatías y talasemias (Catglobin)
- PTC Therapeutics Global Advisory Board on Advancing Diagnosis of Duchenne Muscular Dystrophy

Active grants

• MARIA PIA GALLANO PETIT. Servei de Genètica. 2017 SGR 00545. Agència de Gestió d'Ajuts Universitaris i de Recerca. Duration 2017-2021. 0,00 €.

• MARIA PIA GALLANO PETIT. Anàlisi del transcriptoma mediante RNA-Seq en pacients con patologia neuromuscular no resuelta tras secuenciación de exoma: optimización del algoritmo diagnóstico. PI18/01585. Instituto de Salud Carlos III. Duration 2019-2021. 102.000,00 €.

• PAU RIERA ARMENGOL. Contractes Juan Rodés 2020. JR20/00008. Instituto de Salud Carlos III. Duration 2021-2024. 180.000,00 €.

Note: Total amount granted to PI. It does not include indirect costs.

Other active grants

• Programa de Medicina Genómica IMPaCT: Infraestructura de Medicina de Precisión associada a la Ciencia y Tecnología 2020-2022. Exp IMP/00009. PI: Angel Carracedo. IIB Sant Pau team members: P. Gallano, L. González-Quereda, A. Lasa, S. Bernal, B. Rodríguez, C. Serra-Juhé

• Lidia González-Quereda; PI. P. Gallano: Investigador colaborador. "Síndrome de CANVAS: diagnóstico precoz y modelo fisiopatológico mediante iPSC." Convocatoria de acciones cooperativas y complementarias intramurales (ACCI). CIBER, Instituto de Salud Carlos III.

• S. Bernal, Team member. Red interhospitalaria catalana de variantes genéticas para mejorar el diagnóstico genético en enfermedades raras. La Marató tv3. 01/01/2021-31/12/2023.

• S. Bernal, Team member. Project: Aproximación genómica en atrofia muscular espinal (AME): estudio de casos especiales de pacientes con AME-5q y caracterización de pacientes con AME-no-5q. Instituto de Salud Carlos III. PI Eduardo Tizzano Ferrari. (VHIR). 01/01/2019- 31/12/2021.

• A. Lasa, Team member. Project: La ruta anemia de Fanconi/BRCA: investigación genética y terapéutica. Programa Estatal de I+D+i Orientada a los Retos de la Sociedad. Ministerio de ciencia, innovación y universidades (Ref. RTI2018-098419-B-I00) (2019-2021). PI Jordi Surrallés.

• B. Rodriguez, PI: Project: Xarxa interhospitalària catalana de variants genètiques per millorar el diagnòstic genètic en malalties rares. Fundació La Marató de TV3. Convocatòria sobre malalties minoritàries 2019. Project number FLMTv3: 202040.

• B. Rodriguez, collaborator. Project iDATA-MP. Convocatòria de la Acció Estratègica en Salut 2017-2020, Ministerio de Ciencia e Innovación. Convocatòria: Infraestructura de Medicina de Precisión associada a la Ciencia y Tecnología (IMPACT) – Programa Ciencia de Datos. Code IMP/00019.

• B. Rodriguez, Investigador colaborador: Título del proyecto: "Integración de la farmacogenética y la telemedicina mediante salud móvil para el manejo de los efectos adversos en pacientes con cáncer colorrectal (ePGx study)". Code IIBSP-EPG-2020-84.

• B. Rodriguez, Investigador colaborador: Título del proyecto: Acceleradora de malalties minoritàries de Catalunya (AMMIC). ACCIÓ, Programa Operatiu FEDER de Catalunya 2014-2020. Code: COMRD115-1-0014.

• B. Rodriguez, Collaborator: Project: Multidisciplinary approach for the diagnosis and characterization of rare muscular diseases. FIS, ISCIII.

• P. Riera, co-IP: Título del proyecto: Integración de la farmacogenética y la telemedicina mediante salud móvil para el manejo de los efectos adversos en pacientes con cáncer colorrectal (ePGx study). Instituto de Salud Carlos III. Ref PI21/01913. Duration: 01/2022 to 12/2024. Co-PIs: David Páez and Pau Riera.

• P. Riera, Principal investigator. Project: Integració de la Farmàcia Hospitalària i Comunitària per a la integració de la farmacogenètica a la pràctica assistencial. Societat Catalana de Farmàcia Clínica. Beca Joaquim Bonal 2019-2021. Duration: 09/2019 to 12/2022.

• P. Riera, collaborator. Project: Estudio farmacogenético de los fármacos inhibidores de IL-6 en el tratamiento de las enfermedades reumatológicas. Societat Catalana de Reumatologia. 01/07/2021 - 01/07/2023.

• P. Gallano y L. González-Quereda, Investigadores colaboradores, Título del Proyecto IIBSP-TOS-2020-143: os crónica y CANVAS (Cerebellar Ataxia with Neuropathy and bilateral Vestibular Areflexia Syndrome). Screening de mutaciones en la subunidad 1 del complejo del factor de replicación (RFC1). Pilot study. Duration: 2 years. Funder: Sociedad Española de Neumología y cirugía torácica (SEPAR).

Awards

Premio Internacional de Investigación sobre coagulopatías congénitas, Duquesa de Soria 2021. Dr Sara Bernal Noguera, Genetics Dept. Hospital de la Santa Creu i Sant Pau - IIB Sant Pau.

Fem Pinya Prize was awarded to Dr Pia Gallano by ASEM Catalunya,

Scientific production

- Alvaro S, Abreu I, Abuli A, Serra C, Garrido MD. Current Status of Genetic Counselling for Rare Diseases in Spain. *Diagnostics*. 2021; 11(12):2320. DOI:10.3390/diagnostics11122320. PMID:34943558. IF:3,706 (Q2/D3).

- Bernal S, Pelaez I, Alias L, Baena M, De Pablo JA, Serrano LJ, Camero MD, Tizzano EF, Berruoco R, Liras A. High Mutational Heterogeneity, and New Mutations in the Human Coagulation Factor V Gene. Future Perspectives for Factor V Deficiency Using Recombinant and Advanced Therapies. *INTERNATIONAL JOURNAL OF MOLECULAR SCIENCES*. 2021; 22(18):9705. DOI:10.3390/ijms22189705. PMID:34575869. IF:5,923 (Q1/D3).

- Blasco L, Paramonov I, Leno J, Bernal S, Alias L, Fuentes P, Cusco I, Tizzano EF. Beyond copy number: A new, rapid, and versatile method for sequencing the entire SMN2 gene in SMA patients. *HUMAN MUTATION*. 2021; 42(6). DOI:10.1002/humu.24200. PMID:33739559. IF:4,878 (Q2/D3).

- Castells L, Gutierrez S, Bonache S, Bogliolo M, Carrasco E, Aza M, Montalban G, Munoz N, Pujol R, Cruz C, Llop A, Ramirez MJ, Saura C, Lasa A, Serra V, Diez O, Balmana J, Surrallés J. Clinical consequences of BRCA2 hypomorphism. *npj Breast Cancer*. 2021; 7(1):117. DOI:10.1038/s41523-021-00322-9. PMID:34504103. IF:6,923 (Q1/D2).

- Castells L, Tejero E, Rodriguez B, Surrallés J. CRISPR Screens in Synthetic Lethality and Combinatorial Therapies for Cancer. *Cancers*. 2021; 13(7):1591. DOI:10.3390/cancers13071591. PMID:33808217. IF:6,639 (Q1/D3).

- Crespo A, Bernal S, del Rio E, Rojas E, Martinez C, Marina N, Pallares A, Pascual S, Garcia JL, Padilla A, Curto E, Cisneros C, Serrano J, Baiget M, Plaza V. Association of the CFTR gene with asthma and airway mucus hypersecretion. *PLoS One*. 2021; 16(6):e0251881. DOI:10.1371/journal.pone.0251881. PMID:34086689. IF:3,240 (Q2/D4).

- Garcia C, Roe E, Rodriguez B, Amat V, Cubiro X, Puig L, Boronat S. A case report of PHF6 mosaicism: Beyond the classic Borjeson-Forssman-Lehmann syndrome. *PEDIATRIC DERMATOLOGY*. 2021; 38(4). DOI:10.1111/pde.14636. PMID:34041787. IF:1,588 (Q3/D8).

- Gonzalez-Quereda L, Pagola I, Fuentes Prior P, Bernal S, Rodriguez MJ, Torné L, Salgado Garrido J, Gallano P, Jericó I.

Novel PLEKHG5 mutations in a patient with childhood-onset lower motor neuron disease. *Annals of Clinical and Translational Neurology*. 2021;8(1):294-299. DOI:10.1002/acn3.51265. PMID:33275839. IF:4,511 (Q2/D3).

- Lopez C, Falla LM, Roe E, Arostegui JI, Mozos A, Bernal S, Iznardo H, Baselga E. Excellent response to secukinumab in an infant with severe generalized pustular psoriasis. *JOURNAL OF DERMATOLOGY*. 2021; 48(6). DOI:10.1111/1346-8138.15673. PMID:33543522. IF:4,005 (Q2/D3).

- Natera D, Ortez C, Jou C, Jimenez C, Codina A, Carrera L, Exposito J, Cesar S, Martorell L, Gallano P, Gonzalez L, Cuadras D, Colomer J, Yubero D, Palau F, Nascimento A. The Phenotype and Genotype of Congenital Myopathies Based on a Large Pediatric Cohort. *PEDIATRIC NEUROLOGY*. 2021; 115. DOI:10.1016/j.pediatrneurol.2020.11.002. PMID:33333461. IF:3,372 (Q1/D2).

- Riera P, Paez D. Elucidating the role of pharmacogenetics in irinotecan efficacy and adverse events in metastatic colorectal cancer patients. *Expert Opinion on Drug Metabolism & Toxicology*. 2021; 17(10). DOI:10.1080/17425255.2021.1974397. PMID:34486919. IF:4,481 (Q1/D3).

- Rovira-Moreno E, Abuli A, Codina-Sola M, Valenzuela I, Serra-Juhe C, Cuscó I, Borregán M, Cueto-González A, Vendrell T, López-Grondona F, Brun-Gasca C, Brignani E, Martínez-Ribot L, Garci-Espejo R, Cruz J, García-Arumí E, Tizzano EF. Beyond the disease itself: A cross-cutting educational initiative for patients and families with rare diseases. *Journal of Genetic Counseling*. 2021;30(3):693-700. DOI:10.1002/jgc4.1354. PMID: 33142000. IF:2,537 (Q2/D4).

Other scientific production

- Arechavala V, Gonzalez L. Special Issue "Genetic Advances in Neuromuscular Disorders: From Gene Identification to Gene Therapy". *Genes*. 2021; 12(2):242. DOI:10.3390/genes12020242. PMID:33567614. IF:4,096 (Q2/D4).

- Fionda L, Turon J, Prior PF, Noguera SB, Cortes E, Lopez MA, Gallardo E, Rojas R. A new de novo SYT2 mutation presenting as distal weakness. Neuropathy or neuromuscular junction dysfunction? (vol 26, pg 113, 2021). *JOURNAL OF THE PERIPHERAL NERVOUS SYSTEM*. 2021; 26(2). DOI:10.1111/jns.12441. IF:3,494 (Q2/D5).

- Hernandez I, Gelpi E, Molina-Porcel L, Bernal S, Rodríguez-Santiago B, Dols-Icardo O, Ruiz A, Alcolea D, Boada M, Lleó A, Clarimón J. Heterozygous APOE Christchurch in familial Alzheimer's disease without mutations in other Mendelian genes. *NEUROPATHOLOGY AND APPLIED NEUROBIOLOGY*. 2021;47(4):579-582. DOI:10.1111/nan.12670. PMID: 33095930. IF:8,090 (Q1/D1)).

- Perea I, Gordo G, Iancu IF, Del Pozo M, Almoguera B, Blanco F, Carreno E, Jimenez B, Lopez R, Lorda I, Martin I, de Ayala LP, Riveiro R, Rodriguez E, Tahsin S, Trujillo MJ, Garcia B,

Minguez P, Avila A, Corton M, Ayuso C, Berna S, Allikmets R, Roselló N, Villota E. Genetic landscape of 6089 inherited retinal dystrophies affected cases in Spain and their therapeutic and extended epidemiological implications (vol 11, pg 1526, 2021). *Scientific Reports*. 2021; 11(1):10340. DOI:10.1038/s41598-021-89275-4. PMID:33972629. IF:4,379 (Q1/D3).

Other publications

- Riera P, Riba M, Bernal S, Virgili AC, Paez D, Moreno ME. Frequency and clinical relevance of DPYD genetic variants in gastrointestinal cancer patients. *Farmacia Hospitalaria*. 2021; 45. DOI:10.7399/fh.11683. PMID:35379107.
- Venegas MP, Boronat S, Luna S, Clivillé N, Orús C, de Juan J, Serra C, Alias L, Pujol A, Lasa A. A Nonsense MITF Mutation Associated with Autosomal Dominant Hearing Loss and Intra-Family Clinical Heterogeneity. *BJSTR (Biomedical J Sci&TechRes)*. 2021, DOI: 10.26717/BJSTR.2021.37.005952.

Books and chapters with ISBN

- “50 preguntas clave en Distrofia Muscular de Duchenne” Ed: Permyer. Capítulo 3 : Diagnóstico Genético (Pia Gallano and Lidia Gonzalez-Quereda). ISBN: 978-84-18673-18-4.

Communication and dissemination activities

Scientific dissemination

- P. Gallano, Member of the Scientific Committee at CIBERER (Centro de Investigación en Red de Enfermedades Raras).
- Master of Medical Genetics, UAB. C. Serra, A. Lasa, S. Bernal, N. Clivillé, L. González-Quereda, P. Gallano, M. Baena.
- Master of Neuropsychology, UAB. L. González-Quereda, S. Bernal, C. Serra, P. Gallano.
- S. Bernal, speaker at V Jornada Interhospitalària de Genètica a Catalunya. 15th November 2021. Campus Bellvitge. Title: Comité de Genodermatosis a l'hospital de Sant Pau: un exemple d'abordatge multidisciplinari per la prevenció, diagnòstic i tractament de les malalties minoritàries.
- L González-Quereda speaker at VI Workshop Transferencia del Conocimiento Científico en la Distrofia Muscular de Duchene. VI DMD workshop 7 September 2021. “Secuenciación de mRNA, una herramienta muy útil para diagnóstico genético de distrofinopatías”. Facultad de Biología, Universitat de Barcelona (UB).
- Lidia González-Quereda member of the Bioinformatics Working Group. “Actualización en el análisis de datos de NGS para el Diagnóstico”. CIBERER. Participación en WP2: Análisis de variantes (SNVs e indels) y WP4: Anotación en Sitios de Splicing.

- V Jornada Interhospitalaria de Genética a Catalunya. ICO-Hospital Bellvitge. 15 Nov 2021. A. Lasa, Miembro del Comité organizador.
- S. Bernal, L González-Quereda, P Gallano jopined the XIV REUNIÓN ANUAL CIBERER. 29/06 – 01/07/21. Online.
- III Congreso Interdisciplinar de Genética Humana. Valencia 3-5 Nov 2021.
- Mutaciones intrónicas, splicing alternativo y reordenamientos cromosómicos en el gen DMD, diagnóstico genético mediante RNA (donde el DNA no llega). Alba Segarra, Aurelio Hernández-Lain, Eloy Rivas, Maria Jose Rodríguez, Maria Teresa Sánchez-Calvin, Cristina Domínguez, Ana Camacho, Andrea Campo, Marcos Madruga-Garrido, Carlos Ortez, Andres Nascimento, Ana Codina, Pia Gallano, Lidia González-Quereda.
- Variantes genéticas del receptor de la interleucina-6 (IL-6R) como predictoras de respuesta clínica a tocilizumab en pacientes con artritis reumatoide. Luis Sainz, Pau Riera, Patricia Moya, Sara Bernal, Adriana Lasa, David Lobo, Helena Codes, Ivan Castellví, Cesar Díaz, Ana Laiz, Berta Magallares, Ana Milena Millán, Hector Corominas
- Actualización en Genética Clínica: Habilidades avanzadas para el Asesoramiento Genético 2a Parte, 2a Edición. Asociación Española de Genética Humana. Online course. 01/02/2020 to 31/01/2021. Speakers: S. Bernal, L.González Quereda, P. Gallano.
- Course: Farmacogenética en la práctica asistencial. Coordinator: P. Riera. Organiser: Grupo EFAD (Equip Farmàcia Assistencial Dreta). 19/05/2021.
- Online course: Biología Molecular I. Sociedad Española de Farmacia Hospitalaria (SEFH). Coordinator P. Riera. 02/11/2021 – 06/02/2022.
- 32 Reunión del Grupo Español de Dermatología Pediátrica. Online. 26-27 Feb 2021. “Neurofibromatosis tipo 1 con múltiples neurofibromas plexiformes tratada con trametinib”. Cristina Garcia Melendo, Susana Boronat, Héctor Salvador, Sara Bernal, Lluís Puig y Esther Roe-Crespo.
- WMS 2021 International Congress – The World Muscle Society. “Determination of cerebrospinal fluid and serum neurofilament (pNF-H) concentration in type 2 and type 3 SMA children under Nusinersen treatment.” Selena Trifunov, Laura Carrera, Jesica Maria Exposito Escudero, Anna Codina, Daniel Natera-de Benito, Carlos Ortez, Julita Medina, Sara Bernal, Laura Alias, Carmen Badosa, Soraya Torres, Daniel Alcolea, Andres Nascimento, Cecilia Jimenez-Mallebrera.
- ESMO 2021. “DPYD status, toxicity and compliance to chemoradiotherapy in locally advanced squamous cell carcinoma of the anus”. Pablo Gallardo Melo, Pau Riera Armengol, Anna Virgili Manrique, Javier Gavira Díaz, Berta Martín Culléll, M. Estela Moreno Martínez, Mireia Riba Solé, Ana Sebio García, Sara Bernal Noguera, David Páez López-Bravo.

- 14th World Congress of Pediatric Dermatology 2021. Edinburgh. 22-25 september 2021. "Noonan syndrome: experience in our multidisciplinary clinic." H Iznardo, S Boronat, S Bernal, L Puig, Esther Roe.

- 66 Congreso Nacional de la Sociedad Española de Farmacia Hospitalaria con el lema "Farmacia, Adaptación, Resultados, Oportunidades" 18-21 Oct 2021. Madrid.

"Frecuencia alélica de mutaciones en el gen DPYD en pacientes con cancer colorectal, estudio PHOTODPYD". Gonzalez Suarez S, Morales Barrios A, Miarons Font M, Manzanque Gordon A, Riera Armengol P, Castellote Belles L, Bernal Noguera S, Gutierrez Nicolas F.

Outreach activities

- L. González-Quereda, Member of the Scientific Advisory Board of Federación Española ASEM (Asociación Enfermedades Neuromusculares).

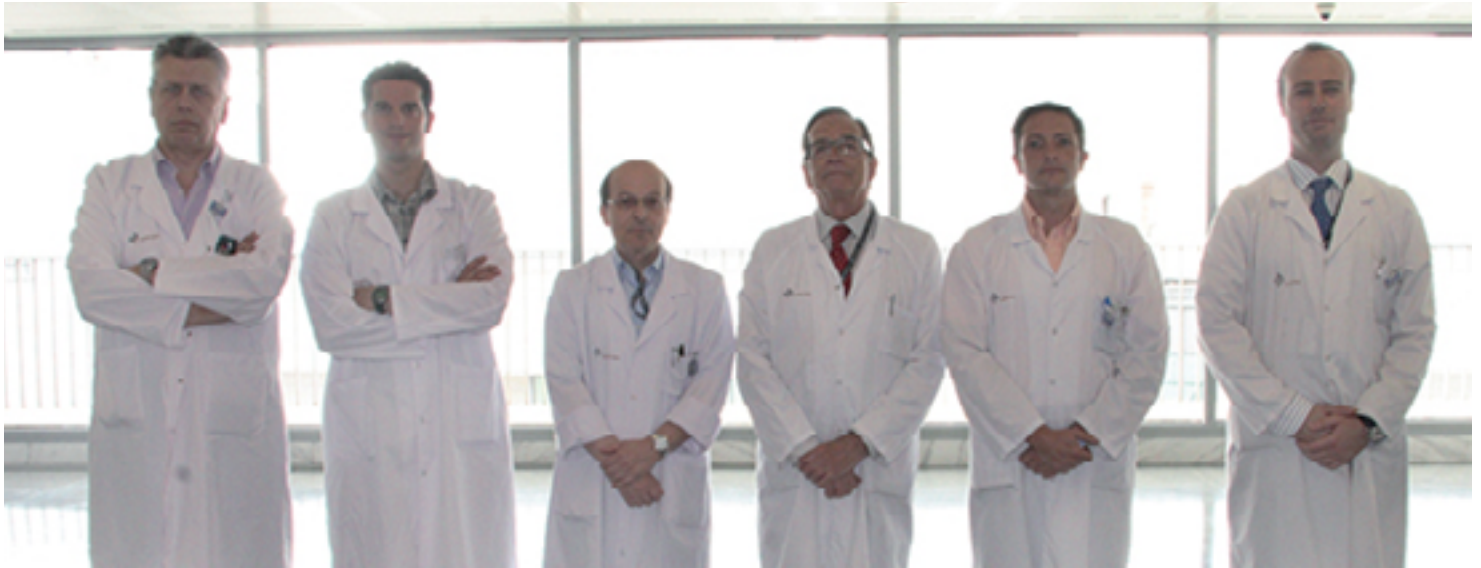
- P Gallano, Member of the Expert Committee at ASEM Catalunya.

- P. Riera, member of the working group for Clinical recommendations at Sociedad Española de Farmacogenética y Farmacogenómica (SEFF).

- A. Lasa: Coordinator of the Precision Medicine Committee at Hospital de la Santa Creu i Sant Pau. Member of the "Comité

del Consens Català en l'ús dels panells de gens en càncer hereditari". Pla director d'Oncologia, Departament de Salut de la Generalitat de Catalunya. Hospital de Sant Pau representative at "Programa de Sistemas de Información" of the working group of Precision Oncology. Pla director d'Oncologia, Departament de Salut de la Generalitat de Catalunya. Member of the Committee "Modelo consensuado de informe Genético" within the IMPaCT-Genómica Project of the Instituto de Salud Carlos III. Ministerio de Ciencia e Innovación. Member of the "Interpretación de Variantes Genéticas" Committee, within the working group of cancer predisposition, in the IMPaCT-Genómica project. Instituto de Salud Carlos III. Ministerio de Ciencia e Innovación.

- C. Serra: Advisor of the Comisión Nacional de Reproducción Humana Asistida, Ministerio de Sanidad. Member of the working group to Genetic Counseling of the Sociedad Española de Asesoramiento Genético (SEAGen). President of Genetic Counselor at the European Board of Medical Genetics (EBM). Member of Transnational Alliance of Genetic Counselling (TAGC). Participation in the Round Table "Retos del diagnóstico genómico", organised by Universitat Pompeu Fabra and the QUAES-UPF Chair in Biomedicine and Biomedical Engineering. Participation in the workshop "Reproducción Asistida en Enfermedades Genéticas y Hereditarias" organised by BENE (Bizkaiaiko Eritasun Neuromuskularren Elkartea). Academic coordinator and lecturer at the Master of Clinical Genetics, UAB; lecturer at Master in Human Assisted Reproductive Technologies, EUGIN / UPF-BSM.



Neurosurgery

Coordinator

Muñoz Hernandez, Fernando FGS
fmunoz@santpau.cat

Members

Aibar Duran, Juan Ángel	FGS	Freixer Palau, Berta	FGS
Anka, Michael Oladotun	FGS	Patino Alvarado, Juan Diego	FGS
Asencio Cortes, Carlos	FGS	Rico Pereira, Marta	FGS
Borràs Pino, Xavier	FGS	Rodriguez Rodriguez, Rodrigo	FGS
De Quintana Schmidt, Cristian Jose	FGS	Sánchez Casas, Marc	FGS
		Sánchez Nevado, Raquel	FGS

Main lines of research

- Tumour biology: gliomas (prognostic value of different mutations in anaplastic astrocytoma and GBM), pituitary gland adenomas.
- Biomarkers in anaplastic astrocytomas and glioblastoma multiforme.
- Application of new technologies in the resection of intracranial tumors.
- Towards a pharmacological treatment for SYNGAP1 deficiency. Preclinical studies to investigate the efficacy of 4 drugs in the rescue of the main phenotypes.
- Prospective study of patients operated by endoscopic endonasal approach.
- Biomaterials: comparative study of two different cranial bone fixations.
- Anatomical studies of the skull base.
- Clinical evaluation of neurostimulation techniques in different neurological entities (Parkinson disease and neuropathic pain).
- Safety and effectiveness of discolysis.

Scientific Challenges

- Neurostimulation for resistant craniofacial pain (jointly with Neurology and Pain Clinic Unit).
- Use of intraoperative ecography for treatment of brain tumors.

- Monitor the glioma tumor diagnosis, treatment and prognostic factors (Hospital Sant Pau – Hospital del Mar).
- Pituitary adenoma treatment: medial cavernous sinus wall approach to cure adenomas.
- Intraoperative neuromonitoring of oculomotor cranial nerves in skull base tumors.
- Joint data base of spine surgery (Hospital de Sant Pau - Hospital del Mar).

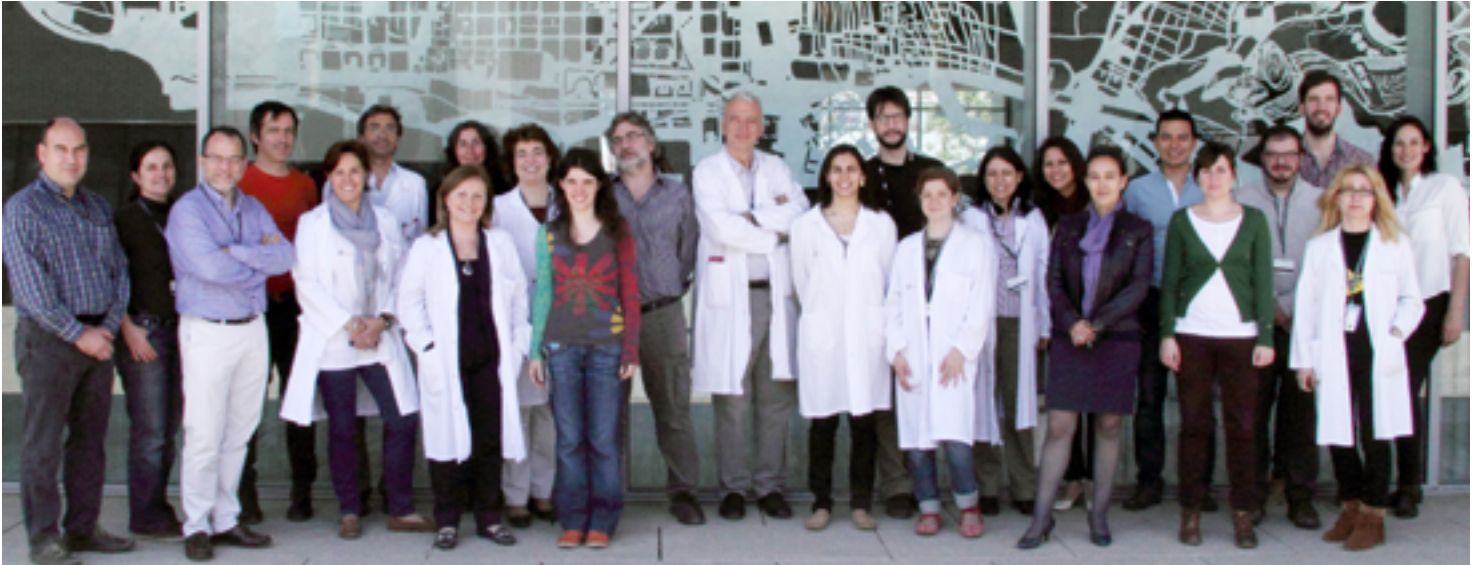
Scientific production

- Aibar JA, Holzapfel M, Rodriguez RR, Nieto RB, Arnall CR, Teixido JM. Occipital nerve stimulation and deep brain stimulation for refractory cluster headache: a prospective analysis of efficacy over time. *JOURNAL OF NEUROSURGERY*. 2021; 134(2). DOI:10.3171/2019.11.JNS192042. PMID:31952039. IF:5,115 (Q1/D2).
- Aibar JA, Munoz F, Asencio C, Montserrat J, Gras JR, Mirapeix RM. Intracavernous Branches of the Internal Carotid Artery Through an Endoscopic Endonasal Approach: Anatomical Study and Review of the Literature. *World Neurosurgery*. 2021; 151. DOI:10.1016/j.wneu.2021.04.046. PMID:33887498. IF:2,104 (Q3/D6).
- Anania P, Mirapeix R, Zona G, Prior A, Cortes CA, Hernandez FM. Middle Cranial Fossa Approach: Anatomical Study on Skull Base Triangles as a Landmark for a Safe Anterior Petrosectomy. *Journal of Neurological Surgery Part B-Skull Base*. 2021; 82(02). DOI:10.1055/s-0039-1696957. PMID:33777635. IF:1,826 (Q3/D8).
- Belvís R, Irimia P, Seijo-Fernández F, Paz J, García-March G, Santos-Lasaosa S, Latorre G, González-Oria C, Rodríguez R, Pozo-Rosich P, Láinez JM. Neuromodulation in headache and craniofacial neuralgia: guidelines from the Spanish Society of Neurology and the Spanish Society of Neurosurgery. *Neurologia*. 2021;36(1):61-79. DOI:10.1016/j.nrl.2020.04.022. PMID: 32718873. IF:3,109 (Q3/D6)
- Esteve A, Alameda F, Carrato C, Pineda E, Arpi O, Martinez M, Mallo M, Gut M, Dabad M, Tortosa A, Del Barco S, Capellades J, Puig J, Gallego O, Pujol T, Oleaga L, Gil M, de Quintana C, Valduvicio I, Martinez A, Bellosillo B, Munoz AM, Esteve A, Domenech M, Camins A, Craven J, Villa S, Marruecos J, Domenech S, de la Iglesia N, Balana C, Bagué S, Aldecoa I. RNA sequencing and Immunohistochemistry Reveal ZFN7 as a Stronger Marker of Survival than Molecular Subtypes in G-CIMP-negative Glioblastoma. *CLINICAL CANCER RESEARCH*. 2021; 27(2). DOI:10.1158/1078-0432.CCR-20-2141. PMID:33106291. IF:12,531 (Q1/1D).
- Pereira MR, Cortes CA. Primary Nocardia brain abscesses and role of intraventricular antibiotic therapy. *CLINICAL NEUROLOGY AND NEUROSURGERY*. 2021; 208:106846. DOI:10.1016/j.clineuro.2021.106846. PMID:34358801. IF:1,876 (Q3/7D).

Communication and dissemination activities

- Moderator of Psychiatric Disorders at the VII SENFE Congress (Spanish Society of Functional and Stereotactic Neurosurgery). November 2021. Dr. Rodríguez
- Tractography Course for Latin America. October 2021. Dr. de Quintana
- Deep Brain Stimulation Talks Expert Meeting. Organised by Abbot. September 2021. Dr. Rodríguez
- Middle fossa approaches. Virtual Meeting of the Spanish Society of Neurosurgery. XXIV 2021 SENEC. Online. September 2021. Dr. Muñoz
- Presentation Surgery of Depression and Schizophrenia. Update Course and Evidence in Pediatric and Functional Neurosurgery. I Course / V Cycle. On-line. July 2021. Dr. Rodríguez
- Basic Online Course of initiation to the Skull Base. Approaches to the middle fossa. Options, advantages and disadvantages of each approach. Online. June 2021. Dr. Muñoz
- Webinar how to use Stealthviz (Second edition). May 2021. Dr. de Quintana
- New techniques in pituitary adenoma surgery: opening of the medial wall of the cavernous sinus. Seminari d'Actualització terapèutica en Acromegàlia. ACROCAT. Online. April 2021. Dr. Muñoz
- Advanced techniques in endonasal endoscopic surgery. Preliminary experience in the opening of the medial wall of the cavernous sinus for the removal of pituitary adenomas. Online. February 2021. Dr. Muñoz

A.4. Epidemiology, Public Health and Primary Care



Clinical Epidemiology and Healthcare Services

Coordinator

Alonso Coello, Pablo Ignacio IR
palonso@santpau.cat

Members

Álvarez Bustins, Gerard	ACCIB	Niño De Guzman Quispe,	
Antequera Martín, Alba M.	IR	Ena Pery	IR
Auladell Rispau, Ariadna	IR	Pantoja Bustillos, Percy E.	IR
Beltran Puerta, Jessica	IR	Popova , Ekaterina	IR
Bolíbar Ribas, Ignasi	FGS	Puig Reixach, Maria Teresa	FGS
Bonfill Cosp, Xavier	FGS	Quintana Ruíz, María Jesús	FGS
Canelo Aybar,		Rabassa Bonet, Montserrat	IR
Carlos Gilberto	CIBERESP	Requeijo Lorenzo, Carolina	FGS
Casino Rubio, Gonzalo	ACCIB	Rigau Comas, David	ACCIB
Cervera Alepuz, Andrea	ACCIB	Rocha Calderon,	
García López, Yasmín	ACCIB	Claudio Alfonso	IR
García Más, Margarita	ACCIB	Rojas Reyes, Maria Ximena	IR
Gich Saladich, Ignasi Josep	FGS	Roqué Fíguls, Marta Cristina	IR
Girós Boixadós, Meritxell	IR	Samsó Jofra, Laura	FGS
Gorgues Sendra, Marta	FGS	Santero Sosa, Marilina	IR
León García, Montserrat	IR	Solà Arnau, Ivan	FGS
Martínez García, Laura	IR	Solà Roca, Judit	ACCIB
Martínez Zapata, María José	IR	Urrútia Cuchí, Gerard	FGS
Merchán Galvis, Ángela María	IR	Valli, Claudia	IR

Main lines of research

Main lines of research

- Evidence-based medicine: systematic reviews, clinical practice guidelines and clinical trials.
- Health service evaluations.
- Methodological research.

Areas of interest

- Evidence-based medicine.
- Cancer.
- Perioperative medicine.
- Cardiovascular medicine.
- Public health.
- Appropriateness.

Scientific Challenges

- To develop and promote systematic-review production about the effects of healthcare interventions, in order to contribute to healthcare and clinical decision-making based on the best available scientific evidence.

- To promote national and international clinical and applied research projects that will contribute with new knowledge to solve clinical or healthcare problems that are relevant to the needs of the system (applied clinical studies, healthcare services assessment studies, clinical trials).

- To foster, organise and/or conduct training activities in order to promote healthcare professionals' acquisition of skills and knowledge on evidence-based Medicine (EBM) tools.

- To promote methodological research projects aiming to provide guidance and tools to improve scientific information analysis, interpretation and communication.

- To develop knowledge transfer activities (clinical practice guidelines) and scientific-knowledge dissemination tools.

Collaborations

Collaborations with other IIB Sant Pau research groups

- Addictive Behaviours
- Anaesthesiology
- Blood and Tissue Bank
- Cerebrovascular Diseases
- Clinical Research and Clinical Trials Unit
- Clinical and Translational Cardiology
- Clinical Oncology
- Evaluation of Public Health Policies and Programmes - Public Health Agency of Barcelona Generation of Advanced Therapy Medicines
- Locomotor System Research
- Nursing Care Research

- Palliative Care
- Pituitary Gland Disorders
- Plastic Surgery
- Primary Care Research - EAP Sardenyà
- Urology
- Women and Perinatal Health Research

External collaborations

- Population Health Research Institute, Mc-Master University (Canada).
- Clinical Trial Service Unit and Epidemiological Studies Unit, University of Oxford (United Kingdom).
- European Respiratory Society.
- Facultad de Ciencias de la Salud, Universidad Tecnológica Equinoccial (Ecuador).
- GRADE Working Group.
- Guidelines International Network.
- Cochrane Collaboration.
- Joint Research Centre - European Commission.
- Applied Health Research Center - Saint Michael's Hospital (Canada).
- Universitat Pompeu Fabra - Nutrimedia.
- International Agency for Research on Cancer.
- European Academy of Allergy and Clinical Immunology.

Active grants

- MARIA JOSE MARTINEZ ZAPATA. Contratos Miguel Servet I 2015. MS15/00116. Instituto de Salud Carlos III. Duration 2016-2021. 202.500,00 €.

- EKATERINE POPOVA. Mecanismos implicados en la lesión miocárdica perioperatoria: estudio mediante angiografía coronaria computerizada y resonancia magnética cardíaca. PI16/01162. Instituto de Salud Carlos III. Duration 2017-2021. 74.500,00 €.

- MARIA JOSE MARTINEZ ZAPATA. Ensayo clínico aleatorizado multicéntrico paralelo en pacientes antiagregados con fractura pertrocantérea de fémur que evalúa una estrategia para acortar el tiempo hasta la cirugía. PI16/01879. Instituto de Salud Carlos III. Duration 2017-2021. 71.500,00 €.

- PABLO IGNACIO ALONSO COELLO. COMPAR-EU - Comparing effectiveness of self-management interventions in 4 high priority chronic diseases in Europe. 754936-IR. Unión Europea. Duration 2018-2022. 456.109,00 €.

- GERARD URRUTIA CUCHI. The effect of additional core stability exercises on improving dynamic sitting balance, trunk control and functional rehabilitation for subacute stroke patients: A randomized controlled trial. MARATO 20173710. Fundació La Marató de TV3. Duration 2018-2021. 159.530,00 €.

- ANGELA MARIA MERCHAN GALVIS. Evaluación de intervenciones para disminuir el riesgo de sangrado y/o

trombosis asociada a la cirugía por fractura proximal de fémur. FI17/00190. Instituto de Salud Carlos III. Duration 2018-2022. 82.400,00 €.

- PABLO IGNACIO ALONSO COELLO. La toma de decisiones compartida de la terapia tromboprolifáctica durante el embarazo: el valor añadido del método de Análisis de Decisión. PI17/01874. Instituto de Salud Carlos III. Duration 2018-2021. 52.000,00 €.

- XAVIER BONFILL COSP. Grup de Recerca Clínica i Sanitària Aplicada. 2017 SGR 01760. Agència de Gestió d'Ajuts Universitaris i de Recerca. Duration 2017-2021. 0,00 €.

- PABLO IGNACIO ALONSO COELLO. COMPAR-EU - Comparing effectiveness of self-management interventions in 4 high priority chronic diseases in Europe.. 754936-FGS. Unió Europea. Duration 2018-2022. 180.120,00 €.

- XAVIER BONFILL COSP. Análisis y mejora de adecuación de la prescripción de quimioterapia al final de la vida.. PI18/00034. Instituto de Salud Carlos III. Duration 2019-2021. 56.000,00 €.

- ALBA MARIA ANTEQUERA MARTIN. Contractes Río Hortega 2018. CM18/00141. Instituto de Salud Carlos III. Duration 2019-2021. 64.926,17 €.

- LAURA MARTINEZ GARCIA. Evaluation of primary school resources from the Informed Health Choices project in improving the ability of Spanish children to assess claims about treatments. CP18/00007. Instituto de Salud Carlos III. Duration 2019-2024. 202.500,00 €.

- MONTSERRAT LEON GARCIA. La toma de decisiones compartida de la terapia tromboprolifáctica durante el embarazo: el valor añadido del método de análisis de decisión. FI18/00014. Instituto de Salud Carlos III. Duration 2019-2023. 82.400,00 €.

- IGNASI BOLIBAR RIBAS. Optimisation of antibiotic prescription in acute non-complicated respiratory tract infections in children: a multicenter randomised controlled clinical trial with a 2x2 factorial design to assess two strategies targeting health professionals and parents. MARATO 20180410. Fundació La Marató de TV3. Duration 2019-2022. 159.718,50 €.

- PABLO IGNACIO ALONSO COELLO. COCOCARE - European partnership on Competencies for high Value Cost Conscious Care. 2018-1-NL01-KA203-039070. Unió Europea. Duration 2018-2021. 43.288,00 €.

- LAURA MARTINEZ GARCIA. Evaluation of primary school resources from the Informed Health Choices project in improving the ability of Spanish children to assess claims about treatments. CP18/00007(P). Instituto de Salud Carlos III. Duration 2019-2022. 40.000,00 €.

- LAURA MARTINEZ GARCIA. Contextualización de los recursos didácticos para niños en educación primaria del proyecto Decisiones Informadas en Salud. PI19/00068. Instituto de Salud Carlos III. Duration 2020-2022. 30.000,00 €.

- PERCY EFRAIN PANTOJA BUSTILLOS. Contractes Río Hortega 2019. CM19/00168. Instituto de Salud Carlos III. Duration 2020-2021. 53.732,00 €.

- MARIA XIMENA ROJAS REYES. Living Evidence to inform health decisions: Development of capacity for the production and use of reliable, friendly and updated health evidence synthesis. 894990. Unió Europea. Duration 2020-2022. 157.332,48 €.

- PABLO IGNACIO ALONSO COELLO. La toma de decisiones compartida en el tratamiento para la prevención de fracturas en mujeres postmenopáusicas. PI20/00681. Instituto de Salud Carlos III. Duration 2021-2023. 69.000,00 €.

- MARIA JOSE MARTINEZ ZAPATA. Contractes "Miguel Servet II" 2020. CPII20/00023. Instituto de Salud Carlos III. Duration 2021-2024. 101.250,00 €.

- LAURA MARTINEZ GARCIA. Diseño y evaluación de recursos didácticos para enseñar a niños, niñas y jóvenes a pensar de forma crítica sobre los tratamientos y a tomar decisiones informadas en salud. MV20/00007. Instituto de Salud Carlos III. Duration 2021-2021. 14.145,00 €.

- MONTSERRAT LEON GARCIA. La toma de decisiones compartida: avances metodológicos para el desarrollo de herramientas en la práctica clínica. MV20/00050. Instituto de Salud Carlos III. Duration 2021-2021. 20.700,00 €.

- PERCY EFRAIN PANTOJA BUSTILLOS. Profundización en el diseño, conducción y análisis de ensayos clínicos multicéntricos y de ámbito internacional en la seguridad del paciente quirúrgico. MV20/00054. Instituto de Salud Carlos III. Duration 2021-2021. 14.030,00 €.

Note: Total amount granted to PI. It does not include indirect costs.

Grants awarded in 2021

- XAVIER BONFILL COSP, Collaborative Research Agreement - CRA-ENV-2021-2, CRA-ENV-2021-2, International Agency for Research on Cancer, 2021 - 2022, 100.000,00 €.

- EKATERINE POPOVA, Programa internacional de recerca clínica en medicina perioperatoria., SLT017/20/000089, Departament de Salut, 2021 - 2023, 85.691,20 €.

Note: Total amount granted to PI. It does not include indirect costs.

Awards

- Perioperative Myocardial Ischemia: Is perioperative troponin screening cost-effective? Ekaterine Popova, Pablo Alonso-Coello, Jesús Alvarez-García, Pilar Paniagua, Misericordia Carles-Lavila. Perioperative Care Congress, Nov 11-14 2021 (Virtual). 2nd Place - Roche Junior/Mid-Career Award.

Doctoral theses

- Carlos Enrique Rodríguez Martínez, Manejo eficiente del asma aguda y crónica en pediatría, Universitat Autònoma de Barcelona, Gerard Urrútia Cuchí, José Antonio Castro Rodríguez, 23/02/2021
- Eric Nwachukwu C Agbata, Migrant Health Evidence: a critical analysis of systematic reviews and guidelines, Universitat Autònoma de Barcelona, Pablo Alonso-Coello, Ingrid Arevalo-Rodríguez, Kevin Pottie, 26/02/2021
- Regina Pané Alemany, Eficacia de la electroestimulación perineal de superficie versus la electroestimulación intracavitaria en el tratamiento de la incontinencia urinaria secundaria a prostatectomía radical: ensayo clínico aleatorizado, Universitat Autònoma de Barcelona, Maria Teresa Puig Reixach, 03/02/2021
- Gabriel J. Martínez Fuentes, Evidencias en exactitud de pruebas diagnósticas en la enfermedad de Alzheimer y otras demencias, Universitat Autònoma de Barcelona, Xavier Bonfill Cosp, Javier Zamora Romero, 24/02/2021
- Carles Fernández Jané, Effectiveness of acupuncture as a nonpharmacological intervention in the treatment of chronic obstructive pulmonary disease, Universitat Autònoma de Barcelona, Gerard Urrútia Cuchí, Mercè Sitjà Rabert, 08/02/2021
- Marta Roqué i Figuls, Aplicación de las técnicas de revisión sistemática a cuestiones clínicas de prevalencia, pronóstico, diagnóstico e intervención, Universitat Autònoma de Barcelona, Xavier Bonfill Cosp, Javier Zamora Romero, 28/01/2021
- Sergio Marcelo Chaves, Los diseños cuasiexperimentales en la investigación clínica: su utilidad y limitaciones para la inferencia causal en la práctica clínica, Universitat Autònoma de Barcelona, Gerard Urrútia Cuchí, 02/11/2021

Scientific production

- Agache I, Rocha C, Pereira A, Song Y, Alonso-Coello P, Solà I, Beltran J, Posso M, Akdis CA, Akdis M, Brockow K, Chivato T, Del Giacco S, Eiwegger T, Eyerich K, Giménez-Arnau A, Gutermuth J, Guttman-Yassky E, Maurer M, Ogg G, Ong P, O'Mahony L, Schwarze J, Werfel T, Canelo-Aybar C, Palomares O, Jutel M.

Efficacy and safety of treatment with omalizumab for chronic spontaneous urticaria: A systematic review for the EAACI Biologicals Guidelines. *Allergy*. 2021;76(1):59-70. DOI:10.1111/all.14547. PMID: 32767573. IF:13,146 (Q1/D1).

- Agache I, Song Y, Alonso P, Vogel Y, Rocha C, Sola I, Santero M, Akdis C, Akdis M, Canonica GW, Chivato T, del Giacco S, Eiwegger T, Fokkens W, Georgalas C, Gevaert P, Hopkins C, Klimek L, Lund V, Naclerio R, O'Mahony L, Palkonen S, Pfaar O, Schwarze J, Soyka MB, Wang DY, Zhang L, Canelo C, Palomares O, Jutel M. Efficacy and safety of treatment with biologicals for severe chronic rhinosinusitis with nasal polyps: A systematic review for the EAACI guidelines. *ALLERGY*. 2021; 76(8). DOI:10.1111/all.14809. PMID:33683704. IF:13,146 (Q1/D1).

- Agache I, Song Y, Posso M, Alonso-Coello P, Rocha C, Solà I, Beltran J, Akdis CA, Akdis M, Brockow K, Chivato T, Del Giacco S, Eiwegger T, Eyerich K, Giménez-Arnau A, Gutermuth J, Guttman-Yassky E, Maurer M, Ogg G, Ong PY, O'Mahony L, Schwarze J, Werfel T, Canelo-Aybar C, Palomares O, Jutel M. Efficacy and safety of dupilumab for moderate-to-severe atopic dermatitis: A systematic review for the EAACI biologicals guidelines. *Allergy*. 2021;76(1):45-58. DOI:10.1111/all.14510. PMID: 32691892. IF:13,146 (Q1/D1).

- Alonso J, Vilagut G, Mortier P, Ferrer M, Alayo I, Aragon A, Aragonés E, Campos M, Cura ID, Emparanza JI, Espuga M, Forjaz MJ, Gonzalez A, Haro JM, Lopez N, de Salazar A, Molina JD, Orti RM, Parellada M, Pelayo JM, Perez A, Pijoan JI, Plana N, Puig MT, Rius C, Rodriguez C, Sanz F, Serra C, Kessler RC, Bruffaerts R, Vieta E, Perez V, MINDCOVID GRP. Mental health impact of the first wave of COVID-19 pandemic on Spanish healthcare workers: A large cross-sectional survey. *Revista de Psiquiatria y Salud Mental*. 2021; 14(2). DOI:10.1016/j.rpsm.2020.12.001. PMID:33309957. IF:3,318 (Q2/D4).

- Alvarez G, Justribo C, Sundberg T, Thomson OP, Leach MJ. A national cross-sectional survey of the attitudes, skills and use of evidence-based practice amongst Spanish osteopaths. *BMC HEALTH SERVICES RESEARCH*. 2021; 21(1):130. DOI:10.1186/s12913-021-06128-6. PMID:33563266. IF:2,655 (Q3/D6).

- Alvarez G, Nunez R, Sola I, Sitja M, Fort A, Fernandez C, Bonfill X, Urrutia G. Sample size, study length, and inadequate controls were the most common self-acknowledged limitations in manual therapy trials: A methodological review. *JOURNAL OF CLINICAL EPIDEMIOLOGY*. 2021; 130. DOI:10.1016/j.jclinepi.2020.10.018. PMID:33144246. IF:6,437 (Q1/D1).

- Anaya R, Rodriguez M, Gil JM, Vilalta N, Merchan A, Moral V, Mateo J, Martinez MJ. Correlation between PlateletWorks(R) and PFA-100(R) for Measuring Platelet Function before Urgent Surgery in Patients with Chronic Antiplatelet Therapy. *Journal of Clinical Medicine*. 2021; 10(2):255. DOI:10.3390/jcm10020255. PMID:33445597. IF:4,241 (Q1/D3).

- Anaya R, Rodriguez M, Millan A, Reguant F, Llorca J, Guilabert P, Ruiz A, Pantoja PE, Gil JM, Moral V, Merchan A, Martinez MJ. Early Surgery with Neuraxial Anaesthesia in Patients on

Chronic Antiplatelet Therapy with a Proximal Femur Fracture: Multicentric Randomised Clinical Trial. *Journal of Clinical Medicine*. 2021; 10(22):5371. DOI:10.3390/jcm10225371. PMID:34830654. IF:4,241 (Q1/D3).

- Antequera A, Lawson DO, Noorduyn SG, Dewidar O, Avey M, Bhutta ZA, Chamberlain C, Ellingwood H, Francis D, Funnell S, Ghogomu E, Greer-Smith R, Horsley T, Juando-Prats C, Jull J, Kristjansson E, Little J, Nicholls SG, Nkangu M, Petticrew M, Rada G, Rizvi A, Shamseer L, Sharp MK, Tuftte J, Tugwell P, Verdugo-Paiva F, Wang H, Wang X, Mbuagbaw L, Welch V. Improving Social Justice in COVID-19 Health Research: Interim Guidelines for Reporting Health Equity in Observational Studies. *International Journal of Environmental Research and Public Health*. 2021;18(17):9357. DOI:10.3390/ijerph18179357. PMID:34501949. IF:3,390 (Q1/D3).

- Antequera A, Lopez J, Stallings E, Muriel A, Felix BF, del Campo R, Ponce M, Fidalgo P, Halperin AV, Madrid O, Alvarez N, Sola I, Gordo F, Urrutia G, Zamora J. Sex as a prognostic factor for mortality in critically ill adults with sepsis: a systematic review and meta-analysis. *BMJ Open*. 2021; 11(9):e048982. DOI:10.1136/bmjopen-2021-048982. PMID:34551945. IF:2,692 (Q2/D4).

- Arevalo I, Smailagic N, Roque M, Ciapponi A, Sanchez E, Giannakou A, Pedraza OL, Cosp XB, Cullum S. Mini-Mental State Examination (MMSE) for the early detection of dementia in people with mild cognitive impairment (MCI). *Cochrane Database of Systematic Reviews*. 2021; (7):CD010783. DOI:10.1002/14651858.CD010783.pub3. PMID:34313331. IF:9,266 (Q1/D1).

- Baselga E, El Hachem M, Diociaiuti A, Carnevale C, Downey C, Roe E, Mascaro P, Neri I, Leuzzi M, Bernabeu J, Monserrat MT, Ortiz A, Torreló A, Knopfel N, Vercellino N, Manunza F, Oranges T, Bassi A, Gonzalez MA, Vicente A, Gich I, Puig L. Sequelae following infantile haemangiomas treated with propranolol. *EUROPEAN JOURNAL OF DERMATOLOGY*. 2021; 31(6). DOI:10.1684/ejd.2021.4172. PMID:35107070. IF:3,328 (Q2/D5).

- Baughman RP, Valeyre D, Korsten P, Mathioudakis AG, Wuyts WA, Wells A, Rottoli P, Nunes H, Lower EE, Judson MA, Israel D, Grutters JC, Drent M, Culver DA, Bonella F, Antoniou K, Martone F, Quadder B, Spitzer G, Nagavci B, Tonia T, Rigau D, Ouellette DR. ERS clinical practice guidelines on treatment of sarcoidosis. *EUROPEAN RESPIRATORY JOURNAL*. 2021; 58(6):2004079. DOI:10.1183/13993003.04079-2020. PMID:34140301. IF:16,671 (Q1/D1).

- Bellmunt S, Escribano JM, Bustillos P, Tello C, Martinez MJ. CHIVA method for the treatment of chronic venous insufficiency. *Cochrane Database of Systematic Reviews*. 2021; (9):CD009648. DOI:10.1002/14651858.CD009648.pub4. PMID:34590305. IF:9,266 (Q1/D1).

- Berenguer J, Borobia AM, Ryan P, Rodriguez J, Bellon JM, Jarrin I, Carratala J, Pachon J, Carcas AJ, Yllescas M, Arribas JR, López J, Pascual P, Pomar V, Rabella N, Benito N, Domingo P, Bonfill X,

Mancebo J, MARTIN A. Development and validation of a prediction model for 30-day mortality in hospitalised patients with COVID-19: the COVID-19 SEIMC score. *THORAX*. 2021; 76(9). DOI:10.1136/thoraxjnl-2020-216001. PMID:33632764. IF:9,139 (Q1/D2).

- Bonfill X, Martinez MJ, Vernooij RW, Sanchez MJ, Morales M, Emparanza JI, Ferrer M, Pijoan JI, Palou J, Madrid E, Abraira V, Zamora J. Follow-up care over 12 months of patients with prostate cancer in Spain A multicenter prospective cohort study. *MEDICINE*. 2021; 100(47):e27801. DOI:10.1097/MD.00000000000027801. PMID:34964747. IF:1,889 (Q3/D6).

- Bonfill X, Quintana MJ, Escudero JR, Miralles M, Fite J, Mikelarena E, Castejon B, Garnica M, De Valderrama IF, Rodriguez A, Pijoan JI, Bellmunt S. Appropriateness of surgery performed for abdominal aortic aneurysm at tertiary hospitals in Spain. *INTERNATIONAL ANGIOLOGY*. 2021; 40(4). DOI:10.23736/S0392-9590.21.04654-X. PMID:34060282. IF:2,789 (Q3/D6).

- Bravo K, Loescher VY, Canelo C, Rojas J, Mejia CR, Schult S, Nieto R, Singh K, Messing S, Hinojosa J. Effect of altitude on mortality of end-stage renal disease patients on hemodialysis in Peru. *Clinical Kidney Journal*. 2021; 14(3). DOI:10.1093/ckj/sfaa056. PMID:33777381. IF:4,452 (Q1/D3).

- Brotons C, Moral I, Fernandez D, Puig M, Vilella MT, Puig T, Cuixart L, Ferriz G, Pedro AM, Codinachs R, Rodriguez M, Fuentes R. Effectiveness of an Intervention Aimed at Improving Information for Patients with High Cardiovascular Risk: INFORISK Clinical Trial. *International Journal of Environmental Research and Public Health*. 2021; 18(7):3621. DOI:10.3390/ijerph18073621. PMID:33807285. IF:3,390 (Q1/D3).

- Brozek JL, Canelo C, Akl EA, Bowen JM, Bucher J, Chiu WA, Cronin M, Djulbegovic B, Falavigna M, Guyatt GH, Gordon AA, Boon MH, Hutubessy RCW, Joore MA, Katikireddi V, LaKind J, Langendam M, Manja V, Magnuson K, Mathioudakis AG, Meerpohl J, Mertz D, Mezencev R, Morgan R, Morgano GP, Mustafa R, O'Flaherty M, Patlewicz G, Riva JJ, et al. GRADE Guidelines 30: the GRADE approach to assessing the certainty of modeled evidence—An overview in the context of health decision-making. *JOURNAL OF CLINICAL EPIDEMIOLOGY*. 2021; 129. DOI:10.1016/j.jclinepi.2020.09.018. PMID:32980429. IF:6,437 (Q1/D1).

- Bujosa A, Moltó C, Hwang TJ, Tapia JC, Vokinger KN, Templeton AJ, Gich I, Barnadas A, Amir E, Tibau A. Associations With Definitive Outcomes and Clinical Benefit of Cancer Drugs at the Time of Marketing Approval and in the Postmarketing Period. *Journal of the National Comprehensive Cancer Network*. DOI:10.6004/jnccn.2021.7003. PMID:34560672. IF:11,902 (Q1/D1).

- Cabanas R, Boix L, Grau M, Guzman JA, Caballero FM, Urrutia G. The Effectiveness of Additional Core Stability Exercises in Improving Dynamic Sitting Balance, Gait and Functional Rehabilitation for Subacute Stroke Patients (CORE-Trial): Study Protocol for a Randomized Controlled Trial. *International Journal of Environmental Research and Public Health*. 2021; 18(12):6615. DOI:10.3390/ijerph18126615. PMID:34205457. IF:3,390 (Q1/D3).

- Camus E, Gonzalez AI, Heijmans M, de Guzman EN, Valli C, Beltran J, Pardo H, Ninov L, Strammiello V, Immonen K, Mavridis D, Ballester M, Sunol R, Orrego C. Self-management interventions for adults living with Chronic Obstructive Pulmonary Disease (COPD): The development of a Core Outcome Set for COMPAR-EU project. *PLoS One*. 2021; 16(3):e0247522. DOI:10.1371/journal.pone.0247522. PMID:33647039. IF:3,240 (Q2/D4).
- Canelo C, Carrera L, Beltran J, Posso M, Rigau D, Lebeau A, Graewingholt A, Castells X, Langendam M, Perez E, Rossi PG, Van R, Parmelli E, Saz Z, Alonso P. Digital breast tomosynthesis compared to diagnostic mammographic projections (including magnification) among women recalled at screening mammography: a systematic review for the European Commission Initiative on Breast Cancer (ECIBC). *Cancer Medicine*. 2021; 10(7). DOI:10.1002/cam4.3803. PMID:33675147. IF:4,452 (Q2/D5).
- Canelo C, Ferreira DS, Ballesteros M, Posso M, Montero N, Sola I, Saz Z, Lerda D, Rossi PG, Duffy SW, Follmann M, Graewingholt A, Alonso P. Benefits and harms of breast cancer mammography screening for women at average risk of breast cancer: A systematic review for the European Commission Initiative on Breast Cancer. *JOURNAL OF MEDICAL SCREENING*. 2021; 28(4):0969141321993866. DOI:10.1177/0969141321993866. PMID:33632023. IF:2,136 (Q3/D7).
- Canelo C, Taype A, Zafra JH, Rigau D, Graewingholt A, Lebeau A, Gomez EP, Rossi PG, Langedam M, Posso M, Parmelli E, Saz Z, Alonso P. Preoperative breast magnetic resonance imaging in patients with ductal carcinoma in situ: a systematic review for the European Commission Initiative on Breast Cancer (ECIBC). *EUROPEAN RADIOLOGY*. 2021; 31(8). DOI:10.1007/s00330-021-07873-2. PMID:34052881. IF:5,315 (Q1/D2).
- Cerritelli F, Lunghi C, Esteves JE, Vaucher P, van PLS, Alvarez G, Biberschick M, Wagner A, Merdy O, Menard M, Tavernier P, Clouzeau C, Risch A, Ruffini N, Nunes A, Santiago R, Marett P, Grech R, Thomson OP. Osteopathy: Italian professional profile. A professional commentary by a group of experts of the European community of practice. *International Journal of Osteopathic Medicine*. 2021; 40. DOI:10.1016/j.ijosm.2021.03.004. IF:2,149 (Q3/D6).
- Clavo B, Robaina F, Urrutia G, Bisshopp S, Ramallo Y, Szolna A, Carames MA, Fiuza MD, Linertova R. Ozone therapy versus surgery for lumbar disc herniation: A randomized double-blind controlled trial. *COMPLEMENTARY THERAPIES IN MEDICINE*. 2021; 59:102724. DOI:10.1016/j.ctim.2021.102724. PMID:33964405. IF:2,446 (Q2/D5).
- Coll L, Rodriguez D, Pons M, Nyqvist F, Puig T, Monteserin R. "Not Alone in Loneliness": A Qualitative Evaluation of a Program Promoting Social Capital among Lonely Older People in Primary Health Care. *International Journal of Environmental Research and Public Health*. 2021; 18(11):5580. DOI:10.3390/ijerph18115580. PMID:34071146. IF:3,390 (Q1/D3).
- Corominas H, Castellvi I, Pomar V, Antonijoan R, Mur I, Matas L, Gich I, de Benito N, Laiz A, Castillo D, Villamarin L, Filella D, Mill AM, Quijada MA, Puig M, Casademont J, Domingo P. Effectiveness and safety of intravenous tocilizumab to treat COVID-19-associated hyperinflammatory syndrome: Covizumab-6 observational cohort. *CLINICAL IMMUNOLOGY*. 2021; 223:108631. DOI:10.1016/j.clim.2020.108631. PMID:33189888. IF:3,969 (Q3/D6).
- Deana NF, Seiffert A, Aravena Y, Alonso P, Munoz P, Espinoza G, Pineda P, Zaror C. Recommendations for Safe Dental Care: A Systematic Review of Clinical Practice Guidelines in the First Year of the COVID-19 Pandemic. *International Journal of Environmental Research and Public Health*. 2021; 18(19):10059. DOI:10.3390/ijerph181910059. PMID:34639363. IF:3,390 (Q1/D3).
- Deana NF, Zaror C, Seiffert A, Aravena Y, Munoz P, Espinoza G, Pineda P, Alonso P. QUALITY APPRAISAL OF CLINICAL PRACTICE GUIDELINES ON PROVISION OF DENTAL SERVICES DURING THE FIRST MONTHS OF THE COVID-19 PANDEMIC. *Journal of Evidence-Based Dental Practice*. 2021; 21(4):101633. DOI:10.1016/j.jebdp.2021.101633. PMID:34922731. IF:5,267 (Q1/D1).
- Diaz R, Urrutia G, Cleland JGF, Poloni D, Villagran F, Acosta R, Bangdiwala SI, Rada G, Madrid E. Stem cell therapy for dilated cardiomyopathy. *Cochrane Database of Systematic Reviews*. 2021; (7):CD013433. DOI:10.1002/14651858.CD013433.pub2. PMID:34286511. IF:9,266 (Q1/D1).
- Duffy JMN, AlAhwany H, Bhattacharya S, Collura B, Curtis C, Evers JLH, Farquharson RG, Franik S, Giudice LC, Khalaf Y, Knijnenburg JML, Leeners B, Legro RS, Lensen S, Vazquez JC, Mavrellos D, Mol BWJ, Niederberger C, Ng E, Otter AS, Puscasiu L, Rautakallio S, Repping S, Sarris I, Simpson JL, Strandell A, Strawbridge C, Torrance HL, Vail A, Wely MV, Vercoe MA, Vuong NL, Wang AY, Wang R, Wilkinson J, Youssef MA, Farquhar CM, Core Outcome Measure Infertility T. Developing a core outcome set for future infertility research: an international consensus development study. *FERTILITY AND STERILITY*. 2021; 115(1). DOI:10.1016/j.fertnstert.2020.11.012. PMID:33272618. IF:7,329 (Q1/D1).
- Escobar C, Barrios V, Cosin J, Martinez JMG, Rodrigo A, Cortes CO, Llergo JT, Requeijo C, Sola I, Zapata MJM. SGLT2 inhibitors and GLP1 agonists administered without metformin compared to other glucose-lowering drugs in patients with type 2 diabetes mellitus to prevent cardiovascular events: A systematic review. *DIABETIC MEDICINE*. 2021; 38(3):e14502. DOI:10.1111/dme.14502. PMID:33368612. IF:4,359 (Q2/D4).
- Escobar C, Barrios V, Lip GYH, Amin AN, Auladell A, Santero M, Salazar J, Requeijo C. Effectiveness and Safety of Dabigatran Compared to Vitamin K Antagonists in Non-Asian Patients with Atrial Fibrillation: A Systematic Review and Meta-Analysis. *CLINICAL DRUG INVESTIGATION*. 2021; 41(11). DOI:10.1007/s40261-021-01091-w. PMID:34643934. IF:2,859 (Q3/D7).
- Farro MY, Gutierrez G, Hernandez A, Barrenechea A, Santero M, Rojas C, Azanedo D. Socioeconomic inequalities

in abdominal obesity among Peruvian adults. *PLoS One*. 2021; 16(7):e0254365. DOI:10.1371/journal.pone.0254365. PMID:34288938. IF:3,240 (Q2/D4).

- Fiol MA, Serrano MJ, Jimenez R, Zamanillo R, Yanez AM, Bennisar M, Leiva A, Gervilla E, Garcia ME, Garcia M, Alonso P, Pastor G, Ruiz I, Sitges C, Garcia J, Llobera J, Ricci I. A Mobile Phone-Based Intervention to Reduce Mental Health Problems in Health Care Workers During the COVID-19 Pandemic (PsyCovidApp): Randomized Controlled Trial. *JMIR mHealth and uHealth*. 2021; 9(5):e27039. DOI:10.2196/27039. PMID:33909587. IF:4,773 (Q1/D2).

- Fite J, Gayarre R, Puig T, Zamora S, Escudero JR, Roca JS, Bellmunt S. Feasibility and Efficiency Study of a Population-Based Abdominal Aortic Aneurysm Screening Program in Men and Women in Spain. *ANNALS OF VASCULAR SURGERY*. 2021; 73. DOI:10.1016/j.avsg.2020.11.042. PMID:33387620. IF:1,466 (Q4/D8).

- Gaillard EA, Kuehni CE, Turner S, Goutaki M, Holden KA, de Jong CCM, Lex C, DKH, Lucas JS, Midulla F, Mozun R, Piacentini G, Rigau D, Rottier B, Thomas M, Tonia T, Usemann J, Yilmaz O, Zacharasiewicz A, Moeller A. European Respiratory Society clinical practice guidelines for the diagnosis of asthma in children aged 5–16 years. *EUROPEAN RESPIRATORY JOURNAL*. 2021; 58(5):2004173. DOI:10.1183/13993003.04173-2020. PMID:33863747. IF:16,671 (Q1/D1).

- Goncalves G, Gil D, Tello C, Tenezaca X, Marrero C, Puig T, Gayarre R, Fite J, Bellmunt S. Prevalence of Peripheral Arterial Disease and Associated Vascular Risk Factors in 65-Years-Old People of Northern Barcelona. *Journal of Clinical Medicine*. 2021; 10(19):4467. DOI:10.3390/jcm10194467. PMID:34640483. IF:4,241 (Q1/D3).

- Gonzalez E, Ballesteros J, Rueda JR, Santos B, Sola I, McCleery J. Remotely delivered information, training and support for informal caregivers of people with dementia. *Cochrane Database of Systematic Reviews*. 2021; (1):CD006440. DOI:10.1002/14651858.CD006440.pub3. PMID:33417236. IF:9,266 (Q1/D1).

- Grau I, Pantoja PE, Grajales FJ, Kostov B, Aragunde V, Puig M, Roca D, Couto E, Siso A. Assessing Apps for Health Care Workers Using the ISYScore-Pro Scale: Development and Validation Study. *JMIR mHealth and uHealth*. 2021; 9(7):e17660. DOI:10.2196/17660. PMID:34287216. IF:4,773 (Q1/D2).

- Gutierrez B, del Toro MD, Borobia AM, Carcas A, Jarrin I, Yllescas M, Ryan P, Pachon J, Carratala J, Berenguer J, Arribas JR, Rodriguez J, López J, Pascual P, Pomar V, Rabella N, Benito N, Domingo P, Bonfill X, Puig M, Mancebo J, Martinez G. Identification and validation of clinical phenotypes with prognostic implications in patients admitted to hospital with COVID-19: a multicentre cohort study. *LANCET INFECTIOUS DISEASES*. 2021; 21(6). DOI:10.1016/S1473-3099(21)00019-0. PMID:33636145. IF:25,071 (Q1/D1).

- Gutierrez R, Martinez MJ, Gaete MC, Osorio D, Bustos L, Tanner JM, Hidalgo R, Seron P. Exercise training for adult lung transplant recipients. *Cochrane Database of Systematic Reviews*. 2021; (7):CD012307. DOI:10.1002/14651858.CD012307.pub2. PMID:34282853. IF:9,266 (Q1/D1).

- Harrow E, Twaddle S, Service D, Kopp IB, Alonso P, Leng G. Clinical Practice Guidelines Registry. *ANNALS OF INTERNAL MEDICINE*. 2021; 174(9). DOI:10.7326/L21-0492. PMID:34543600. IF:25,391 (Q1/D1).

- Hernandez A, Azanedo D, Vargas R, Aparco JP, Chaparro RM, Santero M. Cut-off points of anthropometric markers associated with hypertension and diabetes in Peru: Demographic and Health Survey 2018. *PUBLIC HEALTH NUTRITION*. 2021; 24(4):PII S1368980020004036. DOI:10.1017/S1368980020004036. PMID:33059791. IF:4,022 (Q2/D3).

- Howatt V, Prokop A, Valli C, Zajac J, Bala MM, Alonso P, Guyatt GH, Johnston BC. Values and Preferences Related to Cancer Risk among Red and Processed Meat Eaters: A Pilot Cross-Sectional Study with Semi-Structured Interviews. *Foods*. 2021; 10(9):2182. DOI:10.3390/foods10092182. PMID:34574291. IF:4,350 (Q2/D3).

- Humphries B, Leon M, Bates S, Guyatt G, Eckman M, D'Souza R, Shehata N, Jack S, Alonso P, Xie F. Decision Analysis in SHared decision making for Thromboprophylaxis during Pregnancy (DASH-TOP): a sequential explanatory mixed methods pilot study protocol. *BMJ Open*. 2021; 11(3):e046021. DOI:10.1136/bmjopen-2020-046021. PMID:33753445. IF:2,692 (Q2/D4).

- Llorca V, Palacios R, Routo DR, Buil E, Adrados M, Gich I, Bioque M, Mur M. High neutrophil-lymphocyte ratio upon admission is associated with better response in psychotic depression. *JOURNAL OF PSYCHIATRIC RESEARCH*. 2021; 143. DOI:10.1016/j.jpsychires.2021.08.021. PMID:34438202. IF:4,791 (Q1/D2).

- Lopez L, Domenech E, Roguera M, Gich I, Farre M, Rodrigo C, Montane E. Spontaneous Reporting of Adverse Drug Reactions in a Pediatric Population in a Tertiary Hospital. *Journal of Clinical Medicine*. 2021; 10(23):5531. DOI:10.3390/jcm10235531. PMID:34884233. IF:4,241 (Q1/D3).

- Lopez MG, Chiner A, de Viedma DG, Ruiz P, Bracho MA, Cancino I, D'Auria G, de Marco G, Garcia N, Goig GA, Gomez I, Jimenez S, Martinez L, Ruiz P, Ruiz L, Torres M, Alberola J, Albert E, Zaldumbide MA, Bea MP, Boga JA, Bordoy AE, Canut A, Carvajal A, Eguiluz GC, Rodriguez MLC, Costa JJ, de Toro M, et al. [Rabella N, Navarro F, Miró E, Fernandez I, Martínez L]. The first wave of the COVID-19 epidemic in Spain was associated with early introductions and fast spread of a dominating genetic variant. *NATURE GENETICS*. 2021; 53(10). DOI:10.1038/s41588-021-00936-6. PMID:34594042. IF:38,330 (Q1/D1).

- Louro J, Roman M, Posso M, Vazquez I, Saladie F, Rodriguez A, Quintana MJ, Domingo L, Bare M, Marcos R, Vernet M, Sala M,

Castells X. Developing and validating an individualized breast cancer risk prediction model for women attending breast cancer screening. *PLoS One*. 2021; 16(3):e0248930. DOI:10.1371/journal.pone.0248930. PMID:33755692. IF:3,240 (Q2/D4).

- Lyman GH, Carrier M, Ay C, Di M, Hicks LK, Khorana AA, Leavitt AD, Lee A, Macbeth F, Morgan RL, Noble S, Sexton EA, Stenehjem D, Wiercioch W, Kahale LA, Alonso P. American Society of Hematology 2021 guidelines for management of venous thromboembolism: prevention and treatment in patients with cancer. *Blood Advances*. 2021; 5(4). DOI:10.1182/bloodadvances.2020003442. PMID:33570602. IF:6,686 (Q1/D2).

- Magallares B, Lobo D, Castellvi I, Moya P, Gich I, Martinez L, Park H, Millan AM, Laiz A, Diaz C, Fernandez S, Corominas H. Assessment of EULAR/ACR-2019, SLICC-2012 and ACR-1997 Classification Criteria in SLE with Longstanding Disease. *Journal of Clinical Medicine*. 2021; 10(11):2377. DOI:10.3390/jcm10112377. PMID:34071275. IF:4,241 (Q1/D3).

- Martí AJ, Knight JM, Martínez MJ. Interventions for treating leg ulcers in people with sickle cell disease. *Cochrane Database Of Systematic Reviews*. 2021; 2021(1):CD008394. DOI:10.1002/14651858.CD008394.pub4. PMID:34559425. IF:9,266 (Q1/D1).

- Mas G, Lopez CV, Gorrotxategi PG, Prendes EA, Ramos OE, Duran TV, Alonso M, Viana MPC, Bada TM, Fernandez M, Hernandez A, Ortiz LM, Little P, Abad MD, Alonso P, DAP GRP. Delayed Antibiotic Prescription for Children With Respiratory Infections: A Randomized Trial. *PEDIATRICS*. 2021; 147(3):e20201323. DOI:10.1542/peds.2020-1323. PMID:33574163. IF:7,124 (Q1/D1).

- Mendoza N, Ramirez I, De la Viuda E, Vazquez JC, Sola I, Cano A. Eligibility criteria for menopausal hormone therapy (MHT): A consortium of scientific societies for the use of MHT in women with medical conditions. Research protocol. *MATURITAS*. 2021; 148. DOI:10.1016/j.maturitas.2021.03.009. PMID:34024346. IF:4,342 (Q1/D2).

- Meneses JF, Rosenbaum S, Rada G, Flottorp S, Moberg J, Alonso P. Users' experiences with an interactive Evidence to Decision (iEtD) framework: a qualitative analysis. *BMC Medical Informatics and Decision Making*. 2021; 21(1):169. DOI:10.1186/s12911-021-01532-8. PMID:34034723. IF:2,796 (Q3/D6).

- Miravittles M, Auladell A, Monteagudo M, Vazquez JC, Mohammed J, Nunez A, Urrutia G. Systematic review on long-term adverse effects of inhaled corticosteroids in the treatment of COPD. *European Respiratory Review*. 2021; 30(160):210075. DOI:10.1183/16000617.0075-2021. PMID:34168063. IF:8,839 (Q1/D2).

- Mortier P, Vilagut G, Ferrer M, Serra C, Molina JD, Lopez N, Puig T, Pelayo JM, Pijoan JI, Emparanza JI, Espuga M, Plana N, Gonzalez A, Orti RM, de Salazar AM, Rius C, Aragones E, del Cura I, Aragon A, Campos M, Parellada M, Perez A, Forjaz MJ, Sanz F, Haro JM, Vieta E, Perez V, Kessler RC, Bruffaerts R, Alonso J, MINDCOVID GRP. Thirty-day suicidal thoughts and behaviors

among hospital workers during the first wave of the Spain COVID-19 outbreak. *DEPRESSION AND ANXIETY*. 2021; 38(5). DOI:10.1002/da.23129. PMID:33393724. IF:6,505 (Q1/D1).

- Munoz FZ, Rios M, Roe E, Bernabeu J, Montserrat MT, Puig L, Gich I, Baselga E. Efficacy and Safety of Topical Timolol for the Treatment of Infantile Hemangioma in the Early Proliferative Stage A Randomized Clinical Trial. *JAMA Dermatology*. 2021; 157(5). DOI:10.1001/jamadermatol.2021.0596. PMID:33825828. IF:10,282 (Q1/D1).

- Navarro DF, Garcia AL, de Guzman EN, Rabassa M, Campos RZ, Pardo H, Ricci I, Canelo C, Meneses JF, Yepes JJ, Kuindersma J, Saladich IG, Alonso P. Vitamin D recommendations in clinical guidelines: A systematic review, quality evaluation and analysis of potential predictors. *INTERNATIONAL JOURNAL OF CLINICAL PRACTICE*. 2021; 75(11):e14805. DOI:10.1111/ijcp.14805. PMID:34486779. IF:2,503 (Q2/D5).

- Nieuwlaat R, Wiercioch W, Brozek JL, Santesso N, Kunkle R, Alonso P, Anderson DR, Bates SM, Dahm P, Iorio A, Lim W, Lyman GH, Middeldorp S, Monagle P, Mustafa RA, Neumann I, Ortel TL, Rochweg B, Vesely SK, Witt DM, Cuker A, Schunemann HJ. How to write a guideline: a proposal for a manuscript template that supports the creation of trustworthy guidelines. *Blood Advances*. 2021; 5(22). DOI:10.1182/bloodadvances.2020003577. PMID:34521104. IF:6,686 (Q1/D2).

- Núñez R, Alvarez G, Pérez J, Cabanas R, Calvo J, Bonfill X, Urrutia G. Reporting results in manual therapy clinical trials: A need for improvement. *International Journal of Osteopathic Medicine*. 2021; 42. DOI:10.1016/j.ijosm.2021.06.002. IF:2,149 (Q3/D6).

- Orrego C, Ballester M, Heymans M, Camus E, Groene O, Niño de Guzman E, Pardo-Hernandez H, Sunol R; COMPAR-EU Group. Talking the same language on patient empowerment: Development and content validation of a taxonomy of self-management interventions for chronic conditions. *Health Expectations*. 2021;24(5):1626-1638. DOI:10.1111/hex.13303. PMID: 34252259. IF:3,377 (Q1/D3).

- Piggott T, Brozek J, Nowak A, Dietl H, Dietl B, Saz Z, Mirzayev F, Gonzalez L, Yepes JJ, Mustafa RA, Leontiadis GI, Brignardello R, Alonso P, Schunemann HJ. Using GRADE evidence to decision frameworks to choose from multiple interventions. *JOURNAL OF CLINICAL EPIDEMIOLOGY*. 2021; 130. DOI:10.1016/j.jclinepi.2020.10.016. PMID:33127374. IF:6,437 (Q1/D1).

- Politi J, Martin M, Mercuriali L, Borrás B, Lopez J, Vilella A, Villar J, Orcau A, de Olalla PG, Rius C, Fernández A, Puigpinós R, Bonfill X, Villalbí JR. Epidemiological characteristics and outcomes of COVID-19 cases: mortality inequalities by socio-economic status, Barcelona, Spain, 24 February to 4 May 2020. *Eurosurveillance*. 2021; 26(20):2001138. DOI:10.2807/1560-7917.ES.2021.26.20.2001138. PMID:34018483. IF:6,307 (Q1/D1).

- Pottie K, Magwood O, Rahman P, Concannon T, Alonso P, Garcia AJ, Santesso N, Thombs B, Welch V, Wells GA, Saad A,

Archibald D, Grad R, Moore A, Rojas MX, Iorio A, Pinto N, Doull M, Morton R, Akl EA, Schunemann HJ, Tugwell P. GRADE Concept Paper 1: Validating the “FACE” instrument using stakeholder perceptions of feasibility, acceptability, cost, and equity in guideline implement. *JOURNAL OF CLINICAL EPIDEMIOLOGY*. 2021; 131. DOI:10.1016/j.jclinepi.2020.11.018. PMID:33276054. IF:6,437 (Q1/D1).

- Prados A, Casino G. Microbiome research in general and business newspapers: How many microbiome articles are published and which study designs make the news the most?. *PLoS One*. 2021; 16(4):e0249835. DOI:10.1371/journal.pone.0249835. PMID:33836022. IF:3,240 (Q2/D4).

- Puelacher C, Pinto BB, Mills NL, Duceppe E, Popova E, Duma A, Nagele P, Omland T, Hammerer A, Buse GL. Expert consensus on peri-operative myocardial injury screening in noncardiac surgery A literature review. *EUROPEAN JOURNAL OF ANAESTHESIOLOGY*. 2021; 38(6). DOI:10.1097/EJA.0000000000001486. PMID:33653981. IF:4,330 (Q2/D4).

- Quispe E, Garcia LM, Villagran CO, Heijmans M, Sunol R, Fraile D, Perez J, Ninov L, Salas K, Garcia AV, Alonso P. The Perspectives of Patients with Chronic Diseases and Their Caregivers on Self-Management Interventions: A Scoping Review of Reviews. *Patient-Patient Centered Outcomes Research*. 2021; 14(6). DOI:10.1007/s40271-021-00514-2. PMID:33871808. IF:3,883 (Q1/D2).

- Rossi PG, Lebeau A, Canelo C, Saz Z, Quinn C, Langendam M, McGarrigle H, Warman S, Rigau D, Alonso P, Broeders M, Graewingholt A, Posso M, Duffy S, Schunemann HJ. Recommendations from the European Commission Initiative on Breast Cancer for multigene testing to guide the use of adjuvant chemotherapy in patients with early breast cancer, hormone receptor positive, HER-2 negative. *BRITISH JOURNAL OF CANCER*. 2021; 124(9). DOI:10.1038/s41416-020-01247-z. PMID:33597715. IF:7,640 (Q1/D2).

- Roura S, Alvarez G, Sola I, Cerritelli F. Do manual therapies have a specific autonomic effect? An overview of systematic reviews. *PLoS One*. 2021; 16(12):e0260642. DOI:10.1371/journal.pone.0260642. PMID:34855830. IF:3,240 (Q2/D4).

- Saint DM, Arnau IS, De Mucio B, Arevalo I, Aleman A, Castro JL, Alvarez A. Adverse events associated with the use of recommended vaccines during pregnancy: An overview of systematic reviews. *VACCINE*. 2021; 39. DOI:10.1016/j.vaccine.2020.07.048. PMID:32972737. IF:3,641 (Q3/D6).

- Salamanca-Bautista P, Álvarez-García J, Aramburu-Bodas Ó, Ferrero-Gregori A, Arias-Jiménez JL, Delgado JF, Formiga F, Vázquez R, Manzano L, Puig T, Llàcer P, Vives-Borras M, Cinca J, Montero-Pérez-Barquero M; REDINSCOR, RICA Investigators groups. Modes of death in heart failure according to age, sex and left ventricular ejection fraction. *Internal and Emergency Medicine*. 2021;16(3):643-652. DOI:10.1007/s11739-020-02468-z. PMID: 32813117. IF:3,397 (Q2/D3).

- Salazar J, Perez J, Salas K, Antequera A, Auladell A, Dorantes R, Meade AG, Quintana MJ, Requeijo C, Rodriguez G, Santero M, Acosta R, Sola I, Urrutia G, Cosp XB, Systemic Treatments Adv D. Efficacy of systemic oncological treatments in patients with advanced pancreatic cancer at high risk of dying in the short or medium-term: overview of systematic reviews. *EUROPEAN JOURNAL OF CANCER*. 2021; 154. DOI:10.1016/j.ejca.2021.05.034. PMID:34252759. IF:9,162 (Q1/D2).

- Sanabria AJ, Alonso P, McFarlane E, de Guzman EN, Roque M, Garcia LM. The UpPriority tool supported prioritization processes for updating clinical guideline questions. *JOURNAL OF CLINICAL EPIDEMIOLOGY*. 2021; 139. DOI:10.1016/j.jclinepi.2021.07.022. PMID:34363971. IF:6,437 (Q1/D1).

- Santero M, Perez J, Acosta R, Meade AG, Antequera A, Auladell A, Quintana MJ, Requeijo C, Rodriguez G, Salas K, Dorantes R, Salazar J, Sola I, Urrutia G, Cosp XB. Efficacy of systemic oncological treatments in patients with advanced esophageal or gastric cancers at high risk of dying in the middle and short term: an overview of systematic reviews. *BMC CANCER*. 2021; 21(1):712. DOI:10.1186/s12885-021-08330-5. PMID:34134661. IF:4,430 (Q2/D5).

- Selva A, Selva C, Alvarez Y, Tora N, Lopez P, Terraza R, Rodriguez V, Sola I, Puig T. Satisfaction and experience with colorectal cancer screening: a systematic review of validated patient reported outcome measures. *BMC Medical Research Methodology*. 2021; 21(1):230. DOI:10.1186/s12874-021-01430-7. PMID:34706652. IF:4,615 (Q1/D2).

- Serrano AB, Gomez M, Ureta E, Nunez M, Felix BF, Velasco E, Burgos J, Popova E, Urrutia G, Gomez V, del Rey JM, Sanjuanbenito A, Zamora J, Monteagudo JM, Pestana D, de la Torre B, Candela A. Preoperative clinical model to predict myocardial injury after non-cardiac surgery: a retrospective analysis from the MANAGE cohort in a Spanish hospital. *BMJ Open*. 2021; 11(8):e045052. DOI:10.1136/bmjopen-2020-045052. PMID:34348944. IF:2,692 (Q2/D4).

- Serrano MJ, Ricci I, Jimenez R, Zamanillo R, Yanez AM, Bennasar M, Sitges C, Gervilla E, Leiva A, Garcia J, Garcia ME, Garcia M, Pastor G, Ruiz I, Alonso P, Llobera J, Fiol MA. Effect of a mobile-based intervention on mental health in frontline healthcare workers against COVID-19: Protocol for a randomized controlled trial. *JOURNAL OF ADVANCED NURSING*. 2021; 77(6). DOI:10.1111/jan.14813. PMID:33675247. IF:3,187 (Q1/D1).

- Song Y, Ballesteros M, Li J, Garcia LM, de Guzman EN, Vernooij RWM, Akl EA, Cluzeau F, Alonso P. Current practices and challenges in adaptation of clinical guidelines: a qualitative study based on semistructured interviews. *BMJ Open*. 2021; 11(12):e053587. DOI:10.1136/bmjopen-2021-053587. PMID:34857574. IF:2,692 (Q2/D4).

- Song Y, Li J, Chen YL, Guo RX, Alonso P, Zhang Y. The development of clinical guidelines in China: insights from a national survey. *Health Research Policy and Systems*. 2021;

19(1):151. DOI:10.1186/s12961-021-00799-7. PMID:34949195. IF:3,318 (Q1/D3).

- Stallings E, Antequera A, Lopez J, Garcia M, Urrutia G, Zamora J. Sex as a Prognostic Factor in Systematic Reviews: Challenges and Lessons Learned. *Journal of Personalized Medicine*. 2021; 11(6):441. DOI:10.3390/jpm11060441. PMID:34063786. IF:4,945 (Q1/D2).

- Stuart B, Hounkpatin H, Becque T, Yao GQ, Zhu SH, Alonso P, Altiner A, Arroll B, Bohning D, Bostock J, Bucher HC, Chao J, de la Poza M, Francis N, Gillespie D, Hay AD, Kenealy T, Loffler C, McCormick DP, Mas G, Munoz L, Samuel K, Moore M, Little P. Delayed antibiotic prescribing for respiratory tract infections: individual patient data meta-analysis. *BMJ-British Medical Journal*. 2021; 373:n808. DOI:10.1136/bmj.n808. PMID:33910882. IF:39,890 (Q1/D1).

- Tomas MV, Louro J, Roman M, Saladie F, Posso M, Prieto M, Vazquez I, Bare M, Penalva L, Vidal C, Bargallo X, Sanchez M, Ferrer J, Espinas JA, Quintana MJ, Rodriguez A, Castells X. Risk of breast cancer two years after a benign biopsy depends on the mammographic feature prompting recall. *MATURITAS*. 2021; 144. DOI:10.1016/maturitas.2020.10.024. PMID:33358209. IF:4,342 (Q1/D2).

- Torres R, Gimeno E, Vilaro J, Roque M, Moises J, Vasconcello L, Orizaga T, Barbera JA, Blanco I. Effect of pulmonary hypertension on exercise tolerance in patients with COPD: a prognostic systematic review and meta-analysis. *European Respiratory Review*. 2021; 30(160):200321. DOI:10.1183/16000617.0321-2020. PMID:33927006. IF:8,839 (Q1/D2).

- Tundidor D, Meek CL, Yamamoto J, Martinez C, Gich I, Feig DS, Murphy HR, Corcoy R. Continuous Glucose Monitoring Time-in-Range and HbA(1c) Targets in Pregnant Women with Type 1 Diabetes. *Diabetes Technology & Therapeutics*. 2021; 23(10). DOI:10.1089/dia.2021.0073. PMID:33945304. IF:6,118 (Q1/D2).

- Valli C, Santero M, Prokop A, Howatt V, Johnston BC, Zajac J, Han MA, Pereira A, Nampo FK, Guyatt GH, Bala MM, Alonso P, Rabassa M. Health Related Values and Preferences Regarding Meat Intake: A Cross-Sectional Mixed-Methods Study. *International Journal of Environmental Research and Public Health*. 2021; 18(21):11585. DOI:10.3390/ijerph182111585. PMID:34770099. IF:3,390 (Q1/D3).

- Vergara L, Verdejo C, Franco J, Liquitay CE, Urrutia G, Klabunde R, Perez P, Sanchez L, Madrid E. Registered trials address questions already answered with high-certainty evidence: A sample of current redundant research. *JOURNAL OF CLINICAL EPIDEMIOLOGY*. 2021; 134. DOI:10.1016/j.jclinepi.2021.01.024. PMID:33561527. IF:6,437 (Q1/D1).

- Wiercioch W, Nieuwlaat R, Dahm P, Iorio A, Mustafa RA, Neumann I, Rochweg B, Manja V, Alonso P, Ortel TL, Santesso N, Vesely SK, Akl EA, Schunemann HJ, Zakai N, Cuker A, Lim W, Monagle P, Kunkle R, Witt DM, Kahn SR, McLintock C, Rezende

SM, Zakai NA. Development and application of health outcome descriptors facilitated decision-making in the production of practice guidelines. *JOURNAL OF CLINICAL EPIDEMIOLOGY*. 2021; 138. DOI:10.1016/j.jclinepi.2021.04.016. PMID:33992716. IF:6,437 (Q1/D1).

- Yepes JJ, Urrutia G, Romero M, Alonso S. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. *REVISTA ESPANOLA DE CARDIOLOGIA*. 2021; 74(9). DOI:10.1016/j.recesp.2021.06.016. PMID:34446261. IF:4,753 (Q2/D4).

Other scientific production

- Hernandez MN, Bermudez C, Alguacil J, Cantarero D, Portino MC, Casino G, Santillan A, Calvente MG, Epstein D, Hernan M, Garcia LP, Cantero MTR, Segura A, Amez JG, Cairo L, Miranda JJ, Tejero MF, March JC, Mar J, Peiro R, Alvarez C. GACETA SANITARIA in 2020. Editorial response to syndemia and implementation of new standards. *Gaceta Sanitaria*. 2021; 35(2). DOI:10.1016/j.gaceta.2021.02.002. PMID:33632519. IF:2,139 (Q3/D6).

- McGowan J, Akl EA, Coello PA, Brennan S, Dahm P, Davoli M, Flottorp S, Guyatt G, Langendam M, Meerpohl J, Mustafa R, Rojas MX, Tugwell P, Schunemann HJ. Update on the JCE GRADE series and other GRADE article types. *JOURNAL OF CLINICAL EPIDEMIOLOGY*. 2021; 140. DOI:10.1016/j.jclinepi.2021.05.023. PMID:34089781. IF:6,437 (Q1/D1).

- Mendoza LC, Bolibar I, Puig T, Corcoy R. No deleterious effect of an additional pregnancy on glucose metabolism in women with previous gestational diabetes mellitus. The study design is a cohort study. *DIABETES RESEARCH AND CLINICAL PRACTICE*. 2021; 179:108949. DOI:10.1016/j.diabres.2021.108949. PMID:34270963. IF:5,602 (Q1/D3).

- Meneses JF, Rosenbaum S, Rada G, Flottorp S, Moberg J, Alonso P. Users' experiences with an interactive Evidence to Decision (iEtD) framework: a qualitative analysis (vol 21, 169, 2021). *BMC Medical Informatics and Decision Making*. 2021; 21(1):209. DOI:10.1186/s12911-021-01559-x. PMID:34233681. IF:2,796 (Q3/D6).

- Vaucher P, Menard M, Vaughan B, Morin C, Alvarez G, Sampath KK, Cerritelli F, Shaw R, Cymet TC, Bright P, Hohenschurz D, Vogel S, Thomson OP, MacMillan A, Draper J. Opposing vaccine hesitancy during the COVID-19 pandemic- A critical commentary and united statement of an international osteopathic research community. *International Journal of Osteopathic Medicine*. 2021; 39. DOI:10.1016/j.ijosm.2021.02.002. PMID:33623534. IF:2,149 (Q3/D6).

- Vernooij RWM, Guyatt GH, Zeraatkar D, Han MA, Valli C, El Dib R, Alonso P, Bala MM, Johnston BC. Reconciling contrasting guideline recommendations on red and processed meat for health outcomes. *JOURNAL OF CLINICAL EPIDEMIOLOGY*. 2021; 138. DOI:10.1016/j.jclinepi.2021.07.008. PMID:34273525. IF:6,437 (Q1/D1).

Other publications

- Blasco MJ, Puig T, Balada G, Gich I, Hernandez H, Parra M, Serra R. Health profile, cardiovascular risk prevention and physical exercise in adolescents. *Apunts Educacion Fisica Y Deportes*. 2021; (144). DOI:10.5672/apunts.2014-0983.es.(2021/2).144.03.
- Bonfill X. Contribucions de l'IEC sobre la covid. *Annals de Medicina*. 2021;104(4):145
- Bonfill X. Les vacunes al rescat. *Annals de Medicina*. 2021;104(1):1
- Bonfill X. No volem ser herois. *Annals de Medicina*. 2021;104(3):97
- Bonfill X. Tots els números dels Annals, a l'abast. *Annals de Medicina*. 2021;104(2):49
- Martínez L, Samsó L, Alonso P, Ansuategi E, Asso L, Ballesteros M, Canelo C, Casino G, Gallego A, Niño de Guzmán Quispe EP, Requeijo C, Roqué i Figuls M, Salas K, Ubeda M, Urreta I, Rosenbaum S. Teaching and learning how to make informed health choices: Protocol for a context analysis in Spanish primary schools. *F1000research*. 2021; 10:312. DOI:10.12688/f1000research.51961.2. PMID:34631019.
- Salas K, Diaz JM, Coronado J, Perez J, Requeijo C, Samsó L, Suclupe S, Bolibar I. Patient decision aids for adults with advanced chronic kidney disease with a medical recommendation to start dialysis: a scoping review protocol. *Jbi Evidence Synthesis*. 2021; 19(12). DOI:10.11124/JBIES-20-00437. PMID:34171892.
- Valli C, Sunol R, Orrego C, de Guzman EN, Strammiello V, Adrion N, Immonen K, Ninov L, van der Gaag M, Ballester M, Alonso P. The development of a core outcomes set for self-management interventions for patients living with obesity. *Clinical Obesity*. 2022; 12(1):e12489. DOI:10.1111/cob.12489. PMID:34617681.

Books or chapters with ISBN

- Bonfill Cosp, X, Marín León, I (2021). Evaluar tratamientos: la Colaboración Cochrane y la Medicina basada en la evidencia ante las pandemias. In Del Llano J, Camprubí L (Eds.), *Sociedad entre Pandemias* (pp. 543-564). Madrid: Fundación Gaspar Casal. ISBN: 978-84-7360-772-8
- Bonfill X, Casino G, Gorgues M. Los tratamientos, a prueba. Mejor investigación para mejorar la salud. Traducción de la segunda edición inglesa de: *Testing Treatments better research for better healthcare*. Asociación Colaboración Cochrane Iberoamericana. ISBN: 978-84-09-32049-3

Communication and dissemination activities

Outreach activities

- Casino G. "El Centro Cochrane Iberoamericano y la difusión de la evidencia sobre atención sanitaria" Invited speaker. 1er Congreso Salud Cantabria y 3as Jornadas de Pacientes. Santander, 18-20 May de 2021.
- Casino G, Cervera A, Solà I, Roqué M. "Las gafas progresivas para ordenador ¿son útiles para tratar la fatiga visual?" Technical report. Cochrane Responde: dissemination project that offers evidence-based answers to health questions in a plain language. May 2021.
- Gorgori Gonzalez A, Rabassa Bonet M, Alonso-Coello P, Casino Rubio G. "En población adulta general, ¿disminuir el consumo habitual de alimentos ricos en grasas saturadas disminuye el riesgo de enfermedad cardiovascular?" Technical report. *Nutrimedia: Evaluación científica de mensajes sobre alimentación y salud*. June 2021.
- Gorgori Gonzalez A, Rabassa Bonet M, Alonso-Coello P, Casino Rubio G. "Are probiotic foods beneficial for the health?" Technical report. *Nutrimedia: Evaluación científica de mensajes sobre alimentación y salud*. June 2021.
- Casino G, Solà I, Roqué M. "¿Es efectivo el ejercicio para tratar el dolor menstrual?" *Revista OCU Salud* núm. 157, August 2021.
- León García M. "Diana Salud: Iniciativa para mejorar la práctica clínica basada en la evidencia" *MicroXerrades de la Nit de la Recerca*. Virtual, 11 September 2021.
- Casino G. "La relevancia de la colaboración Cochrane-Wikipedia". Invited speaker. *La evidencia Cochrane en la Wikipedia en español*. Virtual, 20 October 2021.
- Casino G. Autopsia de una exageración. Compraventa y consumo de la ciencia mediática" Invited speaker. *Journal Club de la Fundación Española para la Ciencia y la Tecnología*. Virtual, 24 November 2021.
- Casino G. "Nutrimedia o cómo evaluar científicamente la veracidad de los mensajes sobre alimentación y salud". Encuentro ComCiRed 2021 de las Unidades de Cultura Científica y de la Innovación. Invited Speaker. *Fundación Española para la Ciencia y la Tecnología*. Cuenca, 28-29 November 2021.
- Casino G, Cervera A, Solà I, Roqué M. "¿Es beneficioso el aire caliente y humidificado para el resfriado común?" Technical report. *Cochrane Responde: dissemination project that offers evidence-based answers to health questions in a plain language*. November 2021.
- Casino G, Solà I, Roqué M. "Limpieza dental ¿Cada cuánto?" *Revista OCU Salud* núm.159, December 2021.
- Bonfill X, Casino G, Cervera A, Urrútia G, Alonso-Coello P, Solà I, Roqué M, Rojas MX, Beltran J, Martínez-Zapata MJ,

Martínez-García L, León García M. Sesiones de la Red Cochrane Iberoamericana. Cycle of virtual sessions. Coordinators/ Speakers. 2021.

- Bonfill X, Gorgues M, Casino G, Cervera A, García Y. "ExME: Estudiantes por la Mejor Evidencia". ExME initiative: ExME is a growing network of students from around the world, from school age to university, who are interested in learning more about evidence-based health care (EBH). <https://exme.cochrane.org/>

- Samsó Jofra L, Alonso-Coello P, Martínez García L. Informed Health Choices Newsletter. Multidisciplinary project that aims to teach primary school children (10-12 years old) to think critically about treatments. IHC Newsletter, 2021. <https://www.informedhealthchoices.org/wp-content/uploads/2021/02/2021-IHC-Newsletter.pdf>

- Bonfill X, Casino G, Cervera A, Gorgues M. Spanish translation and dissemination of the "Testing Treatments: Better Research for Better Healthcare" initiative that promotes critical thinking about treatment claims. 2021.

Scientific dissemination activities

- Solà I. "Prácticas para mejorar el diseño y descripción de una búsqueda en una revisión sistemática" Invited speaker. Cochrane Early Career Professionals Journal Club. Virtual, 18 March 2021.

- Bonfill Cosp X. "Síntesis y revalorización del pensamiento de Archie Cochrane y la importancia de la formación en epidemiología e investigación clínica aplicada en el Ecuador" Invited speaker. Maestría de Epidemiología con Mención en Investigación Clínica Aplicada de la Universidad UTE de Ecuador. Virtual, 19 March 2021.

- Bonfill Cosp X. "Appropriateness of Healthcare Interventions". The Online Final Symposium and Closing Ceremony of the Erasmus+ Health-I Project. Invited speaker. Virtual, 7-9 June 2021.

- Solà I. "Taller de metodología GRADE para el desarrollo de informes de evaluación de tecnologías sanitarias". Invited speaker. Jornadas científico-técnicas de la RedETS. Virtual, 14 September 2021.

- Alonso-Coello P, Elizondo U, Barragán Brun U, Gorrotxategi P, Bolívar I, Grupo de estudio Optim@p. "Optimización de la Prescripción de Antibióticos en Infección Respiratoria Aguda no Complicada en Atención Primaria de Pediatría Proyecto OptimAP". Oral presentation. XLI Congreso de la SEMFYC. Palma de Mallorca, 7-9 October 2021.

- Canelo-Aybar C. "Planning for and using modelling studies in public health evidence synthesis". Invited speaker. Cochrane Methods Symposium: Evidence synthesis in public health and complex interventions. Virtual, 12 October 2021.

- León García M. "Challenges faced by cancer care teams when discussing patient involvement in clinical trials and

opportunities to improve shared decision-making (SDM)." Poster presentation. Society for Medical Decision Making- 43rd Annual North American Meeting. Virtual, 18-20 October 2021.

- Beltran J, Valli C, Canelo-Aybar C, Medina M, Orrego C, Ballester M, Poortvliet R, Alonso-Coello P. "Selection process of the most promising self-management interventions for four chronic conditions: a GRADE based approach using network meta-analysis". Poster presentation. GIN 2021 Conference. Virtual, 25-27 October 2021.

- Niño de Guzman Quispe EP, Pérez-Bracchiglione J, Rocha Calderón C, Poortvliet R, Heijmans M, Orrego Villagrán C, Alonso-Coello P, Martínez García L. "Patients' and caregivers' perspectives on outcomes of self-management interventions for Type 2 Diabetes Mellitus: an overview of reviews". Poster presentation. GIN 2021 Conference. Virtual, 25-27 October 2021.

- Santero M, Acosta Dighero R, Gabriela Meade A, Gonzalez L, Melendi S, Solà I, Urrútia G, Quintana MJ, Bonfill Cosp X. "Clinical practice guidelines on the use of chemotherapy for esophageal and gastric advanced cancer in Europe: a quality assessment using the AGREE-II instrument." Poster presentation. GIN 2021 Conference. Virtual, 25-27 October 2021.

- Roqué M. "Estrategias en la síntesis de evidencia". Seminario internacional de JBI Investigación Basada en Evidencia. Invited speaker. Virtual, 27 October 2021.

- Anaya R, Rodriguez M, Millan A, Reguant F, Llorca J, Guilbert P, Ruiz A, Gil JM, Moral V, Delgado CE, Antonijoan RM, Pantoja PE, Merchán-Galvis A, Martínez-Zapata MJ on behalf of AFFEcT study group. "Assessing a strategy to shorten the time to surgery in patients with chronic antiplatelet therapy and proximal femoral fracture". Oral presentation. Perioperative Care Congress. Virtual, 11-14 November 2021.

- Popova E, Alonso-Coello P, Alvarez-Garcia J, Paniagua P, Carles-Lavila M. "Perioperative Myocardial Ischemia: Is perioperative troponin screening cost-effective?" Oral presentation. Perioperative Care Congress. Virtual, 11-14 November 2021.

- Bonfill X, Casino C, Rojas MX. Jornada estratégica del programa de Epidemiología Clínica del CIBERESP. Invited speakers. Pamplona, 12 November 2021.

- Martínez-Zapata MJ. "Seminarios de Investigación con la temática "Diseño de ensayos clínicos" Webinar invited speaker. Universidad de La Frontera, Chile, 16 December 2021.



Evaluation of Public Health Policies and Programmes

Coordinator

Continente Garcia, Xavier ASPB
xcontine@aspb.cat

Members

Ariza Cardenal, Carles	ASPB	Perez Gimenez, Anna	ASPB
Garcia Altes, Anna	ENTITAT EXTERNA	Puigpinós Riera, Rosa	ASPB
Leon Pujadas, Gabriel	ASPB	Sanchez Martinez, Francesca	ASPB
López Medina, Maria José	ASPB	Serral Cano, Gemma	ASPB
		Villalbi Hereter, Joan Ramon	ASPB

Main lines of research

- Monitoring of behaviours and other health risk factors such as environmental exposure (FRESC survey, DAMA cohort, and HUMO cohort).
- Evaluation of public health policies and Action Plans (Barcelona mental health action plan, energy poverty, "superilles", housing with services, Plan for play in Barcelona's Public Areas, and adaptation of schools to climate change).
- Evaluation of public health programmes and services (school based prevention programmes for obesity, smoking, alcohol and cannabis consumption, breast cancer screening programmes)

Scientific Challenges

- Promote research into the evaluation of policies and programmes.
- Support the discussion on conceptual and methodological aspects of results evaluation in prevention and health promotion.
- Consolidate the group's research, fostering less developed aspects such as financial assessment and evaluation of health and environmental protection interventions.
- Develop a theoretical corpus of concepts, principles, methods and examples that contribute to filling the gap in under and postgraduate teaching regarding the design and evaluation of risk prevention and health promotion interventions.

Collaborations

Collaborations with other IIB Sant Pau research groups

- Clinical Epidemiology and Healthcare Services (PI: Xavier Bonfill).
- Transport and Health: Injuries and Mobility (PI: Catherine Pérez).
- Health Inequalities (PI: Carme Borrell).

External collaborations

- CIBER-Epidemiology and Public Health (Group 18: Evaluation of public health policies and programmes).
- CIBER-Obesity and Nutrition (Group PI: Fernando Fernández de Aranda)
- CIBER-Respiratory Disease (Group CB19/06/00004; PI: Esteve Fernández Muñoz)
- AGAUR Consolidated Research Group (Evaluation of public health policies and programmes).
- Tobacco Working Group of the Spanish Epidemiology Society.
- Foreign universities: Johns Hopkins University, USA.
- Spanish universities: Universitat Pompeu Fabra, Universitat Ramon Llull, Universitat de Vic, Universitat Internacional de Catalunya, Universitat Oberta de Catalunya, Universidad de Santiago de Compostela, Universidad de Alcalá de Henares.
- Primary care centres: Ciutat Meridiana, Roquetes, Sant Rafael and Sardenya (Barcelona).
- Catalan Institute of Oncology (ICO).
- Municipal bodies: Barcelona Sports Institute (IBE), Barcelona Municipal Institute of Education (IME).
- Regional bodies: Public Health Agency of Catalunya (Promoting Health through Physical Activity and Healthy Eating Plan) and Catalan Health Information and Quality Agency (AQUAS).
- Other bodies: Catalan Recreation Foundation (FCE).
- Companies: Fontvella and Danone (Health Affairs Departments).

Active grants

• MARIA JOSE LOPEZ MEDINA. Exposición al humo ambiental y residual del tabaco en niños y niñas: cohorte HUMO. PI17/01359. Instituto de Salud Carlos III. Duration 2018-2021. 73.000,00 €.

• MARIA JOSE LOPEZ MEDINA. Desigualtats socials en salut en la població infantil a Catalunya. DI-61 AGAUR. Agència de Gestió d'Ajuts Universitaris i de Recerca. Duration 2019-2022. 30.072,00 €.

Note: Total amount granted to PI. It does not include indirect costs.

Other active grants

• Xavier Continente, M^a José López. Blue, Green & Grey Adapting Schools to Climate Change: From school vulnerable to heat to an open climate shelter for all the citizenship: implementation of blue, green and traditional solutions against

heat in school equipments and CC consciousness. GBG_AS2C. Urban Innovative Actions (UIA). Duration: 2018-2021. 289.275 €

• Anna Garcia-Altés. Pan-European Response to the Impacts of COVID-19 and future Pandemics and Epidemics. H2020 (101016233). Duration: 2020-2023. 68.437,50 €.

Doctoral theses

• Francesca Sánchez Martínez, Evaluación de la efectividad de una intervención de Prevención de la Obesidad Infantil en Barcelona (POIBA), Universitat Pompeu Fabra, Carles Ariza, M^a José López, 06/10/2021

• Elisabet-Mae Henderson Mercader, Secondhand smoke exposure in outdoor settings in Europe, Universitat Pompeu Fabra, M^a José López, Xavier Continente, 25/11/2021

Transfer products

• Anna García-Altés. Amb quina freqüència la població immigrant indocumentada fa ús dels serveis sanitaris a Catalunya i quines malalties tenen? Agència de Qualitat i Avaluació Sanitàries de Catalunya, Barcelona, 2021.

• Anna García-Altés. Les voluntats anticipades influeixen en la pràctica clínica durant el final de la vida? Un estudi de casos i controls amb dades del món real. Agència de Qualitat i Avaluació Sanitàries de Catalunya, Barcelona, 2021.

• Francesca Sánchez-Martínez, Carles Ariza. Sobirania i seguretat alimentàries. "Ens fem grans!" i "Bon dia, somriu!". ASPB, Barcelona, 2021.

• Francesca Sánchez-Martínez, Carles Ariza. Sobirania i seguretat alimentàries. "Creixem sans" i "Creixem més sans". ASPB, Barcelona, 2021.

• La Salut a Barcelona, 2020. ASPB, Barcelona, 2021.

• Carles Ariza, Francesca Sánchez-Martínez. Canvi climàtic i alimentació. ASPB, Barcelona, 2021.

• Carles Ariza, Francesca Sánchez. La formació de l'alimentació saludable, segura i sostenible a través dels programes educatius a l'escola. ASPB, Barcelona, 2021.

• Maria José López. Informe de resultats dels efectes mediambientals i en la salut del model Superilles a Barcelona. Projecte Salut Als Carrers (SAC). ASPB, Barcelona, 2021.

• Anna Pérez, Francesca Sánchez-Martínez. Barcelona Salut als Barris. Memòria 2020. ASPB, Barcelona, 2021.

• Xavier Continente, Anna Pérez. Pantalles i salut emocional en adolescents de Barcelona. ASPB, Barcelona, 2021.

Scientific production

- Albert S, Garcia A. Measuring health inequalities: a systematic review of widely used indicators and topics. *International Journal for Equity in Health*. 2021; 20(1):73. DOI:10.1186/s12939-021-01397-3. PMID:33691701. IF:3,192 (Q2/D3).
- Amalia B, Fu M, Tigova O, Ballbe M, Castellano Y, Semple S, Clancy L, Vardavas C, Lopez MJ, Cortes N, Perez R, Pascual JA, Fernandez E. Environmental and individual exposure to secondhand aerosol of electronic cigarettes in confined spaces: Results from the TackSHS Project(dagger). *INDOOR AIR*. 2021; 31(5). DOI:10.1111/ina.12841. PMID:33905602. IF:5,770 (Q1/D2).
- Amalia B, Liu XQ, Lugo A, Fu M, Odone A, van den Brandt PA, Semple S, Clancy L, Soriano JB, Fernandez E, Gallus S, Lopez MJ, Continente X, TackSHS I. Exposure to secondhand aerosol of electronic cigarettes in indoor settings in 12 European countries: data from the TackSHS survey. *TOBACCO CONTROL*. 2021; 30(1). DOI:10.1136/tobaccocontrol-2019-055376. PMID:32123139. IF:7,552 (Q1/D1).
- Amalia B, Rodriguez A, Henderson E, Fu M, Continente X, Tigova O, Semple S, Clancy L, Gallus S, Fernandez E, Lopez MJ, TackSHS I. How widespread is electronic cigarette use in outdoor settings? A field check from the TackSHS project in 11 European countries. *ENVIRONMENTAL RESEARCH*. 2021; 193:110571. DOI:10.1016/j.envres.2020.110571. PMID:33278471. IF:6,498 (Q1/D1).
- Amigo F, Dalmau A, Garcia A. Do hospitals have a higher mortality rate on weekend admissions? An observational study to analyse weekend effect on urgent admissions to hospitals in Catalonia. *BMJ Open*. 2021; 11(11):e047836. DOI:10.1136/bmjopen-2020-047836. PMID:34845065. IF:2,692 (Q2/D4).
- Barbaglia MG, Pares O, Villalbi JR, Bartroli M, Gasulla L, Espelt A. Temporal relationship between a sudden disruption of a local illicit drug market in a deprived neighborhood of the Barcelona Metropolitan Area and the number of discarded syringes collected from public space. *DRUG AND ALCOHOL DEPENDENCE*. 2021; 218:108400. DOI:10.1016/j.drugalcdep.2020.108400. PMID:33250382. IF:4,492 (Q1/D2).
- Carreras G, Lachi A, Cortini B, Gallus S, López MJ, López-Nicolás Á, Lugo A, Pastor MT, Soriano JB, Fernandez E, Gorini G; TackSHS Project Investigators [Continente X]. Burden of disease from exposure to secondhand smoke in children in Europe. *Pediatric Research*. 2021;90(1):216-222. doi: 10.1038/s41390-020-01223-6. PMID: 33149260. IF:3,756 (Q1/D2).
- Carreras G, Lachi A, Cortini B, Gallus S, Lopez MJ, Lopez A, Soriano JB, Fernandez E, Tigova O, Gorini G, TackSHS I. Burden of disease from second-hand tobacco smoke exposure at home among adults from European Union countries in 2017: an analysis using a review of recent meta-analyses. *PREVENTIVE MEDICINE*. 2021; 145:106412. DOI:10.1016/j.ypmed.2020.106412. PMID:33388324. IF:4,018 (Q1/D3).
- Carrere J, Peralta A, Oliveras L, Lopez MJ, Mari M, Benach J, Novoa AM. Energy poverty, its intensity and health in vulnerable populations in a Southern European city. *Gaceta Sanitaria*. 2021; 35(5). DOI:10.1016/j.gaceta.2020.07.007. PMID:33129571. IF:2,139 (Q3/D6).
- Carrilero N, Dalmau A, Garcia A. Socioeconomic inequalities in 29 childhood diseases: evidence from a 1,500,000 children population retrospective study. *BMC PUBLIC HEALTH*. 2021; 21(1):1150. DOI:10.1186/s12889-021-11230-9. PMID:34130683. IF:3,295 (Q2/D4).
- Clotas C, Serral G, Garcia EV, Puigpinos R. Dietary changes and food habits: social and clinical determinants in a cohort of women diagnosed with breast cancer in Barcelona (DAMA cohort). *CANCER CAUSES & CONTROL*. 2021; 32(12). DOI:10.1007/s10552-021-01483-5. PMID:34480675. IF:2,506 (Q3/D6).
- Codinach E, Obradors N, Mendioroz J, Villalbi JR, Bosque M, Espelt A. Future intentions and beliefs about roll-your-own cigarettes in adolescents. *Atencion Primaria*. 2021; 53(6):102043. DOI:10.1016/j.aprim.2021.102043. PMID:33838538. IF:1,137 (Q4/D8).
- Continente X, Rodriguez A, Perez M, Schiaffino A, Fernandez E, Lopez MJ. Factors related to caregivers' risk perception of secondhand smoke exposure on children's health. *Tobacco Induced Diseases*. 2021; 19:93. DOI:10.18332/tid/143318. PMID:34949975. IF:2,600 (Q2/D5).
- Daban F, Garcia I, Porthe V, Lopez MJ, De B, Pasarin MI, Borrell C, Artazcoz L, Perez A, Diez E. Improving mental health and wellbeing in elderly people isolated at home due to architectural barriers: A community health intervention. *Atencion Primaria*. 2021; 53(5). DOI:10.1016/j.aprim.2021.102020. PMID:33774346. IF:1,137 (Q4/D8).
- Daban F, Pasarin MI, Borrell C, Artazcoz L, Perez A, Fernandez A, Porthe V, Diez E. Barcelona Salut als Barris: Twelve years' experience of tackling social health inequalities through community-based interventions. *Gaceta Sanitaria*. 2021; 35(3). DOI:10.1016/j.gaceta.2020.02.007. PMID:32527681. IF:2,139 (Q3/D6).
- Dalmau A, Garcia A, Amblas J, Contel JC, Santauegenia S. Determinants of the number of days people in the general population spent at home during end-of-life: Results from a population-based cohort analysis. *PLoS One*. 2021; 16(7):e0253483. DOI:10.1371/journal.pone.0253483. PMID:34264956. IF:3,240 (Q2/D4).
- Dalmau A, García A, Vela E, Clèries M, Pérez CV, Argimon JM. Frequency of health-care service use and severity of illness in undocumented migrants in Catalonia, Spain: a population-based, cross-sectional study. *Lancet Planetary Health*. 2021; 5(5). DOI:10.1016/S2542-5196(21)00036-X. PMID:33964238. IF:19,173 (Q1/D1).
- De Batlle J, Bertran S, Turino C, Escarrabill J, Dalmases M, Garcia A, Sapina E, Carbonell EM, Sanchez M, Barbe F.

Longitudinal Analysis of Causes of Mortality in Continuous Positive Airway Pressure-treated Patients at the Population Level. *Annals of the American Thoracic Society*. 2021; 18(8). DOI:10.1513/AnnalsATS.202007-8880C. PMID:33606959. IF:6,831 (Q1/D2).

- Gallus S, Lugo A, Liu XQ, Behrakis P, Boffi R, Bosetti C, Carreras G, Chatenoud L, Clancy L, Contiente X, Dobson R, Effertz T, Filippidis FT, Fu M, Geshanova G, Gorini G, Keogan S, Ivanov H, Lopez MJ, Lopez A, Precioso J, Przewozniak K, Radu C, Ruprecht A, Semple S, Soriano JB, Starchenko P, Trapero M, Tigova O, Tzortzi AS, Vardavas C, Vyzikidou VK, Colombo P, Fernandez E, TackSHS I. Who Smokes in Europe? Data From 12 European Countries in the TackSHS Survey (2017–2018). *JOURNAL OF EPIDEMIOLOGY*. 2021; 31(2). DOI:10.2188/jea.JE20190344. PMID:32249267. IF:3,211 (Q2/D4).

- Garcia A, Subirana M, Llorens D, Bullich I, Brugues A, Teixidor M, Cuxart N, Esteve M, Estrem M. The experience of Catalonia measuring nurse-sensitive indicators: Trends study 2012–2018. *Journal of Nursing Management*. 2021; 29(7). DOI:10.1111/jonm.13348. PMID:33894075. IF:3,325 (Q1/D1).

- González-Rábago Y, La Parra D, Puigpinós-Riera R, Pons-Vigués M; por el Grupo de Trabajo de Determinantes Sociales de la Salud de la Sociedad Española de Epidemiología. ¿Cómo medir el estatus migratorio de la población infantil y juvenil? Estudios sobre salud y desigualdades en salud en Europa [How to measure the migration status of the child and young population? Studies on health and inequalities in health in Europe]. *Gaceta Sanitaria*. 2021;35(1):81–90. Spanish. DOI:10.1016/j.gaceta.2019.06.003. PMID: 31542314. IF:2,139 (Q3/D6).

- Henderson E, Contiente X, Fernandez E, Tigova O, Cortes N, Gallus S, Lugo A, Semple S, Dobson R, Clancy L, Keogan S, Ruprecht A, Borgini A, Tzortzi A, Vyzikidou VK, Gorini G, Lopez A, Soriano JB, Geshanova G, Osman J, Mons U, Przewozniak K, Precioso J, Brad R, Lopez MJ. Secondhand smoke exposure assessment in outdoor hospitality venues across 11 European countries. *ENVIRONMENTAL RESEARCH*. 2021; 200:111355. DOI:10.1016/j.envres.2021.111355. PMID:34022230. IF:6,498 (Q1/D1).

- Henderson E, Lugo A, Liu XQ, Contiente X, Fernandez E, Lopez MJ, Gallus S, TackSHS I. Secondhand smoke presence in outdoor areas in 12 European countries. *ENVIRONMENTAL RESEARCH*. 2021; 195:110806. DOI:10.1016/j.envres.2021.110806. PMID:33515582. IF:6,498 (Q1/D1).

- Keogan S, Alonso T, Sunday S, Tigova O, Fernández E, López MJ, Gallus S, Semple S, Tzortzi A, Boffi R, Gorini G, López-Nicolás Á, Radu-Loghin C, Soriano JB, Clancy L; TackSHS Project Investigators (all listed in Appendix). Lung function changes in patients with chronic obstructive pulmonary disease (COPD) and asthma exposed to secondhand smoke in outdoor areas. *Journal of Asthma*. 2021;58(9):1169–1175. DOI:10.1080/02770903.2020.1766062. PMID: 32441557. IF:2,515 (Q3/D8).

- Oliveras L, Borrell C, Gonzalez I, Gotsens M, Lopez MJ, Palencia L, Artazcoz L, Mari M. The Association of Energy Poverty

with Health and Wellbeing in Children in a Mediterranean City. *International Journal of Environmental Research and Public Health*. 2021; 18(11):5961. DOI:10.3390/ijerph18115961. PMID:34199387. IF:3,390 (Q1/D3).

- Oliveras L, Peralta A, Palencia L, Gotsens M, Lopez MJ, Artazcoz L, Borrell C, Mari M. Energy poverty and health: Trends in the European Union before and during the economic crisis, 2007–2016. *HEALTH & PLACE*. 2021; 67:102294. DOI:10.1016/j.healthplace.2020.102294. PMID:33526205. IF:4,078 (Q1/D2).

- Palma D, Contiente X, Lopez MJ, Vazquez N, Serral G, Ariza C. Personality traits associated with the substance consumption in young people in a context of vulnerability. *Gaceta Sanitaria*. 2021; 35(6). DOI:10.1016/j.gaceta.2020.08.004. PMID:32981753. IF:2,139 (Q3/D6).

- Peruga A, Lopez MJ, Martinez C, Fernandez E. Tobacco control policies in the 21st century: achievements and open challenges. *Molecular Oncology*. 2021; 15(3). DOI:10.1002/1878-0261.12918. PMID:33533185. IF:6,603 (Q1/D3).

- Politi J, Martin M, Mercuriali L, Borrás B, Lopez J, Vilcella A, Villar J, Orcau A, de Olalla PG, Rius C, Fernández A, Puigpinós R, Bonfill X, Villalbí JR. Epidemiological characteristics and outcomes of COVID-19 cases: mortality inequalities by socio-economic status, Barcelona, Spain, 24 February to 4 May 2020. *Eurosurveillance*. 2021; 26(20):2001138. DOI:10.2807/1560-7917.ES.2021.26.20.2001138. PMID:34018483. IF:6,307 (Q1/D1).

- Porthe V, Garcia I, Ariza C, Villalbi JR, Bartroli M, Juarez O, Diez E. Community-Based Interventions to Reduce Alcohol Consumption and Alcohol-Related Harm in Adults. *JOURNAL OF COMMUNITY HEALTH*. 2021; 46(3). DOI:10.1007/s10900-020-00898-6. PMID:32770477. IF:1,883 (Q3/D7).

- Puigpinós R, Serral G. Satisfaction with the breast cancer screening program in Barcelona: a comparison between 2006 and 2016. *Revista Espanola de Salud Publica*. 2021; 95:e202101022. PMID:33496276. IF:0,756 (Q4/D10).

- Sanchez F, Brugueras S, Serral G, Valmayor S, Juarez O, Lopez MJ, Ariza C. Three-Year Follow-Up of the POIBA Intervention on Childhood Obesity: A Quasi-Experimental Study. *Nutrients*. 2021; 13(2):453. DOI:10.3390/nu13020453. PMID:33573017. IF:5,717 (Q1/D2).

- Sanz B, Saurina C, Serra L, Vicens GR, Casanovas LVL, Otero L, Lopez MJ, Perez G, Vives C. Prevalence and associated factors with sexual violence victimisation youth before, during and after the COVID-19 lockdown: a cross-sectional study in Spain. *BMJ Open*. 2021; 11(11):e055227. DOI:10.1136/bmjopen-2021-055227. PMID:34845078. IF:2,692 (Q2/D4).

- Serra S, Alonso C, Serra J, Folguera J, Carrilero N, Garcia A. Geographical, Socioeconomic, and Gender Inequalities in Opioid Use in Catalonia. *Frontiers in Pharmacology*. 2021; 12:750193. DOI:10.3389/fphar.2021.750193. PMID:34744729. IF:5,810 (Q1/D2).

• Vives C, Perez V, Davo M, Sanchez M, Gil D, Abietar DG, Sanchez F, Forcadell L, Perez G, Sanz B. Dating violence and associated factors among male and female adolescents in Spain. *PLoS One*. 2021; 16(11):e0258994. DOI:10.1371/journal.pone.0258994. PMID:34758031. IF:3,240 (Q2/D4).

Other scientific production

• Henderson E, Lugo A, Liu XQ, Continente X, Fernandez E, Lopez MJ, Gallus S, TackSHS I. Secondhand smoke presence in outdoor areas in 12 European countries (vol 195, 110806, 2021). *ENVIRONMENTAL RESEARCH*. 2021; 199:111337. DOI:10.1016/j.envres.2021.111337. PMID:34020235. IF:6,498 (Q1/D1).

• Perez M, Fernandez E, Lopez MJ. Smoking-Associated Mortality in Spain: Quo Vadis?. *ARCHIVOS DE BRONCONEUMOLOGIA*. 2021; 57(8). DOI:10.1016/j.arbres.2020.12.035. PMID:33642074. IF:4,872 (Q2/D3).

• Precioso J, Samorinha C, Oliveira VH, Lopez MJ, Continente X, Fernandez E. Assessment of compliance with the smoking ban in children's playgrounds in Portugal: a case study. *Pulmonology*. 2021; 27(4). DOI:10.1016/j.pulmoe.2020.12.009. PMID:33531274. IF:3,575 (Q2/D4).

Books or chapters with ISBN

• Chapter: "La prevención del consumo de alcohol en el embarazo" Mendoza R, Villalbí JR, Jiménez-Moya AI Book: "Consumo de alcohol en el embarazo" García-Algar O, Mendoza R. Ediciones Díaz de Santos, 2021; 141-93. ISBN: 978-84-9052-151-9

Communication and dissemination activities

Outreach activities

• ASPB talk "L'alimentació saludable, segura i sostenible a l'escola". 21 October 2021. On-line.
Organiser: ASPB within the "Setmana Ciutadana de l'Alimentació Sostenible", Barcelona World Capital of Sustainable Food. Francesca Sánchez (coordinator).

• Debate series "La recerca aplicada col·laborativa a l'àmbit social". 25 February 2021. On-line, Organiser: Àrea de Drets Socials, Justícia Global, Feminismes i LGTBI, Ajuntament de Barcelona. Title: "D'una necessitat detectada a una intervenció comunitària: el programa Creixem sans". Francesca Sánchez.

• Presentation of the SNS results "Bases para un modelo". Session new challenges and opportunities. Club Benchmarking de La Fundació Unió, Compartir X Millorar. Barcelona, 5 October 2021. García-Altés A.

• "El valor del benchmarking, una eina d'aprenentatge i canvi". Session new challenges and opportunities. Club Benchmarking

de La Fundació Unió, Compartir X Millorar. Barcelona, 26 May 2021. García-Altés A.

Scientific dissemination activities

• The "Results Centre" of the Catalan healthcare system: A tool for transparency, benchmarking, and healthcare quality improvement. Pòster. García-Altés A. 44th World Hospital Congress. Barcelona, 8-11 Novembre de 2021.

• Beigelman M, Vall J, García-Altés A, Carrilero N. Behind closed doors: COVID-19 and detection of male-based violence victims. Oral communication. X Taller EvaluAES. Investigación en evaluación de políticas y servicios de salud. Online: 8 July 2021.

• Carrillo G, Dalmau A, Campillo C, García-Altés A. Caesarean section trends in Catalonia between 2013 and 2017 based on the Robson classification system: A cross sectional study. Poster. 5th ECIC Congress - European Congress on Intrapartum Care. Online: 27-29 May 2021.

• García-Altés A. Salud y uso de servicios de inmigrantes sin papeles. Mesas redondas en el otoño boreal de 2021. NoGracias. Online: 20 October 2021.

• Jornada Científica CIBERESP; 23 March 2021; online. Secondhand smoke exposure assessment in outdoor hospitality venues across 11 European countries; Xavier Continente i Maria José López.

• SEE Annual Meeting. 8 September 2021; Oviedo (España); Exposición al Humo Ambiental de Tabaco en casas con personas fumadoras de Europa. Xavier Continente y Maria José López.

• SEE Annual Meeting. 8 September 2021; Oviedo (España); Percepciones de los usos de las pantallas y su impacto en la salud emocional en adolescentes de Barcelona: un estudio cualitativo. Xavier Continente.



Urban Health Inequalities

Coordinator

Perez Gonzalez, Catherine ASPB
cperez@aspb.cat

Members

Artazcoz Lazcano, Lucia	ASPB	Marí Dell'Olmo, Marc	ASPB
Bartoll Roca, Xavier	ASPB	Novoa Pardo, Ana	ASPB
Borrell Thio, Carme	ASPB	Olabarria Saenz De Viguera, Marta	ASPB
Cortes Franch, Immaculada	ASPB	Oliveras Puig, Laura	ASPB
Daban Aguilar, Ferran	ASPB	Palencia Fernandez, Laia	ASPB
Diez David, Elia	ASPB	Pasarin Rua, Maria Isabel	ASPB
Fernández Sánchez, Ana	ASPB	Pérez Albarracín, Gloria	ASPB
Font Ribera, Laia	ASPB	Rodriguez Sanz, Maica	ASPB
Gómez Gutiérrez, Anna	ASPB	Sánchez Ledesma, Esther	ASPB
González Marín, Patricia	ASPB	Vasquez Vera, Hugo Erick	IR
Gotsens Miquel, Merce	ASPB	Vásquez Vera, M. Constanza	ASPB
Malmusi, Davide	ENTITAT EXTERNA		

Main lines of research

- To study the social and political determinants of health and their effects on construction and policy interventions. A special focus on COVID-19 inequalities and in its consequences.
- Evaluation the environmental and potential health benefits of policies aimed at reducing air and noise pollution such the superblocks or Urban Environmental Protection Zones.

- Evaluation of road safety policies and interventions, such effectiveness on road safety of superblocks (Superilles), effectiveness of safe school streets, impact on road safety of the promotion of bicycle use in Barcelona.

- To study the mechanisms and mediators between residential insecurity, energy poverty and health and the evaluation of housing policies, such the impact on health of cooperative housing in cession of use in Catalonia.

- Gender inequalities in health: Inequalities in sexual and reproductive health. Interventions to reduce health inequalities and the mechanisms that influence these policies in the provision of health services.

Scientific Challenges

We can point out that the governance of our group's research is strongly imbricated in our organization (Barcelona Public Health Agency) since it is a research totally linked to the practice of public health. The results of our research are key to making progress in monitoring health inequalities and implementing policies to reduce them.

Collaborations

Collaborations with other IIB Sant Pau research groups

Primary Care Research Group (EAP Sardenya)

External collaborations

- Johns Hopkins University. Baltimore. USA.
- CIBERESP (Centro de Investigación Biomédica en Red de Epidemiología y Salud Pública). Spain.
- Fundació para la Investigació i Docència Sant Joan de Déu. Barcelona. Spain.
- Universitat de Barcelona. Facultat de Medicina. Barcelona. Spain.
- Istituto Superiore di Sanita (ISS). Roma. Italia.
- Universidad Pablo de Olavide de Sevilla. Sevilla. Spain.
- Ajuntament de Barcelona. Barcelona. Spain
- Institut de Recerca en Energia de Catalunya. Barcelona, Spain.
- Consorci Metropolità de l'Habitatge. Barcelona, Spain.
- Observatori DESC
- Plataforma d'Afectats per la Hipoteca
- Aliança contra la Pobresa Energètica
- Enginyeria Sense Fronteres
- Dirección General de Tráfico
- Universidad Politécnica de Madrid
- Future Cities LAB LTD. United Kingdom
- Institut Mines-Telecom. France
- Università Degli Studi di Pavia. Italy
- Centre National de la Recherche Scientifique. France
- Preduzece za Informacione Tehnologije i Elektronsko Trgovanje Belit Doo. Serbia
- Birmingham City Council. UK
- The New York Academy of Medicine. USA
- Connected Health Alliance CIC. UK
- Partnership for Healthy Cities (Bloomberg Philantropies)

Other active grants

- Marc Marí Dell'Olmo. Air pollution and birth outcomes: windows of exposure and health and economic impact assessment – the APBO project. IP: Rebeca Ramis (ISCIII). Centro de Investigación

Biomédica en Red de Epidemiología y Salud Pública (CIBERESP). 2020-2021. No funding to ASPB.

- Marc Marí Dell'Olmo. The impact of air pollution on the consumption of antimicrobials in the general population (the ONAIR project). ASPB IP: Jordi Carratalà (UB). Instituto de Salud Carlos III (FEDER). 2020-2023. No funding to ASPB

- Carme Borrell. Joint Action Health Equity Europe – JAHEE. IP: Giuseppe Costa (Istituto Superiore di Sanita (ISS)). European Union's Health Programme (2014-2020). 2018-2021. 26.122,23€

- Ana Novoa i Carme Borrell. Impacto en salud y bienestar de la vivienda cooperativa en cesión de uso. Instituto de Salud Carlos III (FEDER). 2019-2021. 75.020€

- Glòria Pérez i Elia Diez. Promoción de activos protectores de la violencia de género en la adolescencia y la pre-adolescencia. Instituto de Salud Carlos III (FEDER). 2019-2021. 27830€

- Carme Borrell. Healthy Cultural Scenes: the symbolic-cultural context and healthy lifestyles (HEALTHY-SCENES). IP: Cristina Mateos (Universidad Pablo de Olavide de Sevilla). Ministerio de Ciencia, Innovación y Universidades. 2019-2023. 86.272€

- Carme Borrell. Inequidades, clase social y salud. Una cartografía desde los modos de vida en Colombia. IP: Gabriel Jaime Otálvaro (Universidad de Antioquia, Colombia). MinCiencias. Gobierno de Colombia. 2020-2023. 81.645€

- Maribel Pasarín. El problema de la no iniciación pediátrica: Evaluación con métodos mixtos. IP: María Rubio (UB). Instituto de Salud Carlos III (FEDER). 2019-2021. 37.510,00€

- Marc Marí Dell'Olmo i Anna Gómez. Blue, Green & Grey _ Adapting Schools to Climate Change From school vulnerable to heat to an open climate shelter for all the citizenship: implementation of blue, green and traditional solutions against heat in school equipments and Consciousness. IP: Enric Cremades (Ajuntament de Barcelona). Urban Innovation Action. 2018-2022. 258.933€

- Catherine Pérez. Conveni de col·laboració entre l'Ajuntament de Barcelona i l'Agència de Salut pública de Barcelona per la coordinació de les actuacions en matèria de mobilitat de la ciutat de Barcelona (2018-2021). 27.500 €

- Catherine Pérez. PHC Public Housing & COVID Partnership for Healthy Cities 57.300€.

Grants awarded in 2021

- MARIA CONSTANZA VASQUEZ VERA, Desigualdades de género, modelos de vivienda y salud., 2021 FI_B00935, Agència de Gestió d'Ajuts Universitaris i de Recerca, 2021 - 2025, 23.774,97 €.

Note: Total amount granted to PI. It does not include indirect costs.

Doctoral theses

- Immaculada Cortès Franch., Flexibilitat laboral i salut. Aprofundint en les desigualtats de gènere i el rol dels contextos., UAB, Lucía Artazcoz., 17/03/2021
- Ferran Daban Aguilar, Barcelona Salut als Barris : millorant la salut en poblacions desfavorides mitjançant intervencions en salut comunitària, UPF, Maribel Pasarín i Carme Borrell, 09/04/2021
- Juli Carrere Balcells, Evaluación de un programa para reducir la pobreza energética en Barcelona: "Energía, la justa", UPF, Ana Novoa i Joan Benach, 14/05/2021

Transfer products

Creation of data visualization tools and reports:

- Informació de salut i determinants socials de la salut per districtes <https://www.aspb.cat/docs/infodistrictes/>
- Sistema de vigilància de les desigualtats socials de la salut <https://webs.aspb.cat/dades/VigilanciaDesigualtats/>
- Observatori de salut, desigualtats i impactes de les polítiques municipals <https://ajuntament.barcelona.cat/observatorisalut/>
- Enquesta de salut de Barcelona <https://www.aspb.cat/docs/enquestasalutbcn/#>
- Mortalitat per calor <https://aspb.shinyapps.io/temob/>

Scientific production

- Artazcoz L, Cortes I, Escriba V, Benavides FG. Financial Strain and Health Status Among European Workers: Gender and Welfare State Inequalities. *Frontiers in Public Health*. 2021; 9:616191. DOI:10.3389/fpubh.2021.616191. PMID:34095045. IF:3,709 (Q1/D2).
- Berra S, Rivadero L, Pasarín MI, Peresini V. Linguistic acceptability in the comprehension of health services assessment questionnaires in Ibero-America. *Gaceta Sanitaria*. 2021; 35(4). DOI:10.1016/j.gaceta.2020.04.019. PMID:32654875. IF:2,139 (Q3/D6).
- Bolibar M, Belvis FX, Jodar P, Vives A, Mendez F, Bartoll X, Pozo OJ, Gomez A, Padrosa E, Benach J, Julia M. Precarious Employment and Stress: The Biomedical Embodiment of Social Factors. PRESSED Project Study Protocol. *Frontiers in Public Health*. 2021; 9:649447. DOI:10.3389/fpubh.2021.649447. PMID:33859972. IF:3,709 (Q1/D2).
- Borrell C, Palencia L, Bosakova L, Gotsens M, Morrison J, Costa C, Dzurova D, Deboosere P, Lustigova M, Mari M, Rodopoulou S, Santana P. Socioeconomic Inequalities in Chronic Liver

Diseases and Cirrhosis Mortality in European Urban Areas before and after the Onset of the 2008 Economic Recession. *International Journal of Environmental Research and Public Health*. 2021; 18(16):8801. DOI:10.3390/ijerph18168801. PMID:34444557. IF:3,390 (Q1/D3).

- Carrere J, Peralta A, Oliveras L, Lopez MJ, Mari M, Benach J, Novoa AM. Energy poverty, its intensity and health in vulnerable populations in a Southern European city. *Gaceta Sanitaria*. 2021; 35(5). DOI:10.1016/j.gaceta.2020.07.007. PMID:33129571. IF:2,139 (Q3/D6).
- Daban F, Garcia I, Porthe V, Lopez MJ, De B, Pasarin MI, Borrell C, Artazcoz L, Perez A, Diez E. Improving mental health and wellbeing in elderly people isolated at home due to architectural barriers: A community health intervention. *Atencion Primaria*. 2021; 53(5). DOI:10.1016/j.aprim.2021.102020. PMID:33774346. IF:1,137 (Q4/D8).
- Daban F, Pasarin MI, Borrell C, Artazcoz L, Perez A, Fernandez A, Porthe V, Diez E. Barcelona Salut als Barris: Twelve years' experience of tackling social health inequalities through community-based interventions. *Gaceta Sanitaria*. 2021; 35(3). DOI:10.1016/j.gaceta.2020.02.007. PMID:32527681. IF:2,139 (Q3/D6).
- Duque I, Dominguez MF, Cebrecos A, Prieto MD, Esnaola S, Sanchez MC, Mari M. Deprivation index by enumeration district in Spain, 2011. *Gaceta Sanitaria*. 2021; 35(2). DOI:10.1016/j.gaceta.2019.10.008. PMID:32014314. IF:2,139 (Q3/D6).
- Elizondo U, Carrasco MG, Pinos L, Picchio CA, Rius C, Diez E. Vaccine hesitancy among paediatric nurses: Prevalence and associated factors. *PLoS One*. 2021; 16(5):e0251735. DOI:10.1371/journal.pone.0251735. PMID:34010321. IF:3,240 (Q2/D4).
- Knobel P, Maneja R, Bartoll X, Alonso L, Bauwelinck M, Valentin A, Zijlema W, Borrell C, Nieuwenhuijsen M, Dadvand P. Quality of urban green spaces influences residents' use of these spaces, physical activity, and overweight/obesity. *ENVIRONMENTAL POLLUTION*. 2021; 271:116393. DOI:10.1016/j.envpol.2020.116393. PMID:33388678. IF:8,071 (Q1/D1).
- Long D, Mackenbach J, Martikainen P, Lundberg O, Bronnum H, Bopp M, Costa G, Kovacs K, Leinsalu M, Rodriguez M, Menvielle G, Nusselder W. Smoking and inequalities in mortality in 11 European countries: a birth cohort analysis. *Population Health Metrics*. 2021; 19(1):3. DOI:10.1186/s12963-021-00247-2. PMID:33516235. IF:2,786 (Q2/D4).
- Lopez N, Puig V, Vives A, Olave P, Gotsens M. Effects of an urban regeneration program on related social determinants of health in Chile: A pre-post intervention study. *HEALTH & PLACE*. 2021; 68:102511. DOI:10.1016/j.healthplace.2021.102511. PMID:33486330. IF:4,078 (Q1/D2).
- Lorant V, Kapadia D, Perelman J, Rodríguez M, MacKenbach JP. Socioeconomic disparities in suicide: Causation or confounding?. *PLoS One*. 2021; 16(1):e0243895. DOI:10.1371/journal.pone.0243895. PMID:33395418. IF:3,240 (Q2/D4).

- Mari M, Gotsens M, Pasarin MI, Rodriguez M, Artazcoz L, de Olalla PG, Rius C, Borrell C. Socioeconomic Inequalities in COVID-19 in a European Urban Area: Two Waves, Two Patterns. *International Journal of Environmental Research and Public Health*. 2021; 18(3):1256. DOI:10.3390/ijerph18031256. PMID:33573323. IF:3,390 (Q1/D3).
- Martinez MA, Vergara C, Botella P, Corpas F, Perez J, Zurriaga O, Aldasoro E, Borrell C, Cabeza E, Cirera L, Osinaga JD, Fernandez A, Gandarillas A, Ruano PLL, Mari M, Nolasco A, Prieto MD, Ramis R, Rodriguez M, Sanchez P. Geographical Variability in Mortality in Urban Areas: A Joint Analysis of 16 Causes of Death. *International Journal of Environmental Research and Public Health*. 2021; 18(11):5664. DOI:10.3390/ijerph18115664. PMID:34070635. IF:3,390 (Q1/D3).
- Oliveras L, Borrell C, Gonzalez I, Gotsens M, Lopez MJ, Palencia L, Artazcoz L, Mari M. The Association of Energy Poverty with Health and Wellbeing in Children in a Mediterranean City. *International Journal of Environmental Research and Public Health*. 2021; 18(11):5961. DOI:10.3390/ijerph18115961. PMID:34199387. IF:3,390 (Q1/D3).
- Oliveras L, Peralta A, Palencia L, Gotsens M, Lopez MJ, Artazcoz L, Borrell C, Mari M. Energy poverty and health: Trends in the European Union before and during the economic crisis, 2007–2016. *HEALTH & PLACE*. 2021; 67:102294. DOI:10.1016/j.healthplace.2020.102294. PMID:33526205. IF:4,078 (Q1/D2).
- Politi J, Martin M, Mercuriali L, Borrás B, Lopez J, Vilella A, Villar J, Orcau A, de Olalla PG, Rius C, Fernández A, Puigpinós R, Bonfill X, Villalbí JR. Epidemiological characteristics and outcomes of COVID-19 cases: mortality inequalities by socio-economic status, Barcelona, Spain, 24 February to 4 May 2020. *Eurosurveillance*. 2021; 26(20):2001138. DOI:10.2807/1560-7917.ES.2021.26.20.2001138. PMID:34018483. IF:6,307 (Q1/D1).
- Porta M, Pumarega J, Henriquez LA, Gasull M, Bartoll X, Arrebola JP, Morales E, Ibarluzea J, Alguacil J, Bilal U, Luzardo OP. Reductions in blood concentrations of persistent organic pollutants in the general population of Barcelona from 2006 to 2016. *SCIENCE OF THE TOTAL ENVIRONMENT*. 2021; 777:146013. DOI:10.1016/j.scitotenv.2021.146013. IF:7,963 (Q1/D1).
- Porthe V, Garcia I, Ariza C, Villalbi JR, Bartoli M, Juarez O, Diez E. Community-Based Interventions to Reduce Alcohol Consumption and Alcohol-Related Harm in Adults. *JOURNAL OF COMMUNITY HEALTH*. 2021; 46(3). DOI:10.1007/s10900-020-00898-6. PMID:32770477. IF:1,883 (Q3/D7).
- Reyes A, Vázquez-Vera H, Novoa A, González-Marín P, Puig-Barrachina V, Borrell C. ¿Cómo influye la situación laboral en los efectos de la inseguridad residencial sobre la salud? [How does the employment status influence the effects of residential insecurity on health?]. *Gaceta Sanitaria*. 2021;35(1):60–66. Spanish. DOI:10.1016/j.gaceta.2019.07.007. PMID: 31732187. IF:2,139 (Q3/D6).
- Rocha KB, Rodríguez-Sanz M, Berra S, Borrell C, Pasarin MI. Evaluación de la atención primaria, versión modificada del instrumento PCAT-A10 [Modified version of the PCAT-A10 tool for the evaluation of primary care]. *Atencion Primaria*. 2021;53(1):3–11. Spanish. doi: 10.1016/j.aprim.2019.10.004. PMID: 32035754. IF:1,137 (Q4/D8).
- Rubio M, Marques S, Penarrubia MT, Urbanos RM, Borrell C, Bosch J, Sanchez A, Aznar I. Who Suffers From Pharmaceutical Poverty and What Are Their Needs? Evidence From a Spanish Region. *Frontiers in Pharmacology*. 2021; 12:617687. DOI:10.3389/fphar.2021.617687. PMID:33959003. IF:5,810 (Q1/D2).
- Saavedra B, Mambuque E, Nguenha D, Gomes N, Munguambe S, Garcia JI, Izco S, Acacio S, Murias A, Cossa M, Losada I, Pernas H, Oliveras L, Theron G, Garcia AL. Performance of Xpert MTB/RIF Ultra for tuberculosis diagnosis in the context of passive and active case finding. *EUROPEAN RESPIRATORY JOURNAL*. 2021; 58(6):2100257. DOI:10.1183/13993003.00257-2021. PMID:34140293. IF:16,671 (Q1/D1).
- Sanz B, Saurina C, Serra L, Vicens GR, Casanovas LVL, Otero L, Lopez MJ, Perez G, Vives C. Prevalence and associated factors with sexual violence victimisation youth before, during and after the COVID-19 lockdown: a cross-sectional study in Spain. *BMJ Open*. 2021; 11(11):e055227. DOI:10.1136/bmjopen-2021-055227. PMID:34845078. IF:2,692 (Q2/D4).
- Van BL, Abalos M, Abad E, Adrados MA, Gomez A, Galles P, Grimalt JO. Qualitative and quantitative changes in traffic and waste incineration PCDD/Fs in urban air and soils under different seasonal conditions (Metropolitan Area of Barcelona). *SCIENCE OF THE TOTAL ENVIRONMENT*. 2021; 753:142149. DOI:10.1016/j.scitotenv.2020.142149. PMID:33207451. IF:7,963 (Q1/D1).
- Vasquez H, Leon BB, Palencia L, Perez K, Borrell C. Health Effects of Housing Insecurity and Unaffordability in the General Population in Barcelona, Spain. *JOURNAL OF URBAN HEALTH-BULLETIN OF THE NEW YORK ACADEMY OF MEDICINE*. 2021; 98(4). DOI:10.1007/s11524-021-00546-x. PMID:34231119. IF:3,671 (Q2/D3).
- Vives C, Perez V, Davo M, Sanchez M, Gil D, Abietar DG, Sanchez F, Forcadell L, Perez G, Sanz B. Dating violence and associated factors among male and female adolescents in Spain. *PLoS One*. 2021; 16(11):e0258994. DOI:10.1371/journal.pone.0258994. PMID:34758031. IF:3,240 (Q2/D4).
- Zayas M, Cole HVS, Anguelovski I, Connolly JJT, Bartoll X, Triguero M. Mental Health Outcomes in Barcelona: The Interplay between Gentrification and Greenspace. *International Journal of Environmental Research and Public Health*. 2021; 18(17):9314. DOI:10.3390/ijerph18179314. PMID:34501901. IF:3,390 (Q1/D3).

Other publications

- Bartoll X, Gotsens M, Palencia L. Decomposition and changes in socio-economic inequalities in mental health in Barcelona between 2006 and 2016. *Journal Of Public Mental Health*. 2021; 20(4). DOI:10.1108/JPMH-01-2021-0013.
- Bartoll X, Julia A. Empirically revisiting a social class scheme for mental health in Barcelona, Spain. *International Journal Of Social Economics*. 2021; 48(7). DOI:10.1108/IJSE-10-2020-0694.
- Bartoll X, Palència L, Gotsens M, Borrell C. Socioeconomic inequalities in self-assessed health and mental health in Barcelona, 2001-2016. *Gaceta Sanitaria*. DOI:10.1016/j.gaceta.2021.02.009.
- Cortés I, Artazcoz L. Desigualdades de género relacionadas con la flexibilidad laboral. *Archivos De Prevencion De Riesgos Laborales*. 2021; 24(4). DOI:10.12961/apr.2021.24.04.01. PMID:34965323.
- International Transport Forum. Road Safety Grant Programme. Road Safety in Cities. Street Design and Traffic Management Solutions. Access: <https://www.itf-oecd.org/sites/default/files/docs/road-safety-cities-street-design-traffic-management.pdf>
- PHC website. Barcelona, Spain. Access: <https://cities4health.org/city-stories/barcelona-spain>
- Santamarina E, Perez K. Methods to evaluate the effectiveness of advanced stop lines for motorcycles in improving road safety. *Methodsx*. 2021; 8:101267. DOI:10.1016/j.mex.2021.101267. PMID:34434789.
- Vargas H, Porcel E, Cortès I. Necesidades y dificultades de los/las profesionales sanitarios/as de los servicios de prevención de riesgos laborales de Cataluña. *Archivos De Prevencion De Riesgos Laborales*. 2021; 24(2). DOI:10.12961/apr.2021.24.02.05. PMID:34015202.
- WHO website. Barcelona: Using urban design to improve urban health. Access: <https://www.who.int/news-room/feature-stories/detail/barcelona-using-urban-design-to-improve-urban-health>

Communication and dissemination activities

Outreach activities

- UDivulga UVic-UCC. International Women's Day. 13/03/2021. Vic, Spain. Title: Raons per incorporar la perspectiva de gènere en la salut pública. Speaker: Lucía Artazcoz
- Setmana Ciutadana de l'Alimentació Sostenible. 22/10/2021. Barcelona. Title: Intervencions comunitàries per promoure l'alimentació saludable. Speaker: Ana Fernández. Organisers: Carme Borrell, Maribel Pasarín.

- CCSC2. VIII Congrés de Comunicació Social de la Ciència. 30/09/2021. Online. Title: La comunicació de la COVID-19: una mirada de casi 360°. Speaker: Maica Rodríguez-Sanz
- Art i Salut. Exposició Art i Salut. 15/10/2021. Online. Exhibition title: COVID-19: El paper de l'Agència de Salut Pública de Barcelona. Organiser: Carme Borrell, Lucía Artazcoz.
- Videos ASPB. "Salut als carrers". 03/09/2021 <https://youtube.com/playlist?list=PLJpPY7X6uuuDI00YsGMEqWzeGKT5qNdaZ>. Organiser: Catherine Pérez
- TV interview. At RTVE, Cafè d'Idees. 14/01/2021. Title (video): Evolució de la COVID-19 a Barcelona. <https://www.rtve.es/play/videos/cafe-didees/juan-carlos-campo-suplicatori-puigdemont-any-explosio-iqoxe/5761520/>. Speaker: Carme Borrell.
- Press conference ASPB and Ajuntament de Barcelona. 18/11/2021. Title (video): La Salut a Barcelona 2020. <https://ajuntament.barcelona.cat/premsa/2021/11/18/gemma-tarafa-i-carme-borrell-presenten-linforme-la-salut-a-barcelona-2020-de-laspb/>. Speaker: Carme Borrell
- Press conference ASPB and Ajuntament de Barcelona. 01/09/2021. Title (video): Presentació de l'estudi de l'ASPB sobre els efectes sobre la salut de les Superilles de Barcelona. <https://ajuntament.barcelona.cat/premsa/2021/09/01/presentacio-de-lestudi-de-laspb-sobre-els-efectes-sobre-la-salut-publica-de-les-superilles-de-barcelona-2/>. Speaker: Carme Borrell
- Press opinion articles: Carme Borrell has published 8 articles of opinion in El Periódico and can be found here: Carme Borrell (elperiodico.com). Maribel Pasarín and Carme Borrell wrote an opinion article at elperiodico.com. Carme Borrell and Davide Malmusi published an opinion article at elperiodico.cat.
- Radio interview to Juli Carrere. Ondacero Aragon. "Desigualtats probresa energètica i salut". 13/01/21

Scientific dissemination activities

- ICUH. 17th International Conference on Urban Health. 07/07 2021. Online. Title: Socioeconomic inequalities in the incidence of COVID-19 in Barcelona: data and policy responses in different waves. Authors: Davide Malmusi, Maribel Pasarín, Marc Marí-Dell'Olmo, Lucía Artazcoz, Mercè Gotsens, Glòria Pérez, Maica Rodríguez-Sanz, Carme Borrell.
- ICUH. 17th International Conference on Urban Health. 07/07 2021. Online. Title: Mobility and space use in the superblocks in Barcelona. Salut als Carrers (Healthy Streets) Project. Katherine Pérez MPH, PhD, Laia Palència MPH, PhD, Brenda Biaani León-Gómez MPH, PhD.
- ICUH. 17th International Conference on Urban Health. 07/07 2021. Online. Title: Air quality evaluation in superblocks, Barcelona. Anna Gómez-Gutiérrez, Marc Rico, Marc Marí-Dell'Olmo, Jaume Arimon, Elisenda Realp-Campalans and Salut als Carrers (Healthy Streets) working group: Xavier Bartoll,

Laura Bordera, Glòria Carrasco, Juli Carrere, Èlia Díez, Laia Font, María José López, Brenda Leon, Blai Martí, Laia Palència, Roshanak Mehdipanah, Marta Olabarria, Anna Puig-Ribera, Hugo Vázquez, Catherine Pérez.

EPHC. 14th European Public Health Conference 2021. 10-11-2021. Online. Title: Socioeconomic inequalities in the incidence of COVID-19 in Barcelona and policy responses. Davide Malmusi, Maribel Pasarin, Marc Marí-Dell'Olmo, Lucía Artazcoz, Mercè Gotsens, Glòria Pérez, Maica Rodríguez-Sanz, Carme Borrell.

IUHPE. 11th IUHPE European Conference on Health Promotion. 15/06/2021. Girona, Spain. Title (plenary session): Recognizing Health Promotion's contribution in a changing Europe. Speaker: Èlia Díez

ITF. International Transport Forum. 10-17/11 2021. Online. Title: Road safety in cities street design and traffic management solutions: Superblocks in Barcelona, Spain. Author: Catherine Pérez.

2n Congrés de Qualitat de l'Aire. 15/10/2021. Sabadell, Spain. Title: Impacto en salud de la contaminación del aire en Barcelona. Speaker: Laia Font. Organiser: Anna Gómez.

Innovation for SDGs: inspirational tools towards sustainability challenges. 22/03/2021. Online. Title: (webinar): Community Health during the COVID-19 pandemic: experiences from a Local Public Health Agency. Speaker: Ana Fernández.

Elia Díez. How irregular migrants get access to vaccination in Barcelona? City Initiative on Migrants with Irregular Status in Europe (C-MISE). City of Utrecht and University of Oxford's Centre on Migration, Policy and Society (COMPAS). Webinar: How irregular migrants get access to vaccination across Europe. December 15, 2021.

Ana Novoa. Compareixença al Parlament de Catalunya en el marc del debat de la proposició de llei de mesures urgents per fer front a l'emergència habitacional. 13/9/21.

SEE 2021. XXXIX Congreso Sociedad Española de Epidemiología. 09/09/2021. León, Spain. Title: Violencia en la pareja: Un estudio transversal desde la interseccionalidad en la adolescencia. Authors: DG. Abiétar, F. Sánchez-Martínez, S. Trujillo-Alemán, O. Juárez, C. Vives-Cases, B. Sanz-Barbero, V. Pérez-Martínez, G. Pérez.

SEE 2021. XXXIX Congreso Sociedad Española de Epidemiología. 09/09/2021. León, Spain. Title: Covid-19 y residencias de personas mayores en Barcelona: medidas de actuación desde la salud pública. Authors: DG. A. Reyes, M. Guillaumes, L. Reverter, C. Gelabert, S. Nofuentes, H. Vázquez-Vera, G. Pérez.

SEE 2021. XXXIX Congreso Sociedad Española de Epidemiología. 09/09/2021. León, Spain. Title: Impacto en salud y calidad de vida de participar en un modelo de vivienda cooperativa: un estudio cualitativo. Authors: Alexia Reyes Segura, Anna Fernández, Ana M. Novoa, Juli Carrere, Carme Borrell

SEE 2021. XXXIX Congreso Sociedad Española de Epidemiología. 09/09/2021. León, Spain. Title: Desigualdades territoriales en la incidencia de COVID-19 en centros educativos de la ciudad de Barcelona. Authors: Marc Olivella-Cirici, Anabel Romero, M Isabel Pasarin, Anna Fernández, Lilas Mercuriali, Mònica Cortes, Gloria Perez

SEE 2021. XXXIX Congreso Sociedad Española de Epidemiología. 09/09/2021. León, Spain. Title: 2 décadas de ciencia aplicada en Salud Pública. Authors: M. Rodríguez-Sanz, D. Ruiz-Muñoz, M. Milán, C. Borrell.



Transmissible Diseases

Coordinator

Rius Gibert, Cristina ASPB
crius@aspb.cat

Members

Álamo Junquera, M. Dolores	ASPB	Marcos Arroita, Isabel	ASPB
Artigas Baeza, Alba	ASPB	Masdeu Corcoll, Eva	ASPB
Avellanes Gil, Ingrid	ASPB	Mercuriali, Lilas	ASPB
Brugueras Torrella, Sílvia	ASPB	Millet Vilanova, Joan Pau	ASPB
Clos Guix, Roser	ASPB	Molinero Ruiz, Emilia	ASPB
De Andrés Aguayo, Anna	ASPB	Montalvo Porro, Tomás	ASPB
De Benito Langa, Javier	ASPB	Orcau Palau, Angels	ASPB
Estruga Garcia, M. Lluïsa	ASPB	Ospina Valencia, Jesús E.	ASPB
Forns Cantón, M. Lluïsa	ASPB	Prieto García, Raquel	ASPB
Garcia De Olalla Rizo, Patricia	ASPB	Rodríguez López, Raquel	ASPB
Guillaumes Puigbarraca, Montserrat	ASPB	Ros Samso, Miriam	ASPB
Hernández Pineda, Anna	ASPB	Simón Viván, Pere	ASPB

Main lines of research

• Tuberculosis

- Use of new technologies to improve tuberculosis (TB) control, diagnostic, treatment and prevention: video DOT, website of the Barcelona TB Research Unit, twitter and Enfermedades Emergentes Journal.

- Role of diabetes in different clinical presentation and evolution of TB.

- Predictors of TB in a cohort of TB infected contacts to determine the disease incidence at 2 and 5 years.

- Characterization of TB in vulnerable populations: immigrants, homeless, children, bad adherence TB patients, etc.

• Sexually transmitted infections (STI)/ VIH

- Use of information and communication technologies for the prevention and control of STI/HIV: a) Creation of Apps to promote sexual health both in HIV positive and HIV

negative men. b) Use of Apps to offer rapid tests outside the sanitary circuit.

- New technologies: APPS for HIV and STD contacts tracing.
- Study of the proportion pelvic inflammatory disease due to chlamidia.
- Study of HIV contacts to determine the incidence among them.

• **Community health workers (CHW) for communicable diseases control: with the immigration increase we have incorporated CHW that aid in the prevention and control of these diseases. They act as mediators and translators.**

• **Incidence studies of mumps, whooping cough and STIs, as well as the influence of the crisis on some communicable diseases such as TB and hepatitis. Study of factors influencing the transmission of pertussis in homes as well as the effectiveness of immunization and chemoprophylaxis.**

• **Outbreaks and COVID-19**

- Investigation of the causes and implementation of control measures as in the case of different outbreaks by norovirus.
- COVID-19 outbreaks characterization in different setting in Barcelona city.
- Impact of COVID-19 in incidence and mortality in nursing homes and associated factors.
- Vaccination hesitancy and COVID-19
- To assess the if there is difference in the amount of viable SARS-CoV-2 virus released by the vaccinated individuals in comparison with non-vaccinated. Can vaccinated people transit COVID-19? To study the systemic and local immune response in both groups of patients.

• **To monitor vaccine hesitancy, study its determinants and develop interventions to reduce it and prevent it**

- Estimation of vaccine refuse in families with children under 15 years-old in Barcelona.

• Knowledge, attitudes and beliefs about systematic childhood vaccines in paediatric healthcare workers in Barcelona.

• **Vector-borne diseases**

- Environmental factors related to vector distribution, specially *Aedes albopictus* and *Culex pipiens*, and their impact on risk of local transmission of arboviral diseases.

Scientific Challenges

- Prevent sexually transmitted infections and other transmissible diseases

- Evaluate HIV screening programs in gay saunas.
- Improve detection and research into causes of C hepatitis.
- Improve detection and control measures of outbreaks.
- Improve adherence of tuberculosis and latent tuberculosis infection.
- STD/HIV and TB contract tracing
- Cost effective analysis on public health interventions
- Describe the threats and improve the procedures of vector born transmitted diseases.

Collaborations

Collaborations with other IIB Sant Pau research groups

- Urban health inequalities research group (Dr Catherine Pérez).

External collaborations

- Group 21 CIBER Epidemiología del consumo de drogas
- Group 03 CIBER Desigualdades en Salud
- Group 09 CIBER Salud Mental
- Programa 3. DAPET (Determinantes Biológicos y Conductuales en la adquisición y propagación de Enfermedades transmisibles en poblaciones vulnerables
- Programa 2. PREVICET (grupos Departament de Salut (Gen Cat), CNE, CNM, Laboratori Sant Joan de Déu, Doñana)
- Ethics Advisory Board para el consorcio Innova4TB
- HIVACAT
- Grupo Servicio de Urgencias de Vigilancia Epidemiológica de Cataluña
- Grupo de Trabajo MENA (menor extranjero no acompañado)
- Sociedad Española de Neumología y Cirugía Torácica (SEPAR)
- Tuberculosis Network European Trialsgroup (TBNET)
- Sociedad Española de Enfermedades Infecciosas y Microbiología Clínica
- Fundación de la Unidad de Investigación en Tuberculosis de Barcelona
- Red contra la Tuberculosis y por la Solidaridad
- Programa Integrado de Investigación en Tuberculosis de SEPAR (PII-TB)

Active grants

- PATRICIA GARCIA DE OLALLA RIZO. Uso de las Aplicaciones para telefonía móvil en la promoción de las pruebas del VIH y otras Infecciones de Transmisión sexual en hombres que tienen sexo con hombres. PI16/02025. Instituto de Salud Carlos III. Duration 2017-2021. 46.500,00 €.
- ANGELS ORCAU PALAU. Asociación de diabetes y tuberculosis en un distrito con alta incidencia de tuberculosis. Estudio de casos y controles, 2007-2016. PI16/01751. Instituto de Salud Carlos III. Duration 2017-2021. 46.500,00 €.
- CRISTINA RIUS GIBERT. Prueba rápida de hepatitis C en hombres que tienen sexo con hombres: conocimientos, prevalencia e implicaciones para el cribado en VIH negativos.

PI17/02077. Instituto de Salud Carlos III. Duration 2018–2021. 32.200,00 €.

Note: Total amount granted to PI. It does not include indirect costs.

Other active grants

• PI21/01883 – GUILLAUMES PUIGBARRACA, MONTSERRAT. 2022–2024 76.230,00 €

• 1100/2020 – MILLET VILANOVA, JOAN PAU. 2021–2024 12.000,00 €

• 2019/017 – GARCÍA DE OLALLA RIZO, PATRICIA. 2020–2022 73.460,00 €

• COV20/00711 – RIUS GIBERT, CRISTINA. 2020–2021 330.293,00 €

• HR18–00336 – MONTALVO PORRO, TOMÁS. 2019–2022 999.920,30 €

• H2020–MSCA–RISE–2018 – MILLET VIJOAN PAU MILLET VILANOVA. 2019–2022 – 1.250.000,00 €

• H2020–EIC–FTI–2018–2020 – MONTALVO PORRO, TOMÁS. 2019–2021 1.558.956,99 €

• 688/18 – MILLET VILANOVA, JOAN PAU. 2019–2021 9.000,00 €

Scientific production

• Acosta L, Soldevila N, Torner N, Martinez A, Ayneto X, Rius C, Jane M, Dominguez A. Influenza Vaccine Effectiveness in Preventing Severe Outcomes in Patients Hospitalized with Laboratory-Confirmed Influenza during the 2017–2018 Season. A Retrospective Cohort Study in Catalonia (Spain). *Viruses-Basel*. 2021; 13(8):1465. DOI:10.3390/v13081465. PMID:34452337. IF:5,048 (Q2/D3).

• Alamo D, Politi J, Simon P, Dieli R, Borrell RP, Colobran R, Martinez M, Campins M, Anton A, Esperalba J, Andres C, Codina MG, Polverino E, Narciso MR, Molinero E, Rius C. Coordinated Response to Imported Vaccine-Derived Poliovirus Infection, Barcelona, Spain, 2019–2020. *EMERGING INFECTIOUS DISEASES*. 2021; 27(5). DOI:10.3201/eid2705.204675. PMID:33900188. IF:6,883 (Q1/D1).

• Alonso J, Vilagut G, Mortier P, Ferrer M, Alayo I, Aragon A, Aragonés E, Campos M, Cura ID, Emparanza JI, Espuga M, Forjaz MJ, Gonzalez A, Haro JM, Lopez N, de Salazar A, Molina JD, Orti RM, Parellada M, Pelayo JM, Perez A, Pijoan JI, Plana N, Puig MT, Rius C, Rodriguez C, Sanz F, Serra C, Kessler RC, Bruffaerts R, Vieta E, Perez V, MINDCOVID GRP. Mental health impact of the first wave of COVID-19 pandemic on Spanish healthcare workers: A large cross-sectional survey. *Revista de Psiquiatria y Salud Mental*. 2021; 14(2). DOI:10.1016/j.rpsm.2020.12.001. PMID:33309957. IF:3,318 (Q2/D4).

• Basile L, Guadalupe V, Guijarro MV, Mateo AM, Navas PC, Pena JM, Rius C, Epidemiological N. Diagnostic Performance of Ag-RDTs and NAAT for SARS-CoV2 Identification in Symptomatic Patients in Catalonia. *Viruses-Basel*. 2021; 13(5):908. DOI:10.3390/v13050908. PMID:34068899. IF:5,048 (Q2/D3).

• Bentzon AK, Panteleev A, Mitsura V, Borodulina E, Skrahina A, Denisova E, Tetrarov S, Podlasin R, Riekstina V, Kancauskiene Z, Paduto D, Mocroft A, Trofimova T, Miller R, Post F, Grezesczuk A, Lundgren JD, Inglot M, Podlekareva D, Bolokadze N, Kirk O; TB:HIV Study Group [Millet JP, Orcau A]. Healthcare delivery for HIV-positive people with tuberculosis in Europe. *HIV Medicine*. 2021;22(4):283–293. DOI:10.1111/hiv.13016. PMID: 33215809. IF:3,180 (Q3/D6).

• Carol M, Guadalupe V, Rius C, Soldevila N, Razquin E, Guix S, Dominguez A. A Waterborne Gastroenteritis Outbreak Caused by a GII Norovirus in a Holiday Camp in Catalonia (Spain), 2017. *Viruses-Basel*. 2021; 13(9):1792. DOI:10.3390/v13091792. PMID:34578373. IF:5,048 (Q2/D3).

• Dominguez A, Varela C, Soldevila N, Izquierdo C, Guerrero M, Penuelas M, Martinez A, Godoy P, Borrás E, Rius C, Torner N, Avellon AM, Castilla J. Hepatitis A Outbreak Characteristics: A Comparison of Regions with Different Vaccination Strategies, Spain 2010–2018. *Vaccines*. 2021; 9(11):1214. DOI:10.3390/vaccines9111214. PMID:34835145. IF:4,422 (Q2/D5).

• Elizondo U, Carrasco MG, Pinos L, Picchio CA, Rius C, Diez E. Vaccine hesitancy among paediatric nurses: Prevalence and associated factors. *PLoS One*. 2021; 16(5):e0251735. DOI:10.1371/journal.pone.0251735. PMID:34010321. IF:3,240 (Q2/D4).

• Galan MT, Trelis M, Saez S, Cifre S, Gosálvez C, Sanxis J, Pascual J, Bueno R, Franco S, Peracho V, Montalvo T, Fuentes MV. One Health Approach to Zoonotic Parasites: Molecular Detection of Intestinal Protozoans in an Urban Population of Norway Rats, *Rattus norvegicus*, in Barcelona, Spain. *Pathogens*. 2021; 10(3):311. DOI:10.3390/pathogens10030311. PMID:33799948. IF:3,492 (Q2/D5).

• Godoy P, Garcia M, Rius C, Munoz C, Carmona G, Alseda M, Jane M, Vidal MJ, Rodriguez R, Alvarez J, Camps N, Minguell S, Carol M, Sala MR, Castilla J, Dominguez A. Effectiveness of maternal pertussis vaccination in protecting newborn: A matched case-control study. *JOURNAL OF INFECTION*. 2021; 83(5). DOI:10.1016/j.jinf.2021.08.022. PMID:34407422. IF:6,072 (Q1/D2).

• Guerras JM, de Olalla PG, Belza MJ, de la Fuente L, Palma D, del Romero J, Garcia JN, Hoyos J. Sexualized drug injection among men who have sex with men in Madrid and Barcelona as the first episode of drug injecting. *Harm Reduction Journal*. 2021; 18(1):86. DOI:10.1186/s12954-021-00531-2. PMID:34362402. IF:4,362 (Q1/D2).

• Guerras JM, Hoyos J, de la Fuente L, Roman F, Ayerdi O, Garcia JN, de Olalla PG, Belza MJ. Injection of Anabolic Steroids in Men Who Had Sex with Men in Madrid and Barcelona: Prevalence

Correlates and Role as a Risk Factor for Transmitted Infections. *International Journal of Environmental Research and Public Health*. 2021; 18(16):8289. DOI:10.3390/ijerph18168289. PMID:34444038. IF:3,390 (Q1/D3).

• Guerras JM, Hoyos J, de Olalla PG, de la Fuente L, Herrero L, Palma D, del Romero J, Garcia JN, Belza MJ. Comparison of Polydrug Use Prevalences and Typologies between Men Who Have Sex with Men and General Population Men, in Madrid and Barcelona. *International Journal of Environmental Research and Public Health*. 2021; 18(21):11609. DOI:10.3390/ijerph182111609. PMID:34770122. IF:3,390 (Q1/D3).

• Jove N, Masdeu E, Brugueras S, Millet JP, Ospina JE, Orcau A, Rius C, Cayla JA, Sanchez F. Threats and Interventions During the Treatment of Tuberculosis in an Inner-city District. *ARCHIVOS DE BRONCONEUMOLOGIA*. 2021; 57(5). DOI:10.1016/j.arbres.2020.05.025. PMID:32593536. IF:4,872 (Q2/D3).

• Kraef C, Bentzon A, Panteleev A, Skrahina A, Bolokadze N, Tetrarov S, Podlasin R, Karpov I, Borodulina E, Denisova E, Azina I, Lundgren J, Johansen IS, Mocroft A, Podlekareva D, Kirk O, Pomar V, Millet JP, Orcau A, HIV TBGRP. Delayed diagnosis of tuberculosis in persons living with HIV in Eastern Europe: associated factors and effect on mortality—a multicentre prospective cohort study. *BMC INFECTIOUS DISEASES*. 2021; 21(1):1038. DOI:10.1186/s12879-021-06745-w. PMID:34615474. IF:3,090 (Q3/D7).

• Mari M, Gotsens M, Pasarin MI, Rodriguez M, Artazcoz L, de Olalla PG, Rius C, Borrell C. Socioeconomic Inequalities in COVID-19 in a European Urban Area: Two Waves, Two Patterns. *International Journal of Environmental Research and Public Health*. 2021; 18(3):1256. DOI:10.3390/ijerph18031256. PMID:33573323. IF:3,390 (Q1/D3).

• Mortier P, Vilagut G, Ferrer M, Alayo I, Bruffaerts R, Cristobal P, del Cura I, Domenech J, Felez M, Olaya B, Pijoan JI, Vieta E, Perez V, Kessler RC, Haro JM, Alonso J, Bonfill X, Molinero E, Rius C, MINDCOVID GRP. Thirty-day suicidal thoughts and behaviours in the Spanish adult general population during the first wave of the Spain COVID-19 pandemic. *Epidemiology and Psychiatric Sciences*. 2021; 30:e19. DOI:10.1017/S2045796021000093. PMID:34187614. IF:6,892 (Q1/D1).

• Mortier P, Vilagut G, Ferrer M, Serra C, Molina JD, Lopez N, Puig T, Pelayo JM, Pijoan JI, Emparanza JI, Espuga M, Plana N, Gonzalez A, Orti RM, de Salazar AM, Rius C, Aragonés E, del Cura I, Aragon A, Campos M, Parellada M, Perez A, Forjaz MJ, Sanz F, Haro JM, Vieta E, Perez V, Kessler RC, Bruffaerts R, Alonso J, MINDCOVID GRP. Thirty-day suicidal thoughts and behaviors among hospital workers during the first wave of the Spain COVID-19 outbreak. *DEPRESSION AND ANXIETY*. 2021; 38(5). DOI:10.1002/da.23129. PMID:33393724. IF:6,505 (Q1/D1).

• Palma D, Mercuriali L, Figuerola J, Montalvo T, Bueno R, Millet JP, Simon P, Masdeu E, Rius C. Trends in the Epidemiology of Leishmaniasis in the City of Barcelona (1996-2019).

Frontiers in Veterinary Science. 2021; 8:653999. DOI:10.3389/fvets.2021.653999. PMID:33981743. IF:3,412 (Q1/D1).

• Parron I, Barrabeig I, Alseda M, Rius C, Cornejo T, Jane M, Perez C, Guix S, Dominguez A, Alvarez J, Sala MR, Berver AI, Rovira A, Coronas L, Godoy P, de Andres A, de Benito J, Camprubi E, Cunille M, Fornis ML, Moreno A, Razquin E, Sabate S, de Simon M, Soldevila N, Bartolome R, Martinez A, Torner N, Izquierdo C, Vileu RM, Camps N, Sabate M, Minguell S, Carol M. Norovirus outbreaks in long-term care facilities in Catalonia from 2017 to 2018. *Scientific Reports*. 2021; 11(1):23218. DOI:10.1038/s41598-021-02348-2. PMID:34853333. IF:4,379 (Q1/D3).

• Politi J, Martin M, Mercuriali L, Borrás B, Lopez J, Vilella A, Villar J, Orcau A, de Olalla PG, Rius C, Fernández A, Puigpinós R, Bonfill X, Villalbí JR. Epidemiological characteristics and outcomes of COVID-19 cases: mortality inequalities by socio-economic status, Barcelona, Spain, 24 February to 4 May 2020. *Eurosurveillance*. 2021; 26(20):2001138. DOI:10.2807/1560-7917.ES.2021.26.20.2001138. PMID:34018483. IF:6,307 (Q1/D1).

• Sanchez F, Brugueras S, Serral G, Valmayor S, Juarez O, Lopez MJ, Ariza C. Three-Year Follow-Up of the POIBA Intervention on Childhood Obesity: A Quasi-Experimental Study. *Nutrients*. 2021; 13(2):453. DOI:10.3390/nu13020453. PMID:33573017. IF:5,717 (Q1/D2).

• Sanchez S, Cruz MJ, Alvarez D, Montalvo T, Munoz X, Hoet PM, Vanoirbeek JA, Gomez S. A rapid test for the environmental detection of pigeon antigen. *SCIENCE OF THE TOTAL ENVIRONMENT*. 2021; 788:147789. DOI:10.1016/j.scitotenv.2021.147789. PMID:34134383. IF:7,963 (Q1/D1).

• Senar JC, Navalpotro H, Pascual J, Montalvo T. Nicarbazine has no effect on reducing feral pigeon populations in Barcelona. *PEST Management Science*. 2021;77(1):131-137. DOI:10.1002/ps.6000. PMID: 32652833. IF:4,845 (Q1/D1).

• Sentis A, Montoro M, Lopez E, Egea L, Nomah DK, Diaz Y, de Olalla PG, Mercuriali L, Borrell N, Reyes J, Casabona J. STI epidemic re-emergence, socio-epidemiological clusters characterisation and HIV coinfection in Catalonia, Spain, during 2017-2019: a retrospective population-based cohort study. *BMJ Open*. 2021; 11(12):e052817. DOI:10.1136/bmjopen-2021-052817. PMID:34903544. IF:2,692 (Q2/D4).

• Sentis A, Prats A, Lopez E, Montoro M, Nomah DK, de Olalla PG, Mercuriali L, Borrell N, Guadalupe V, Reyes J, Casabona J, Catalan HIV STI Surveillance GRP. The impact of the COVID-19 pandemic on Sexually Transmitted Infections surveillance data: incidence drop or artefact?. *BMC PUBLIC HEALTH*. 2021; 21(1):1637. DOI:10.1186/s12889-021-11630-x. PMID:34493244. IF:3,295 (Q2/D4).

• Soldevila N, Acosta L, Martinez A, Godoy P, Torner N, Rius C, Jane M, Dominguez A, Torra R, Torrel J.M. Behavior of hospitalized severe influenza cases according to the outcome variable in Catalonia, Spain, during the 2017-2018 season.

Scientific Reports. 2021; 11(1):13587. DOI:10.1038/s41598-021-92895-5. PMID:34193898. IF:4,379 (Q1/D3).

• Torner N, Izquierdo C, Coronas L, Martínez A, Rovira A, Rius C, Sabater M, Parron I, Carol M, Sala MR, Minguell S, Godoy P, Jané M, Domínguez Á; Working Group for the Study of Outbreaks of Acute Gastroenteritis in Catalonia. Acute gastroenteritis outbreaks in closed and semi-closed facilities during 2017 in Catalonia, Spain. *EUROPEAN JOURNAL OF CLINICAL MICROBIOLOGY & INFECTIOUS DISEASES*. 2021;40(5):1085-1089. DOI:10.1007/s10096-020-04101-5. PMID: 33211224. IF:3,267 (Q3/D6).

Other scientific production

• Martin G, Monreal P, Mercuriali L, Canas E, Pujol RM, Duran X, Niubo MM, Domingo P, Villar J, Lopez J, Gonzalez A, Garcia P, Barbera MJ. Evolution of notified sexually transmitted infections in Barcelona during the first wave of the COVID-19 pandemic. *JOURNAL OF THE EUROPEAN ACADEMY OF DERMATOLOGY AND VENEREOLOGY*. 2021; 35(10). DOI:10.1111/jdv.17460. PMID:34146425. IF:6,166 (Q1/D2).

• Soldevila N, Acosta L, Martinez A, Godoy P, Torner N, Rius C, Jane M, Dominguez A. Behavior of hospitalized severe influenza cases according to the outcome variable in Catalonia, Spain, during the 2017-2018 season (vol 11, 13587, 2021). *Scientific Reports*. 2021; 11(1):20566. DOI:10.1038/s41598-021-99937-y. PMID:34642443. IF:4,379 (Q1/D3).

Other publications

• Millet JP. Basic characteristics for a good tuberculosis prevention and control programmes currently in Spain. *Revista Espanola De Sanidad Penitenciaria*. 2021; 23(1). DOI:10.18176/resp.00025. PMID:33847705.

• Soldevilla P, Cardona PJ, Caylà JA, Hernández A, Palma D, Rius C. Revisión sobre las vacunas frente a SARS-CoV-2. Actualización a 31 de enero de 2021. *Enfermedades Emergente*. 2021; 20(1):7-19.

Communication and dissemination activities

Talks

• Jornada del Dia Mundial de la Tuberculosis. Millet JP, Orcau A. "COVID y TB en Barcelona". Barcelona, 17 March 2021.

• Trobada de Salut Pública del Consorci de Salut i Social de Catalunya (CSC). Rius C. "Confianza vacunal: impacte en malalties reemergents i impacte en la Covid-19". Barcelona, 25 March 2021.

• 2a Jornada de Residències de Barcelona. Transformació per l'adequació de l'Atenció Sanitària i Social Sanitària a les residències de persones grans. Rius C. "Experiències.

Lliçons apreses amb la COVID-19: Importància dels plans de contingència". Barcelona, 29 June 2021.

• 54° Congreso Nacional SEPAR. Millet JP. Sesión: Actualización en Tuberculosis. "Tuberculosis en poblaciones vulnerables y colectivos de riesgo. Estrategias y enfoque para mejorar el cumplimiento y reducir el retraso diagnóstico". Sevilla, 4 November 2021.

• Jornada de Infecciones de Transmisión Sexual (ITS). Controversias y actualización. García de Olalla P, Díaz E. "Estrategia en salud sexual en Barcelona". Barcelona, 20 November 2021.

Oral communications

• XXXIX Reunión Anual de la Sociedad Española de Epidemiología (SEE), XVI Congresso da Associação Portuguesa de Epidemiologia (APE) y XIX Congreso de la Sociedad Española de Salud Pública y Administración Sanitaria (SESPAS). Millet, JP Orcau A, Simón P, Ros M, de Andrés A, Rius C. "Evolución e impacto de la COVID-19 en la vigilancia, prevención y control de la tuberculosis en Barcelona". León, 10 September 2021

• XXXIX Reunión Anual de la Sociedad Española de Epidemiología (SEE), XVI Congresso da Associação Portuguesa de Epidemiologia (APE) y XIX Congreso de la Sociedad Española de Salud Pública y Administración Sanitaria (SESPAS). Román F, Palma D, Alarcón M, Rius C, García de Olalla P. "Acceso a Servicios de salud sexual en Hombres que tienen sexo con Hombres durante la pandemia". León, 10 September 2021.

• XXXIX Reunión Anual de la Sociedad Española de Epidemiología (SEE), XVI Congresso da Associação Portuguesa de Epidemiologia (APE) y XIX Congreso de la Sociedad Española de Salud Pública y Administración Sanitaria (SESPAS). Guerras JM, Donat M, García de Olalla P, San-Juan Bueno JA, Herrero L, Palma D, del Romero J, García Pérez JN, Belza MJ. "Comparación de prevalencias y tipologías de policonsumo entre Hombres que tienen sexo con Hombres de la población general, en Madrid y Barcelona". León, 10 September 2021.

• XXXIX Reunión Anual de la Sociedad Española de Epidemiología (SEE), XVI Congresso da Associação Portuguesa de Epidemiologia (APE) y XIX Congreso de la Sociedad Española de Salud Pública y Administración Sanitaria (SESPAS). Torres M, Palma D, Oliver A, Cosialls D, Guillaumes M, Vasquez-Vera H, Millet JP, Rius C. "Incidencia y mortalidad de la COVID-19 en residencias de personas mayores en Barcelona". León, 10 September 2021.

• XXXIX Reunión Anual de la Sociedad Española de Epidemiología (SEE), XVI Congresso da Associação Portuguesa de Epidemiologia (APE) y XIX Congreso de la Sociedad Española de Salud Pública y Administración Sanitaria (SESPAS). Pérez C, Guerras JM, Donat L, Herrero L, San-Juan Bueno JA, Palma D, García de Olalla P, Hoyos J, Belza MJ. "Comparación mediante AUDIT del uso de alcohol en hombres que tienen sexo con Hombres y varones de población general". León, 10 September 2021.

• XXXIX Reunión Anual de la Sociedad Española de Epidemiología (SEE), XVI Congresso da Associação Portuguesa de Epidemiologia (APE) y XIX Congreso de la Sociedad Española de Salud Pública y Administración Sanitaria (SESPAS). Puigdomènech E, Mercuriali L, de Andrés A, Fornis LI, Millet JP, Molinero E, Ros M, Simón P, Rius C. "Impacto de la COVID-19 en la detección de brotes no COVID-19 en Barcelona". León, 10 September 2021.

• XXXIX Reunión Anual de la Sociedad Española de Epidemiología (SEE), XVI Congresso da Associação Portuguesa de Epidemiologia (APE) y XIX Congreso de la Sociedad Española de Salud Pública y Administración Sanitaria (SESPAS). Sentís A, Prats-Urbe A, López-Corbeto E, Montoro-Fernandez M, Kwakye Nomah D, Garcia de Olalla P, Mercuriali L, Borrell N, Guadalupe-Fernández V, Reyes-Urueña J, Casabona J y grupo Catalán de vigilancia del VIH y las ITS. "El impacto de la pandemia por COVID-19 en los datos de vigilancia de las ITS en Cataluña: ¿disminución de la incidencia o artefacto?". León, 10 September 2021.

• European Scientific Conference on Applied Infectious Disease Epidemiology (ESCAIDE) 2021. Sentís A, Prats-Urbe A, López-Corbeto E, Montoro-Fernandez M, Kwakye Nomah D, Garcia de Olalla P, Mercuriali L, Borrell N, Guadalupe-Fernández V, Reyes-Urueña J, Casabona J and the Catalan HIV and STI Surveillance Group. The impact of the COVID-19 pandemic on STI surveillance data: incidence drop or artefact?

Posters

• XXXIX Reunión Anual de la Sociedad Española de Epidemiología (SEE), XVI Congresso da Associação Portuguesa de Epidemiologia (APE) y XIX Congreso de la Sociedad Española de Salud Pública y Administración Sanitaria (SESPAS). Román F, Palma D, Alarcón M, Rius C, García de Olalla P. "Características de GBHSH que refieren aumento prácticas sexuales de riesgo durante la pandemia". León, 10 September 2021.

• XXXIX Reunión Anual de la Sociedad Española de Epidemiología (SEE), XVI Congresso da Associação Portuguesa de Epidemiologia (APE) y XIX Congreso de la Sociedad Española de Salud Pública y Administración Sanitaria (SESPAS). Palma D, Picchio CA, Jodar G, Rius C. "Confianza en una vacuna contra la COVID-19 en enfermeros/os de Barcelona al inicio de la estrategia vacunal". León, 10 September 2021.

• XXXIX Reunión Anual de la Sociedad Española de Epidemiología (SEE), XVI Congresso da Associação Portuguesa de Epidemiologia (APE) y XIX Congreso de la Sociedad Española de Salud Pública y Administración Sanitaria (SESPAS). Guillaumes M, Prieto MA, Millet JP, Mercuriali L, Vargas-Leguás H, Vázquez A, Artigas A, Prieto R, Ros M et al. "Evolución de los brotes de COVID-19 en residencias de gente mayor de la ciudad de Barcelona". León, 10 September 2021.

• XXXIX Reunión Anual de la Sociedad Española de Epidemiología (SEE), XVI Congresso da Associação Portuguesa de Epidemiologia (APE) y XIX Congreso de la Sociedad Española de Salud Pública y Administración Sanitaria (SESPAS). Fornis

L, Hernández A, Marcos I, de Andrés A, Castellón A, Bastida A, Pujana B, Molinero E, Rius C. "Coordinación institucional: clave en el éxito del abordaje y control de la transmisión de COVID-19". León, 10 September 2021.

• XXXIX Reunión Anual de la Sociedad Española de Epidemiología (SEE), XVI Congresso da Associação Portuguesa de Epidemiologia (APE) y XIX Congreso de la Sociedad Española de Salud Pública y Administración Sanitaria (SESPAS). De Andrés A, Hernández A, Fornis LI, Molinero E, Mercuriali L, Avellanés I, Marcos I, Ros M, Riud C. "Utilización de encuestas on line: impacto en la mejora de la investigación de brotes". León, 10 September 2021.

• European Scientific Conference on Applied Infectious Disease Epidemiology (ESCAIDE) 2021. A.Sentís, M. Montoro-Fernandez, E. Lopez-Corbeto, L. Egea-Cortés, D.K.Nomah, Y. Díaz, P.Garcia de Olalla, L.Mercuriali, N.Borrell, J.Reyes-Urueña, J.Casabona, and the Catalan HIV/STI surveillance group. The STI re-emergence in Catalonia (2017-2019): epidemic characterization, socio-epidemiological clustering approach, and HIV co-infection associated factors.

Teaching

• Màster de Salud Pública. García de Olalla P, Orcau A, Rius C. Assignatura: "Epidemiología de las Enfermedades Transmisibles". Universitat Pompeu Fabra. 2020-2021.

• Climate change & Emerging Infectious Diseases in Barcelona. Mercuriali L, Lowe R. 340.651.98 Emerging Infections. 18th Annual Johns Hopkins Fall Institute In Health Policy And Management. Johns Hopkins Bloomberg School of Public Health

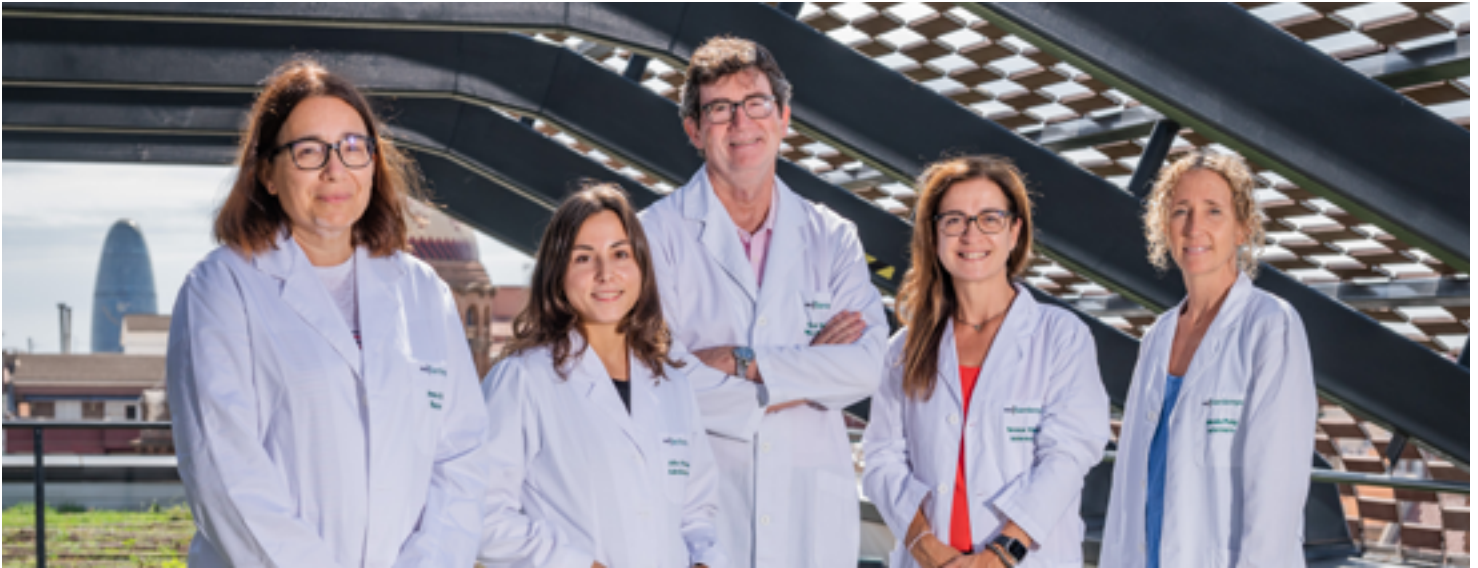
Outreach activities

• Jornada del "Dia Mundial de la Tuberculosis". Barcelona, 17 March 2021.

• "XI Jornadas de Enfermedades Emergentes". Barcelona, 16-17 June 2021.

• "XXV Jornadas Internacionales sobre Tuberculosis". Barcelona, 15-16 November 2021.

• Course 340.651.98 Emerging Infections. 18th Annual Johns Hopkins Fall Institute In Health Policy And Management. Johns Hopkins Bloomberg School of Public Health.



Primary Care Research

Coordinator

Brotos Cuixart, Carles EAP SARDENYA
cbrotos@eapsardenya.cat

Members

Aguado Jodar, Maria Alba	ENTITAT EXTERNA	Ichazo Tobella, Begoña Jiménez Muñoz, Beatriz	EAP SARDENYA ENTITAT EXTERNA
Agustí Roca, Berta Balagué Galito, Enriqueta	EAP SARDENYA ENTITAT EXTERNA	Martinez Gil, Mireia Monteserin Nadal, Rosa Moral Pelaez, Irene Múñoz Pena, Aser	EAP SARDENYA EAP SARDENYA EAP SARDENYA EAP SARDENYA
Blasi Codinach, Anna	EAP SARDENYA ENTITAT EXTERNA	Palasi Bargallo, Carme Pedro Pijoan, Anna Maria	EAP SARDENYA ENTITAT EXTERNA
Casasa Plana, Albert Coderch Aris, Marta Cuixart Costa, Lluís	EAP SARDENYA EAP SARDENYA ENTITAT EXTERNA	Puig Palma, Mireia Rayo Martínez, Elisabet Sellares Sallas, Jaume Serrano Pons, Helena Vila Garcia, Judit Vilella Moreno, Maria Teresa	EAP SARDENYA EAP SARDENYA EAP SARDENYA EAP SARDENYA EAP SARDENYA EAP SARDENYA
De La Figuera Von Wichmann, Mariano Delgado Alvarez, Beatriz Fernández Valverde, Diana Elizabeth	EAP SARDENYA EAP SARDENYA EAP SARDENYA EAP SARDENYA	Zamora Mestre, Silvia	EAP SARDENYA
Ferríz Villanueva, Gemma Galan Diez, Maria Luisa Gil Calvo, Joan Josep	EAP SARDENYA EAP SARDENYA ENTITAT EXTERNA		

Main lines of research

- Cardiovascular risk estimation.
- Health promotion in primary care settings.
- Ageing.
- Hypertension.
- Diabetes.
- Immunization.
- Determinants of Post-Covid syndrome.
- Technology (Telemedicine)

Scientific Challenges

- Cooperate with other research teams in IIB Sant Pau.
- Cooperate with other European institutions in implementing projects on risk prevention and health promotion in primary care settings.
- Encourage multicenter research studies in primary care.

Collaborations

Collaborations with other IIB Sant Pau research groups

Collaborations with research groups of Epidemiology and Public Health, Nephrology (Fundació Puigvert), Public Health Agency of Barcelona, Neurology, Gynecology

External collaborations

Agreement with Fundació Barcelona Beta Brain Research Center to implement de project: 'BETA-AARC study: cohort study to identify blood biomarkers in patients with cognitive impairment'

Active grants

- CARLES BROTONS CUIXART. Validación externa de una ecuación de riesgo cardiovascular de por vida. PI17/01031. Instituto de Salud Carlos III. Duration 2018-2022. 41.000,00 €. Note: Total amount granted to PI. It does not include indirect costs.

Other active grants

Spanish Society of Atherosclerosis

Doctoral theses

- Diana Fernandez Valverde, Estimación del riesgo cardiovascular en población española adulta y control de los factores de riesgo en pacientes con enfermedad cardiovascular establecida., Universitat Rovira i Virgili, Carlos Brotons, 25/11/2021

Scientific production

- Alias SB, Nadal RM, Moral I, Figols MR, Luque X, Coll L. Promoting social capital, self-management and health literacy in older adults through a group-based intervention delivered in low-income urban areas: results of the randomized trial AEQUALIS. *BMC PUBLIC HEALTH*. 2021; 21(1):84. DOI:10.1186/s12889-020-10094-9. PMID:33413233. IF:3,295 (Q2/D4).
- Brotons C, Moral I, Fernandez D, Puig M, Vilella MT, Puig T, Cuixart L, Ferriz G, Pedro AM, Codinachs R, Rodriguez M,

Fuentes R. Effectiveness of an Intervention Aimed at Improving Information for Patients with High Cardiovascular Risk: INFORISK Clinical Trial. *International Journal of Environmental Research and Public Health*. 2021; 18(7):3621. DOI:10.3390/ijerph18073621. PMID:33807285. IF:3,390 (Q1/D3).

- Coll L, Rodriguez D, Pons M, Nyqvist F, Puig T, Monteserin R. "Not Alone in Loneliness": A Qualitative Evaluation of a Program Promoting Social Capital among Lonely Older People in Primary Health Care. *International Journal of Environmental Research and Public Health*. 2021; 18(11):5580. DOI:10.3390/ijerph18115580. PMID:34071146. IF:3,390 (Q1/D3).

- Fernandez B, Candas B, Gil M, Amigo N, Corbella E, Rodriguez MA, Padro A, Brotons C, Hernandez A, Calmarza P, Jarauta E, Brea AJ, Mauri M, Guijarro C, Vila A, Valdivielso P, Corbella X, Pinto X. Physicochemical Properties of Lipoproteins Assessed by Nuclear Magnetic Resonance as a Predictor of Premature Cardiovascular Disease. PRESARV-SEA Study. *Journal of Clinical Medicine*. 2021; 10(7):1379. DOI:10.3390/jcm10071379. PMID:33805580. IF:4,241 (Q1/D3).

- Grigorian L, Edel K, Esteve MA, Acena A, Silva C, Delgado J, Ntaios G, Demerouti E, Brotons C. Practical Decision Algorithms for the Use of the Cardiovascular Polypill in Secondary Prevention in Europe. *Frontiers in Cardiovascular Medicine*. 2021; 8. DOI:10.3389/fcvm.2021.663361. PMID:34504874. IF:6,050 (Q1/D3).

- Lledó GM, Sellares J, Brotons C, Sans M, Antón JD, Blanco J, Bassat Q, Sarukhan A, Miró JM, de Sanjosé S. Post-acute COVID-19 syndrome: a new tsunami requiring a universal case definition. *CLINICAL MICROBIOLOGY AND INFECTION*. 2022; 28(3). DOI:10.1016/j.cmi.2021.11.015. PMID:34826619. IF:8,067 (Q1/D1).

- Montenegro P, Brotons C, Serrano J, Fernandez D, Garcia C, Ichazo B, Lemaire J, Moral I, Wienese RP, Pitarch M, Puig M, Vilella MT, Sellares J. Community seroprevalence of COVID-19 in probable and possible cases at primary health care centres in Spain. *FAMILY PRACTICE*. 2021; 38(2). DOI:10.1093/fampra/cmaa096. PMID:32914857. IF:2,267 (Q3/D6).

- Moragas A, Garcia A, Escudero AP, Faro CB, Ibanez RH, Brotons C, Vilella T, Puig M, Casaponsa RF, Guerrero SC, Pera H, van der Velden AW, Butler CC, Llor C. Prevalence of microbiologically-confirmed influenza in patients with influenza-like illness in primary care and clinical and epidemiological characteristics. *Revista Espanola de Quimioterapia*. 2021; 34(5). DOI:10.37201/req/032.2021. PMID:34118801. IF:1,553 (Q4/D9).

- Pelaez IM, Cuixart CB, Valverde DF, Palma MP, Bonacho EC, Munoz PM, Romero CC, Aguado LJQ. External validation of the European and American equations for calculating cardiovascular risk in a Spanish working population. *REVISTA CLINICA ESPANOLA*. 2021; 221(10). PMID:34147422. IF:1,556 (Q3/D7).

Other publications

• Brotons C, Moral I, Gonzalez J, Fernandez D, Puig M, Vilella MT. Epidemiology of hypertriglyceridaemia. *Clinica E Investigacion En Arteriosclerosis*. 2021; 33. DOI:10.1016/j.arteri.2020.12.015. PMID:34006358.

Communication and dissemination activities

• Puy Penella A, Chantada Lorenzo N, Moral Pelaez I, Fernandez Valverde D, Vilella Moreno T, Brotons Cuixart C. Factores determinantes de COVID persistente en pacientes atendidos en Atención Primaria. XLI Congreso de la Sociedad Española de Medicina de Familia y Comunitaria (semFYC). 7-9 October 2021, Palma de Mallorca.

• Daniel Sánchez Ruiz, Carlos Brotons Cuixart, Irene Moral Pelaez, Diana Elizabeth Fernandez Valverde, Teresa Vilella Moreno, Mireia Puig Palma. Adecuación del abordaje diagnóstico y terapéutico de la infección por *Helicobacter Pylori* en el ámbito de la Atención Primaria. XLI Congreso de la Sociedad Española de Medicina de Familia y Comunitaria (semFYC). 7-9 October 2021, Palma de Mallorca.

A.5. Translational Research



Inflammatory diseases

Coordinator

Vidal Alcorisa, Silvia
svidal@santpau.cat

IR

Members

Alejandro Santiago, José	IR	Mariscal Rodriguez, Anais	FGS
Alserawan De Lamo, Leticia	FGS	Martinez Martinez, Laura	FGS
Canto Naves, Elisabeth	IR	Moga Naranjo, Maria Esther	FGS
De La Calle Martin, Oscar	FGS	Mulet Gual, Maria	IR
Franco Leyva, Teresa	FGS	Ortiz De Juana, Maria Angels	IR
Juarez Rubio, Candido	FGS	Osuna Gomez, Ruben	IR
Lynton Pons, Elionor	FGS	Zamora Atenza, Carlos	IR

Main lines of research

- The role of the immune system in the development and perpetuation of autoimmune, immunomediated diseases and chronic inflammatory processes.
- Immunological response associated with the clinical course during immunomodulatory therapies.
- The involvement of autoantibodies, components of the adaptive immune system, in the pathogenesis of autoimmune processes.
- Mechanisms involved in immunodeficiency.
- Immunosenescence.

Scientific Challenges

- Study of regulatory pathways in chronic inflammatory diseases to identify cellular and molecular therapeutic targets.
- Understanding the appearance and evolution of autoimmune events, immunodeficiencies, infections and cardiovascular diseases to improve diagnosis tools.
- Deciphering the immune response involved in the development or the control of tumors to discover new biomarkers of prognosis to immunotherapies.
- Elucidate biomarkers related to immunosenescence and susceptibility to infections.
- Evaluation of cellular immune responses in immunological disorders such as infections, hypersensitivity reactions and immunodeficiencies.
- **Different strategies were applied according to the goal and pathology:**
 - Characterization of cell populations in complex human biological fluids by multiparametric flow cytometry analysis complemented with dimensionality reduction and data visualization techniques.
 - Study the expression and dynamics of inflammatory mediators with advance clustering analysis.
 - Identification of new specificities of autoantibodies in subgroups of patients.
 - Study of mechanisms involved in immunodeficiency caused by alterations of molecular components.

Collaborations

Collaborations with other IIB Sant Pau research groups

- Dr C. Guarner, Dr G. Soriano, Dr Eva Roman, Dr Esther Garcia-Planella, and Dr Jordi Gordillo (Digestive Pathology and CIBER) "Mecanismos inflamatorios asociados a la barrera epitelial en la cirrosis y enfermedad inflamatoria intestinal".
- Dr Novelli; Dr Nomdedeu and Dr Garcia Cadenas (Hematology) "Regulación de la respuesta inmune en pacientes con patología hematológica".
- Dr Isabel Illa and Dr Eduard Gallardo (Neurology): "Estudios moleculares y celulares en miastenia gravis: correlaciones clínicas y terapéuticas" Collaborator: Dr Candido Juarez.
- Dr Cesar Diaz-Torné, Dr Hector Corominas, and Dr Ivan Castellví (Rheumatology) "Caracterización de las plaquetas "educadas" en un entorno inflamatorio crónico para optimizar

las terapias inmunoreguladoras con plaquetas. Estudio inmunológico de la inflamación sistémica en enfermos con gota".

- Dr Plaza and Dr Castillo (Pneumology). "Predictores de Infección bronquial en Enfermedades Respiratorias Crónicas."
- Dr Lluís Puig, Dr Serra, and Dr Vilarrassa (Dermatology). "Estudio de dianas inmunogenéticas en piel y suero de pacientes con psoriasis moderado-grave, dermatitis atópica y sialoadenitis y su posterior clasificación para selección de tratamiento biológico existente."
- Dr Majem, Dr Barnadas, and Dr Maroto (Oncology). " Fuentes de PD-1 y PD-L1 en el cancer de pulmón no microcítico y microcítico." "Estudio traslacional prospectivo del sistema inmune y de los biomarcadores de células tumorales circulantes en el cancer de próstata metastásico resistente a la castración."
- Dr Joaquin Lopez-Contreras (PI) (Infectious diseases, Internal Medicine) and Dr Noelia Vilalta (Hematology). "Trampas extracelulares de los neutrófilos en sepsis". Marató 2018-2021. Collaborators: Dr Silvia Vidal and Dr Carlos Zamora.
- Dra: Olga Torres Bonafonte (IP) (Internal Medicine). "Identificación de un inmunofenotipo de riesgo de mal pronóstico en ancianos que han sido ingresados por neumonía" finançat per l'Institut de Salut Carlos III (PI18/00684). (Jan 2019 – Dec 2021). Collaborator researcher: Dr Laura Martínez-Martínez.

External collaborations

- Dra. Manichanh (Patologia Digestiva, Hospital de la Vall d'Hebron).
- Dr Juan Jose de Agustí (Reumatologia, Hospital de la Vall d'Hebron).
- Dr Blanca Sanchez (Hematologia, Hospital del Mar).
- Dr Albert Selva i Dr. Moises Labrador (Alergia, Hospital de la Vall d'Hebron).
- Dr Porcel (Medicina Interna, Hospital Arnau de Vilanova).
- Dr Sabzevari i Dra. Semnani (Precigen MD, USA).
- Dr Catalfamo del Georgetown University School of Medicine (Washington DC, USA).
- Dr Monica Guma (University of California San Diego, CA, USA).
- Dr Nieto i Dr. Heyn (CNAG-CRG).
- Dr Oscar Rodríguez Faba (Fundació Puigvert).
- Dr Per Thor Straten (Dep Immunology and Microbiolog, Herlev, Denmark).
- Dr Oriol Sibila (Hospital Clínic).
- Dr JD Chalmers (University of Dundee).
- Dr Elena Bargagli (Universidad Sienna).

Active grants

- SILVIA VIDAL ALCORISA. Grup d'Immunologia. 2017 SGR 00867. Agència de Gestió d'Ajuts Universitaris i de Recerca. Duration 2017-2021. 0,00 €.

- SILVIA VIDAL ALCORISA. Estudio del perfil pro-inflamatorio de las plaquetas y sus derivados en pacientes con artritis reumatoide para identificar biomarcadores de inflamación y dianas terapéuticas. PI20/00184. Instituto de Salud Carlos III. Duration 2021-2023. 72.000,00 €.

Note: Total amount granted to PI. It does not include indirect costs.

Other active grants

- Name of the project: Determination of circulating leukocyte-platelet complexes & PD-L1 expression on circulating cells in patients with advanced SCLC patients receiving anti-PD-L1 blockade agents in combination with platinum and etoposide. Degree of contribution: Scientific coordinator. Name principal investigator (PI, Co-PI...): Vidal; Majem. Funding entity or bodies: Roche Farma, S.A. Type of entity: Business. Start date: 24/11/2021 Duration: 18 months. Total amount: 40.000 €.

- Name of the project: A new mechanism of action of methotrexate in RA through platelet-leukocyte complexes. Degree of contribution: Researcher. Name principal investigator (PI, Co-PI...): Corominas; Vidal. Funding entity or bodies: Laboratorios Gebro Pharma, S.A. Type of entity: Business. Start date: 20/04/2021. Total amount: 15.000 €.

- Name of the project: Determination of circulating leukocyte-platelet complexes & PD-L1 expression on circulating cells in patients with advanced SCLC patients receiving anti-PD-L1 blockade agents in combination with platinum and etoposide. Degree of contribution: Scientific coordinator. Name principal investigator (PI, Co-PI...): Vidal; Majem. Funding entity or bodies: AstraZeneca Farmacéutica Spain Type of entity: Business. Start date: 01/03/2021 Duration: 18 months. Total amount: 126.050 €.

- Name of the project: In vitro assessment of cytokine production in HBV patients. Degree of contribution: Scientific coordinator. Name principal investigator (PI, Co-PI...): Vidal. Funding entity or bodies: Precigen Type of entity: Business. Start date: 18/02/2021. Total amount: 29.940 €.

Scientific production

- Alserawan L, Penacoba P, Echevarria S, Castillo D, Ortiz E, Martinez L, Naranjo EM, Domingo P, Castellvi I, Juarez C, Mariscal A. Growth Differentiation Factor 15 (GDF-15): A Novel Biomarker Associated with Poorer Respiratory Function in COVID-19. *Diagnostics*. 2021; 11(11):1998. DOI:10.3390/diagnostics11111998. PMID:34829345. IF:3,706 (Q2/D3).

- Canto E, Faba OR, Zamora C, Mulet M, Garcia MS, Palomino A, Anguera G, Breda A, Maroto P, Vidal S. Immunological Status of Bladder Cancer Patients Based on Urine Leukocyte Composition at Radical Cystectomy. *Biomedicines*. 2021; 9(9):1125. DOI:10.3390/biomedicines9091125. PMID:34572311. IF:6,081 (Q1/D2).

- d'Alessandro M, Bergantini L, Bargagli E, Vidal S. Extracellular Vesicles in Pulmonary Fibrosis Models and Biological Fluids of Interstitial Lung Disease Patients: A Scoping Review. *Life-Basel*. 2021; 11(12):1401. DOI:10.3390/life11121401. PMID:34947932. IF:3,817 (Q2/D3).

- Diaz C, Ortiz MA, Garcia A, Jeria S, Sainz L, Fernandez S, Corominas H, Vidal S. The inflammatory role of silent urate crystal deposition in intercritical gout. *RHEUMATOLOGY*. 2021; 60(11). DOI:10.1093/rheumatology/keab335. PMID:33839783. IF:7,580 (Q1/D2).

- González-Manso A, Agut-Busquet E, Romaní J, Vilarrasa E, Bittencourt F, Mensa A, Cantó E, Aróstegui JI, Vidal S. Hidradenitis Suppurativa: Proposal of Classification in Two Endotypes with Two-Step Cluster Analysis. *Dermatology*. 2021;237(3):365-371. DOI:10.1159/000511045. PMID: 33171462. IF:5,366 (Q1/D2).

- Isola I, Moreno DF, Moga E, Mena MP, Tovar N, Rodriguez LG, Oliver A, Salgado MC, Braso F, Yague J, Cibeira MT, Prat A, Rosinol L, Blade J, de Larrea CF. Immunoparesis defined by heavy/light chain pair suppression in smoldering multiple myeloma shows initial isotype specificity and involves other isotypes in advanced disease. *ANNALS OF HEMATOLOGY*. 2021; 100(12). DOI:10.1007/s00277-021-04653-2. PMID:34463804. IF:3,673 (Q2/D5).

- Lleixa C, Martin L, Pascual E, Franco T, Caballero M, De Luna N, Gallardo E, Suarez X, Martinez L, Diaz J, Rojas R, Cortes E, Turon J, Casasnovas C, Homedes C, Gutierrez G, Jimeno MC, Berciano J, Sedano MJ, Garcia T, Pardo J, Marquez C, Rojas I, Jerico I, Martinez E, de la Tassa GM, Dominguez C, Juarez C, Illa I, Querol L. Autoantibody screening in Guillain-Barre syndrome. *Journal of Neuroinflammation*. 2021; 18(1):251. DOI:10.1186/s12974-021-02301-0. PMID:34719386. IF:8,322 (Q1/D1).

- Magallares B, Lobo D, Castellvi I, Moya P, Gich I, Martinez L, Park H, Millan AM, Laiz A, Diaz C, Fernandez S, Corominas H. Assessment of EULAR/ACR-2019, SLICC-2012 and ACR-1997 Classification Criteria in SLE with Longstanding Disease. *Journal of Clinical Medicine*. 2021; 10(11):2377. DOI:10.3390/jcm10112377. PMID:34071275. IF:4,241 (Q1/D3).

- Mariscal A, Milan M, Baucells A, Martinez MA, Guillen AG, Trallero E, Alvarado M, Martinez L, Alserawan L, Franco T, Sanz MT, Vinas L, Corominas H, Juarez C, Castellvi I, Selva A. Anti-TIF-1 gamma Antibody Detection Using a Commercial Kit vs In-House Immunoblot: Usefulness in Clinical Practice. *Frontiers in Immunology*. 2021; 11:625896. DOI:10.3389/fimmu.2020.625896. PMID:33613568. IF:7,561 (Q1/D2).

- Mariscal A, Zamora C, Magallares B, Salman TC, Ortiz MA, Diaz C, Castellvi I, Corominas H, Vidal S. Phenotypic and Functional Consequences of PLT Binding to Monocytes and Its Association with Clinical Features in SLE. *INTERNATIONAL JOURNAL OF MOLECULAR SCIENCES*. 2021; 22(9):4719. DOI:10.3390/ijms22094719. PMID:33947017. IF:5,923 (Q1/D3).
- Murillo JD, Diaz C, Ortiz MA, Coras R, Gil P, Pedersen A, Corominas H, Vidal S, Guma M. Metabolomics profiling predicts outcome of tocilizumab in rheumatoid arthritis: an exploratory study. *Metabolomics*. 2021; 17(9):74. DOI:10.1007/s11306-021-01822-2. PMID:34402961. IF:4,290 (Q2/D5).
- Osuna R, Arqueros C, Galano C, Mulet M, Zamora C, Barnadas A, Vidal S. Effector Mechanisms of CD8+HLA-DR+ T Cells in Breast Cancer Patients Who Respond to Neoadjuvant Chemotherapy. *Cancers*. 2021; 13(24):6167. DOI:10.3390/cancers13246167. PMID:34944786. IF:6,639 (Q1/D3).
- Pascual E, Fehmi J, Lleixa C, Martin L, Devaux J, Hoftberger R, Delmont E, Doppler K, Sommer C, Radunovic A, Carvajal A, Smyth S, Williams L, Mazanec R, Potockova V, Hinds N, Cassereau J, Viala K, Lefilliatre M, Nicolas G, Foley P, Leypoldt F, Keddie S, Lunn MP, Zimprich F, Nunkoo VS, Loscher WN, Martinez L, Diaz J, Rojas R, Illa I, Rinaldi S, Querol L. Antibodies to the Caspr1/contactin-1 complex in chronic inflammatory demyelinating polyradiculoneuropathy. *BRAIN*. 2021; 144. PMID:33880507. IF:13,501 (Q1/D1).
- Perea L, Canto E, Suarez G, Aliberti S, Chalmers JD, Sibila O, Vidal S. A Cluster Analysis of Bronchiectasis Patients Based on the Airway Immune Profile. *CHEST*. 2021; 159(5). DOI:10.1016/j.chest.2020.11.011. PMID:33217421. IF:9,410 (Q1/D1).
- Perea L, Rodriguez L, Nieto JC, Zamora C, Canto E, Soriano G, Poca M, Blanco P, Navarro F, Muniesa M, Vidal S. Bacteriophages immunomodulate the response of monocytes. *EXPERIMENTAL BIOLOGY AND MEDICINE*. 2021; 246(11). DOI:10.1177/1535370221995154. PMID:33641443. IF:2,691 (Q3/D7).
- Perez S, Pallares N, Grijota MD, Sanchez A, Barcia L, Campos S, Pomar V, Rabunal R, Balcells ME, Gazel D, Montiel N, Vicente D, Goic I, Schon T, Paues J, Marekovic I, Cacho J, Barac A, Goletti D, Garcia M, Barcala JM, Tortola MT, Anibarro L, Suarez I, Moga E, Gude MJ, Naves R, Karsligil T, Martin T, Stevanovic G, Trigo M, Rubio V, Karaoglan I, Bayram N, et al. Identification of Recent Tuberculosis Exposure Using QuantiFERON-TB Gold Plus, a Multicenter Study. *Microbiology Spectrum*. 2021; 9(3):e00972-21. DOI:10.1128/Spectrum.00972-21. PMID:34756079. IF:7,171 (Q1/D2).
- Pero M, Casani L, Castells C, Perez ML, Naranjo EM, Juan O, De Lamo LA, Lopez P, Serrat AV, Badimon L, Roda OP. Rabbit as an animal model for the study of biological grafts in pelvic floor dysfunctions. *Scientific Reports*. 2021; 11(1):10545. DOI:10.1038/s41598-021-89698-z. PMID:34006889. IF:4,379 (Q1/D3).
- Piquero-Casals J, Martínez-Martínez L, Alomar A, Rozas-Muñoz E, Juárez C, Puig L. LRP1/CD91 is highly expressed in monocytes from patients with vitiligo - even after repigmentation. *Experimental Dermatology*. 2021;30(3):390-395. DOI:10.1111/exd.14249. PMID: 33249636. IF:3,960 (Q2/D3).
- Román E, Parramón M, Flavià M, Gely C, Poca M, Gallego A, Santesmases R, Hernández E, Nieto JC, Urgell E, Alvarado-Tapias E, Vidal S, Ferrero-Gregori A, Vargas V, Guarner C, Soriano G. Frailty in outpatients with cirrhosis: A prospective observational study. *Liver International*. 2021;41(2):357-368. DOI:10.1111/liv.14694. PMID: 33030788. IF:5,828 (Q2/D3).
- Roman E, Poca M, Amoros G, Rosell J, Gely C, Nieto JC, Vidal S, Urgell E, Ferrero A, Alvarado E, Cuyas B, Hernandez E, Santesmases R, Guarner C, Escorsell A, Soriano G. Phase angle by electrical bioimpedance is a predictive factor of hospitalisation, falls and mortality in patients with cirrhosis. *Scientific Reports*. 2021; 11(1):20415. DOI:10.1038/s41598-021-99199-8. PMID:34650096. IF:4,379 (Q1/D3).
- Vidal S, Puig L, Carrascosa JM, Gonzalez A, Ruiz JC, Velasco AM. From Messengers to Receptors in Psoriasis: The Role of IL-17RA in Disease and Treatment. *INTERNATIONAL JOURNAL OF MOLECULAR SCIENCES*. 2021; 22(13):6740. DOI:10.3390/ijms22136740. PMID:34201664. IF:5,923 (Q1/D3).
- Zamora C, Canto E, Vidal S. The Dual Role of Platelets in the Cardiovascular Risk of Chronic Inflammation. *Frontiers in Immunology*. 2021; 12:625181. DOI:10.3389/fimmu.2021.625181. PMID:33868242. IF:7,561 (Q1/D2).
- Zamora C, Riudavets M, Anguera G, Alserawan L, Sullivan I, Barba A, Serra J, Ortiz MA, Gallardo P, Perea L, Gavira J, Barnadas A, Majem M, Vidal S. Circulating leukocyte-platelet complexes as a predictive biomarker for the development of immune-related adverse events in advanced non-small cell lung cancer patients receiving anti-PD-(L)1 blocking agents. *CANCER IMMUNOLOGY IMMUNOTHERAPY*. 2021; 70(6). DOI:10.1007/s00262-020-02793-4. PMID:33388994. IF:6,968 (Q1/D2).

Other publications

- Castellví I, Vidal S, Valenzuela C. Autoimmunity in the Study of Interstitial Lung Disease: Are Serological Test Enough?. *ARCHIVOS DE BRONCONEUMOLOGIA*. DOI:10.1016/j.arbres.2021.08.016.

Books or chapters with ISBN

- Franco Leyva, Teresa; Ortiz Losada, Esther; Tandaipan Jaime, José Luis; Gallardo Vigo, Eduard; Martínez-Martínez, Laura; Mariscal Rodríguez, Anaís. Miopatía necrotizante asociada a anticuerpos anti-Ku. 42 Congreso Nacional de la Sociedad Española de Inmunología. Madrid, 24-26/03/2021. Caso clínico en Autoinmunidad VI. 2021:113-117. ISBN 978-84-09-28265-4.
- Franco Leyva T, Lynton Pons E, Albert Jares D, Martínez-Martínez L, De la Calle Martín O. Paciente con

Agammaglobulinemia de Bruton y COVID asintomático. Inmunodeficiencias: Casos clínicos comentados. 2021:35-38. ISBN 978-84-09-28266-1. Sociedad Española de Inmunología.

- Franco Leyva T, Ortiz Losada E, Tandaipan Jaime JL, Gallardo Vigo E, Martínez Martínez L, Mariscal Rodríguez A. Miopatía necrotizante asociada a anticuerpos anti-Ku. Caso clínico en Autoinmunidad VI. 2021:113-117. ISBN 978-84-09-28265-4.
- Alserawan de Lamo L, Mariscal Rodríguez A, Zamora Atenza C, Franco Leyva T, Majem Tarruella M, Martínez-Martínez L. Triple toxicidad inmunomediada asociada a tratamiento anti-PD1. ¿Es necesario el cribaje de autoanticuerpos en estas terapias? Caso clínico en Autoinmunidad VI. 2021:113-117. ISBN 978-84-09-28265-4.

Communication and dissemination activities

Courses

- ASMACAM. 27 MAYO 2021. Curso online. Formación Médica Continuada de Asma. Inmunología para dummies. Silvia Vidal.
- Curso de Formación Virtual en Inmunoterapia (Hospital de Sant Pau) 21 Jan 2021. Bases de la inmunooncología. Silvia Vidal.
- Curso de inmunología básica. Universidad Autónoma de Madrid-Catedra UAM-Roche. 19- May 2021. Generalidades del Sistema Inmune. Inmunidad Innata: Componente Mieloide y componente Linfoide de la Inmunidad Innata. Silvia Vidal.

Conferences

- Sociedad Gallega de Reumatología. Programa integrado de actualización en reumatología. 10 sessions. 2/02/21 – 20/04/2021. "Autoinmunidad en las enfermedades reumáticas". Silvia Vidal.

- Sociedad Valenciana de Neumología. XXVIII Congreso de la Sociedad Valenciana de Neumología. 17-19 June 2021 – Inflamación de la vía aérea: una mirada diferente. Silvia Vidal.

- Sociedad Catalana de ORL y PCF. XXXI CONGRESO DE LA SOCIEDAD CATALANA DE ORL Y PCF. 2-4 June 2021. Las terapias con anticuerpos en la fisiopatología de la respuesta T2. Silvia Vidal.

- Sociedad Española de Reumatología. 12- March 2021. Novedades en fisiopatogenia de Artritis reumatoide. Silvia Vidal.

- 42 Congreso de la Sociedad Española de Inmunología. CONGRESO DE LA SOCIEDAD ESPAÑOLA DE INMUNOLOGÍA. March 2021. En enfermedades neuromusculares: Estado actual y perspectivas de futuro. Cándido Juárez Rubio.

- XIV Jornada tècnica del Congrés de la Societat Catalana d'Immunologia – Avenços en la immunoteràpia. 25 November 2021. Tractament biològic per a malalties autoimmunes. Barcelona. Esther Moga.

- Avaluació de la proteïna monoclonal i resultats d'estudis en mieloma quiescent. Biomarcadors de malignitat en les gammopaties monoclonals: Què poden aportar? 27 de maig de 2021. Barcelona. Organitzat per Binding Site. Esther Moga.

- El puzzle de la autoinmunidad (1ª parte) organitzat per Thermofisher i la Sociedad Española de Inmunología: "Autoanticuerpos en la Polirradiculoneuropatía desmielinizante-inflamatoria crónica (CIDP). 29/04/2021). Laura Martínez



Endocrinology, Diabetes and Nutrition

Coordinator

Mauricio Puente, Dídac FGS
dmauricio@santpau.cat

Members

Barranco Altirriba, María	IR	Mendoza Mathison,	
Chico Ballesteros, Ana Isabel	FGS	Lilian Cristina	FGS
Corcoy Pla, Rosa	FGS	Miñambres Donaïre, Inka	FGS
Cubero Marcos, Jose Maria	FGS	Perez Perez, Antonio	FGS
Cuixart Carruesco, Gemma	IR	Pujol Abajo, Montserrat	FGS
Gonzalez Blanco, Cintia	FGS	Rodríguez Hernández, Claudia	IR
Granado Casas, Minerva	CIBERDEM	Rojo López, Marina Idalia	IR
López Argudo, Alicia	FGS	Rossellí Rusiñol, Joana	CIBERDEM
Mateu Salat, Manuel	FGS	Stantonyonge Sesnic, Nicole	FGS
Mato Matute, Eugenia	CIBERBBN	Subias Burrell, Miguel	IR

Main lines of research

- Diabetic complications: atherosclerosis and microvascular disease.
- Diabetic epidemiology: primary care research, and research with large databases.
- Endocrinological diseases and pregnancy
- Nodular disease and thyroid cancer
- Diabetes and cardiovascular risk factors

Scientific Challenges

Endocrine Neoplasms

- Molecular markers of the epithelial lineage: expression of the ABCG2 gene/BCRP1 transporter.
- Transcriptomics and proteomics as prediction and prognosis instruments for epithelial thyroid cancer.
- Intramural CELL-NANO-THYROID project: investigation of human mesenchymal cell capacity as an instrument for administering anti-tumour cell drugs in the form of conjugated nanoparticles.

- Role of cholesterol & cholesterol metabolites in thyroid neoplasms differentiation

- Assessment of glycosylated immunoglobulins as serologic markers of thyroid carcinoma

Autoimmune Diabetes Mellitus

- Classic type 1 autoimmune diabetes mellitus: discovery of genes that influence susceptibility to autoimmune diabetes (classic type 1).

- LADA type diabetes: prevalence of metabolic syndrome among patients with LADA compared to prevalence among patients with classic type 1 diabetes, type 2 diabetes and the general non-diabetic population in European countries.

Diabetes and pregnancy

- Clinical research aimed at optimizing care for women with pre-gestational and gestational diabetes at pre-conception, pregnancy, birth and postpartum stages. And specifically, addressing the relevance of adequacy of pregnancy weight gain, maternal predictive characteristics and association with pregnancy outcomes.

Technology, Telemedicine and Intelligent Systems for Therapeutic Optimization of Diabetes Mellitus

- Technology in the treatment of diabetes with special focus in insulin (new insulins, pumps), and glucose measurement including sensors.

- development of a technological platform for the prediction, prevention and treatment of obesity, DM, HTA, dyslipidemia and cardiometabolic risk.

Optimization of the Treatment of Obesity, Hyperlipidaemia, Metabolic Syndrome and Complications

- Mechanisms linking diabetes, obesity, and dyslipidemia with cardiovascular disease.

- Optimal treatment and prevention of cardiovascular risk associated with obesity, hyperlipidaemia, metabolic syndrome and diabetes

Diabetic complications: atherosclerosis and microvascular disease

- Clinical and translational studies that explore research in pathogenesis, biomarkers, and early detection and treatment of microvascular and chronic complications, especially atherosclerosis.

Diabetic epidemiology: primary care research, and with large databases

- Research on diabetes mellitus in Primary Health Care of Catalonia. In recent years, the group has developed projects using the SIDIAP database, in different aspects of real-world evidence.

Collaborations

Collaborations with other IIB Sant Pau research groups

- Oncogenesis and Antitumour Drugs (Ramon Mangues).
- Ophthalmology (Fernando Rodríguez Álvarez).
- Cardiovascular Biochemistry (Jorge Ordóñez, José Luis Quesada, Francisco Blanco).
- General and Digestive Surgery (Antonio Moral, Ignacio Pérez).
- Reproductive Health (Carmen Medina Mallén).
- Bases Metabòliques i lipídiques del Risc Cardiovascular i Càncer (JC Escolà)
- Metabolic Bases of Cardiovascular Risk (Francisco Blanco).
- Group of Regulatory Mechanisms in Cardiovascular Remodeling (Maria Galán)
- Posterior segment and ocular inflammation (Ignacio Vela)
- Lipid and Cardiovascular Pathology (Concepción Vicenta Llorente)
- Biomarkers of Cardiovascular Disease (Teresa Padró)

External collaborations

- University of East Anglia, Norwich Medical School (Helen Murphy)
- Mount Sinai Hospital, Toronto (Denice Feig)
- Bioengineering and Telemedicine Group at the Universidad Politécnica de Madrid, Spain (GBT-UPM) (Enrique J. Gómez Aguilera)
- Biomedical Engineering Research Group at the Universidad de Sevilla, Spain (GIB-US). (Laura Roa Romero)
- Molecular Oncology Group at HVH, PI: S. Schwartz, Jr.
- Development of New Drugs Group at the Universidad del País Vasco, Spain. PI: JL Pedraz.
- CONCEPTT: Women with Type 1 Diabetes in Pregnancy Trial Collaborators
- Vitamin D and Lifestyle Intervention for Gestational Diabetes Mellitus (GDM) Prevention (DALI) Consortium
- Action Lada European Consortium - Paolo Pozilli, Richard David Leslie
- Real-world evidence studies (ERICAS). Kamlesh Khunti - University of Leicester
- Hospital and Institute for Health Science Research Germans Trias i Pujol (IGTP) (Nuria Alonso, Manel Puig-Domingo)
- Medicine Department, University of Padova (Angelo Avogaro)
- Bioinformatics and Biomedical Signals Laboratory - Alex Perera Lluna
- Vascular and renal translational research group - José Manuel Valdivielso
- Research Group on Obesity, Diabetes and Metabolism (ODIM) - Albert Lecube, Marta Hernández
- Department of Endocrine Physiopathology and the nervous system, Institut d'Investigacions Biomèdiques "Alberto Sols"
- Departament de Medicina, Universitat de Buenos Aires UBA, (Argentina) (F. Pitoia)
- Universidade Federal do Maranhão (Hospital Universitário - Serviço de Endocrinologia), São Luís, Maranhão, Brasil (Marcelo Magalhães Silva)
- Glycotechnology CIC biomaGUNE. San Sebastián, Gipuzkoa (Niels Reichardt)

Active grants

- ROSA CORCOY PLA. Grup de Recerca en Endocrinologia, Diabetes i Metabolisme. Universitat Autònoma de Barcelona, Hospital de la Santa Creu i Sant Pau (EDUAB-HSP). 2017 SGR 01652. Agència de Gestió d'Ajuts Universitaris i de Recerca. Duration 2017-2021. 0,00 €.
- DIEGO MAURICIO PUENTE. Descubrimiento y validación de marcadores de predicción de diabetes tipo 2: proyecto colaborativo de cohortes. PI18/00328. Instituto de Salud Carlos III. Duration 2019-2021. 145.750,00 €.
- PAULA QUIFER RADA. Risk and benefits of Beer and nonalcoholic beer moderate consumption on cardiovascular system. CD18/00172. Instituto de Salud Carlos III. Duration 2019-2022. 80.598,00 €
- NICOLE STANTONYONGE SESNIC. Neurofilamento de cadena ligera en sangre como marcador precoz de alteraciones neurocognitivas en pacientes con diabetes mellitus tipo 1 e hipoglucemia inadvertida. SED 2018. Societat Espanyola de Diabetis. Duration 2018-2021. 18.181,82 €.
- CINTIA GONZALEZ BLANCO. Les xarxes socials com alternativa a l'educació terapèutica tradicional. ACD 2019. Associació Catalana de Diabetis. Duration 2019-2021. 5.454,55 €.
- LILIAN CRISTINA MENDOZA MATHISON. Relación entre los diferentes compuestos de la vitamina D (total, D2, D3, 3-epi-25(OH)D3) y las medidas de homeostasis de la glucosa durante la gestación. Subestudio del proyecto DALI. SED 2020. Societat Espanyola de Diabetis. Duration 2020-2021. 18.000,00 €.
- DIEGO MAURICIO PUENTE. Promoción e impulso de la investigación en el área temática de Diabetes y Enfermedades Metabólicas Asociadas. 292_ateromatosa_dem. Centro de Investigación Biomédica en Red. Duration 2020-2021. 32.157,27 €.

- ROSA CORCOY PLA. Desarrollo de una herramienta para la determinación de riesgo genético y prevención personalizada de la diabetes gestacional. RTC2019-007406-1. Ministeri de Ciència, Innovació i Universitats. Duration 2020-2022. 138.873,74 €.

Note: Total amount granted to PI. It does not include indirect costs.

Other active grants

- Relationship of epicardial fat, lipoprotein function and inflammation with the development of arteriosclerosis and diabetic cardiomyopathy. Antonio Perez - Menarini. 2019 - 2021. 36.000€.
- ¿Puede una aplicación móvil mejorar el conocimiento y la autogestión de las personas con diabetes tipo 1? Evaluación

clínica de la app MySugr®". Cintia González. Roche Diabetes Care. 2019-2021

- Relationship of epicardial fat, lipoprotein function and inflammation with the development of arteriosclerosis and diabetic cardiomyopathy. Antonio Pérez Pérez. Menarini. 2019-2021.
- Proyecto Diabethink, Think Tank de diabetes. Investigador coordinador: Antonio Pérez. Lilly. 2021.
- Rosa Corcoy.
- DALIFUS
- Suficiència vitamina D a mare i nadó
- Vitamina D2, D3 i epimer vitamina D3 & sensibilitat i secreció insulíniques

Grants awarded in 2021

- MANUEL MATEU SALAT, Microperimetria retiniana com a exploració de cribatge precoç d'alteracions neurocognitives en pacients amb diabetis mellitus tipus 1 i hipoglucèmies inadvertides., ACD 2020, Associació Catalana de Diabetis, 2021 - 2023, 9.090,91 €.
- IDOIA GENUA TRULLOS, Relación del volumen de tejido adiposo epicárdico en diabetes con nuevos biomarcadores de insuficiencia cardíaca y perfil de microRNAs., SED 2021, Societat Espanyola de Diabetis, 2021 - 2022, 18.181,82 €.
- MARINA IDALIA ROJO LOPEZ, Descubrimiento y validación de marcadores de predicción de diabetes tipo 2., SLT017/20/000107, Departament de Salut, 2021 - 2024, 103.040,20 €.

Note: Total amount granted to PI. It does not include indirect costs.

Awards Doctoral theses

- Lilian Mendoza, Risk factors for hyperglycemia in pregnancy and vitamin D as a prevention strategy in the DALI study, Universitat Autònoma de Barcelona, Rosa Corcoy i Pla, Alberto Leiva Hidalgo, 14/05/2021
- Maria Belén Vilanova Fillat, Malaltia arterial subclínica en població prediabètica en l'estudi de cohorts prospectiu de Mollerussa, Universitat de Lleida, Dídac Mauricio Puente, Dídac Josep Franch Nadal, 14/01/2021
- Jiaming Liu, Enfermedad tiroidea y gestación: Evolución y resultados del embarazo según el sexo fetal y el estado tiroideo, Universitat Autònoma de Barcelona, Rosa Corcoy i Pla, 14/01/2021

Scientific production

- Abolbaghaei A, Langlois MA, Murphy HR, Feig DS, Burger D, Corcoy R, CONCEPTT GRP. Circulating extracellular vesicles during pregnancy in women with type 1 diabetes: a secondary analysis of the CONCEPTT trial. *Biomarker Research*. 2021; 9(1):67. DOI:10.1186/s40364-021-00322-8. PMID:34488911. IF:6,148 (Q1/D3).
- Arroyo JA, Julve J, Vlachó B, Corcoy R, Ponte P, Roman E, Navas E, Llauro G, Franch J, Domingo P, Mauricio D. Previous Vitamin D Supplementation and Morbidity and Mortality Outcomes in People Hospitalised for COVID-19: A Cross-Sectional Study. *Frontiers in Public Health*. 2021; 9:758347. DOI:10.3389/fpubh.2021.758347. PMID:34631653. IF:3,709 (Q1/D2).
- Bacon S, Burger D, Taylor M, Sanchez JJ, Tomlinson G, Murphy HR, Feig DS, Corcoy R, CONCEPTT GRP. Can placental growth factors explain birthweight variation in offspring of women with type 1 diabetes?. *DIABETOLOGIA*. 2021; 64(7). DOI:10.1007/s00125-021-05438-y. PMID:33839801. IF:10,122 (Q1/D1).
- Ballesteros Pomar MD, Vilarrasa García N, Rubio Herrera MÁ, Barahona MJ, Bueno M, Caixàs A, Calañas Continente A, Ciudin A, Cordido F, de Hollanda A, Diaz MJ, Flores L, García Luna PP, García Pérez-Sevillano F, Goday A, Lecube A, López Gómez JJ, Miñambres I, Morales Gorria MJ, Morinigo R, Nicolau J, Pellitero S, Salvador J, Valdés S, Bretón Lesmes I. The SEEN comprehensive clinical survey of adult obesity: Executive summary. *Endocrinología Diabetes y Nutrición*. 2021;68(2):130-136. English, Spanish. DOI:10.1016/j.endinu.2020.05.003. PMID:32933882. IF:1,417 (Q4/D9).
- Barranco M, Sola P, Picart S, Kanaan S, Fonollosa J, Perera A. mWISE: An Algorithm for Context-Based Annotation of Liquid Chromatography-Mass Spectrometry Features through Diffusion in Graphs. *ANALYTICAL CHEMISTRY*. 2021; 93(31). DOI:10.1021/acs.analchem.1c00238. PMID:34320315. IF:6,986 (Q1/D1).
- Battelino T, Mauricio D. Randomised Controlled Trials in Diabetes Research: A Pathway to Interpreting Published Results. *Diabetes Therapy*. 2021; 12(10). DOI:10.1007/s13300-021-01143-6. PMID:34455574. IF:2,945 (Q3/D8).
- Bellido V, Perez A. COVID-19 and Diabetes. *Journal of Clinical Medicine*. 2021; 10(22):5341. DOI:10.3390/jcm10225341. PMID:34830623. IF:4,241 (Q1/D3).
- Bellido V, Pérez A. Inpatient Hyperglycemia Management and COVID-19. *Diabetes Therapy*. 2021;12(1):121-132. DOI:10.1007/s13300-020-00966-z. PMID: 33278017. IF:2,945 (Q3/D8).
- Bermudez M, Perpnan H, Amigo N, Castro E, Alonso N, Mauricio D, Fernandez E, Valdivielso JM. Advanced lipoprotein parameters could better explain atheromatosis in non-diabetic chronic kidney disease patients. *Clinical Kidney Journal*. 2021; 14(12). DOI:10.1093/ckj/sfab113. PMID:34950470. IF:4,452 (Q1/D3).
- Bermúdez-López M, Martínez-Alonso M, Castro-Boqué E, Betriu À, Cambray S, Farràs C, Barbé F, Pamplona R, Lecube A, Mauricio D, Purroy F, Valdivielso JM, Fernández E; ILERVAS project collaborators. Subclinical atheromatosis localization and burden in a low-to-moderate cardiovascular risk population: the ILERVAS study. *REVISTA ESPANOLA DE CARDIOLOGIA*. 2021;74(12):1042-1053. English, Spanish. DOI:10.1016/j.rec.2020.09.015. PMID: 33162389. IF:4,753 (Q2/D4).
- Bonadonna RC, Mauricio D, Muller D, Freemantle N, Bigot G, Mauquoi C, Ciocca A, Bonnemaire M, Gourdy P. Impact of Age on the Effectiveness and Safety of Insulin Glargine 300 U/ mL: Results from the REALI European Pooled Data Analysis. *Diabetes Therapy*. 2021; 12(4). DOI:10.1007/s13300-021-01030-0. PMID:33650085. IF:2,945 (Q3/D8).
- Bonaterra A, Fernandez S, Rivas A, Puig N, Benitez S, Pancorbo O, Rodriguez D, Pujadas F, Freijo MD, Tur S, Martinez M, Portela PC, Vera R, Lebrato L, Arenillas JF, Perez S, Montaner J, Sanchez JL, Hernandez M. Comparison of Plasma Lipoprotein Composition and Function in Cerebral Amyloid Angiopathy and Alzheimer's Disease. *Biomedicines*. 2021; 9(1):72. DOI:10.3390/biomedicines9010072. PMID:33445800. IF:6,081 (Q1/D2).
- Bundo M, Llussa J, Serra M, de la Iglesia PP, Gimbert RM, Real J, Vlachó B, Mata M, Cos X, Franch J, Mauricio D. Incidence and characteristics of diabetic foot ulcers in subjects with type 2 diabetes in Catalan primary care centres: An observational multicentre study. *Primary Care Diabetes*. 2021; 15(6). DOI:10.1016/j.pcd.2021.08.002. PMID:34419365. IF:2,459 (Q3/D6).
- Castelblanco E, Hernandez M, Ortega E, Amigo N, Real J, Granada M, Minambres I, Lopez C, Lecube A, Bermudez M, Alonso N, Julve J, Mauricio D. Outstanding improvement of the advanced lipoprotein profile in subjects with new-onset type 1 diabetes mellitus after achieving optimal glycemic control. *DIABETES RESEARCH AND CLINICAL PRACTICE*. 2021; 182:109145. DOI:10.1016/j.diabres.2021.109145. PMID:34785302. IF:5,602 (Q1/D3).
- Castelblanco E, Sarrias MR, Betriu A, Soldevila B, Barranco M, Franch J, Valdivielso JM, Bermudez M, Groop PH, Fernandez E, Alonso N, Mauricio D. Circulating CD5L is associated with cardiovascular events and all-cause mortality in individuals with chronic kidney disease. *Ageing-US*. 2021; 13(19). DOI:10.18632/aging.203615. PMID:34629330. IF:5,682 (Q1/D2).
- Chiva G, Pena E, Cubedo J, Garcia M, Pane A, Gil PA, Perez A, Ortega E, Padro T, Badimon L. Molecular mapping of platelet hyperreactivity in diabetes: the stress proteins complex HSPA8/Hsp90/CSK2 alpha and platelet aggregation in diabetic and normal platelets. *Translational Research*. 2021; 235. DOI:10.1016/j.trsl.2021.04.003. PMID:33887528. IF:7,012 (Q1/D1).
- Colom C, Rull A, Sanchez JL, Perez A. Cardiovascular Disease in Type 1 Diabetes Mellitus: Epidemiology and Management of Cardiovascular Risk. *Journal of Clinical Medicine*. 2021; 10(8):1798. DOI:10.3390/jcm10081798. PMID:33924265. IF:4,241 (Q1/D3).

- Dieberger AM, Desoye G, Stolz E, Hill DJ, Corcoy R, Simmons D, Harreiter J, Kautzky-Willer A, Dunne F, Devlieger R, Wender-Ozegowska E, Zawiejska A, Lapolla A, Dalfrà MG, Bertolotto A, Galjaard S, Adelantado JM, Jensen DM, Andersen LL, Tanvig M, Damm P, Mathiesen ER, Snoek FJ, Jelsma JGM, van Poppel MNM. Less sedentary time is associated with a more favourable glucose-insulin axis in obese pregnant women—a secondary analysis of the DALI study. *INTERNATIONAL JOURNAL OF OBESITY*. 2021;45(2):296–307. DOI:10.1038/s41366-020-0639-y. PMID: 32661292. IF:5,095 (Q2/D3).
- Doria M, Betriu A, Belart M, Rosado V, Hernandez M, Sarro F, Real J, Castelblanco E, Pacheco LR, Fernandez E, Franch J, Gratacos M, Mauricio D. High Incidence of Adverse Outcomes in Haemodialysis Patients with Diabetes with or without Diabetic Foot Syndrome: A 5-Year Observational Study in Lleida, Spain. *Journal of Clinical Medicine*. 2021; 10(7):1368. DOI:10.3390/jcm10071368. PMID:33810545. IF:4,241 (Q1/D3).
- Falguera M, Castelblanco E, Rojo MI, Vilanova MB, Real J, Alcubierre N, Miro N, Mollo A, Mata M, Franch J, Granado M, Mauricio D. Mediterranean Diet and Healthy Eating in Subjects with Prediabetes from the Mollerussa Prospective Observational Cohort Study. *Nutrients*. 2021; 13(1):252. DOI:10.3390/nu13010252. PMID:33467197. IF:5,717 (Q1/D2).
- Fuster VP, Perez AP, Gomez JC, Pedragos AC, Gomez R, Perez P. Executive summary: Updates to the dietary treatment of prediabetes and type 2 diabetes mellitus. *Endocrinologia Diabetes y Nutricion*. 2021; 68(4). DOI:10.1016/j.endinu.2020.10.009. PMID:33593709. IF:1,417 (Q4/D9).
- Fustera VP, Perez AP, Gomez JC, Pedragos AC, Gomez R, Perez P. Executive summary: Updates to the dietary treatment of prediabetes and type 2 diabetes mellitus. *REVISTA CLINICA ESPANOLA*. 2021; 221(3). DOI:10.1016/j.rce.2020.10.009. PMID:33998467. IF:1,556 (Q3/D7).
- Genua I, Puig N, Minambres I, Benitez S, Gil P, Grau M, Rivas A, Balague C, Fernandez S, Garcia A, Perez A, Sanchez JL. Changes in the Composition and Function of Lipoproteins after Bariatric Surgery in Patients with Severe Obesity. *Journal of Clinical Medicine*. 2021; 10(8):1716. DOI:10.3390/jcm10081716. PMID:33923393. IF:4,241 (Q1/D3).
- Genua I, Tuneu L, Ramos A, Stantonoyonge N, Caimari F, Balagué C, Fernández-Ananin S, Sánchez-Quesada JL, Pérez A, Miñambres I. Effectiveness of Bariatric Surgery in Patients with the Metabolically Healthy Obese Phenotype. *Obesity Surgery*. 2021;31(2):517–522. DOI:10.1007/s11695-020-04967-6. PMID: 32915359. IF:4,129 (Q1/D2).
- Gimenez G, Franch J, Ortega E, Mata M, Goday A, Real J, Rodriguez A, Vlachos B, Mauricio D. Clinical Characteristics and Degree of Glycemic and Cardiovascular Risk Factor Control in Patients with Type 1 Diabetes in Catalonia (Spain). *Journal of Clinical Medicine*. 2021; 10(7):1536. DOI:10.3390/jcm10071536. PMID:33917523. IF:4,241 (Q1/D3).
- Gimeno JA, Rodriguez L, Anguita M, Barrios V, Muniz J, Perez A. Association of the KDIGO Risk Classification with the Prevalence of Heart Failure in Patients with Type 2 Diabetes. *Journal of Clinical Medicine*. 2021; 10(20):4634. DOI:10.3390/jcm10204634. PMID:34682756. IF:4,241 (Q1/D3).
- Granado M, Martinez D, Martinez M, Doria M, Alcubierre N, Valls J, Julve J, Verdu J, Mauricio D. Psychometric Validation of the Cardiff Wound Impact Schedule Questionnaire in a Spanish Population with Diabetic Foot Ulcer. *Journal of Clinical Medicine*. 2021; 10(17):4023. DOI:10.3390/jcm10174023. PMID:34501471. IF:4,241 (Q1/D3).
- Gras JR, Rodriguez F, Gomez B, Cubero JM, Martel M, Granell E, Lopez M, Montserrat JR, Masegur H. Management of Patients With Graves Orbitopathy Using Endonasal Endoscopic Techniques. *JOURNAL OF CRANIOFACIAL SURGERY*. 2021; 32(4). DOI:10.1097/SCS.000000000000107. PMID:33170828. IF:1,046 (Q4/D9).
- Hernandez M, Mauricio D. Latent Autoimmune Diabetes in Adults: A Review of Clinically Relevant Issues. *Advances in Experimental Medicine and Biology*. 2021; 1307. DOI:10.1007/978-1-4939-9533-3. PMID:32424495. IF:2,622 (Q2/D5).
- Iglesias P, Peiro I, Biagetti B, Paja M, Cobo DA, Gomez CG, Mateu M, Genua I, Majem M, Riudavets M, Gavira J, Lamas C, Pombo AF, Guerrero F, Villabona C, Agricola JMC, Webb SM, Diez JJ. Immunotherapy-induced isolated ACTH deficiency in cancer therapy. *ENDOCRINE-RELATED CANCER*. 2021; 28(12). DOI:10.1530/ERC-21-0228. PMID:34609950. IF:5,678 (Q1/D3).
- Immanuel J, Simmons D, Harreiter J, Desoye G, Corcoy R, Adelantado JM, Devlieger R, Lapolla A, Dalfrà MG, Bertolotto A, Wender-Ozegowska E, Zawiejska A, Dunne FP, Damm P, Mathiesen ER, Jensen DM, Andersen LL, Hill DJ, Jelsma JGM, Kautzky-Willer A, Galjaard S, Snoek FJ, van Poppel MNM. Metabolic phenotypes of early gestational diabetes mellitus and their association with adverse pregnancy outcomes. *Diabetic Medicine*. 2021;38(2):e14413. DOI:10.1111/dme.14413. PMID: 32991758. IF:4,359 (Q2/D4).
- Julián MT, Pera G, Soldevila B, Caballería L, Julve J, Puig C, Morillas R, Torán P, Expósito C, Puig M, Castelblanco E, Franch J, Cusi K, Mauricio D, Alonso N. Atherogenic dyslipidemia, but not hyperglycemia, is an independent factor associated with liver fibrosis in subjects with type 2 diabetes and NAFLD: A population-based study. *EUROPEAN JOURNAL OF ENDOCRINOLOGY*. 2021; 184(4). DOI:10.1530/EJE-20-1240. PMID:33606661. IF:6,664 (Q1/D2).
- Lázaro Martínez JL, Almaraz MC, Álvarez Hermida Á, Blanes Mompó I, Escudero Rodríguez JR, García Morales EA, March García JR, Rivera San Martín G, Rodríguez Sáenz de Buruaga V, Rosendo Fernández JM, Rubio García JA, Mauricio D. Consensus document on actions to prevent and to improve the management of diabetic foot in Spain. *Endocrinologia Diabetes y Nutricion*. 2021;68(7):509–513. DOI:10.1016/j.endien.2020.08.016. PMID: 34863416. IF:1,417 (Q4/D9).

- Lima RA, Desoye G, Simmons D, Devlieger R, Galjaard S, Corcoy R, Adelantado JM, Dunne F, Harreiter J, Kautzky-Willer A, Damm P, Mathiesen ER, Jensen DM, Andersen LT, Tanvig M, Lapolla A, Dalfrà MG, Bertolotto A, Manta U, Wender-Ozegowska E, Zawiejska A, Hill DJ, Snoek FJ, Jelsma JGM, van Poppel M. The importance of maternal insulin resistance throughout pregnancy on neonatal adiposity. *PAEDIATRIC AND PERINATAL EPIDEMIOLOGY*. 2021;35(1):83–91. DOI:10.1111/ppe.12682. PMID: 32352590. IF:3,980 (Q1/D2).
- Magliano DJ, Chen L, Islam RM, Carstensen B, Gregg EW, Pavkov ME, Andes LJ, Balicer R, Baviera M, Boersma E, Booth GL, Chan JCN, Chua YX, Fosse S, Fuentes S, Gulseth HL, Gurevicius R, Ha KH, Hird TR, Jermendy G, Khalangot MD, Kim DJ, Kiss Z, Kravchenko VI, Leventer M, Lin CY, Luk A, Mata M, Mauricio D, Nichols GA, Nielen MM, Pang D, et al. Trends in the incidence of diagnosed diabetes: a multicountry analysis of aggregate data from 22 million diagnoses in high-income and middle-income settings. *Lancet Diabetes & Endocrinology*. 2021; 9(4). DOI:10.1016/S2213-8587(20)30402-2. PMID:33636102. IF:32,069 (Q1/D1).
- Martínez JLL, Almaraz MC, Hermida AA, Mompo IB, Rodríguez J, Morales E, García JRM, San Martín GR, de Buruaga VRS, Fernández JMR, García J, Mauricio D. Consensus document on actions to prevent and to improve the management of the diabetic foot in Spain. *Endocrinología Diabetes y Nutrición*. 2021; 68(7). DOI:10.1016/j.endinu.2020.08.001. PMID:33160948. IF:1,417 (Q4/D9).
- Mata M, Franch J, Real J, Vlachó B, Gómez A, Mauricio D. Evaluation of clinical and antidiabetic treatment characteristics of different sub-groups of patients with type 2 diabetes: Data from a Mediterranean population database. *Primary Care Diabetes*. 2021; 15(3). DOI:10.1016/j.pcd.2021.02.003. PMID:33602606. IF:2,459 (Q3/D6).
- Mateu M, Corcoy R. Labetalol and hypoglycaemia unawareness: two case reports and considerations about its use as an antihypertensive drug for women with diabetes and pregnancy. *ACTA DIABETOLOGICA*. 2021; 58(6). DOI:10.1007/s00592-021-01688-9. PMID:33638710. IF:4,280 (Q2/D5).
- Mauricio D, Gourdy P, Bonadonna RC, Freemantle N, Bigot G, Mauquoi C, Ciocca A, Bonnemaire M, Müller D. Glycaemic Control with Insulin Glargine 300 U/mL in Individuals with Type 2 Diabetes and Chronic Kidney Disease: A REALI European Pooled Data Analysis. *Diabetes Therapy*. 2021; 12(4). DOI:10.1007/s13300-021-01031-z. PMID:33751403. IF:2,945 (Q3/D8).
- Mauricio D, Westerbacka J, Nicholls C, Wu J, Gupta R, Eliasson B. How many people with type 2 diabetes fulfil the eligibility criteria for randomized, controlled trials of insulin glargine 300 U/mL in a real-world setting? *DIABETES OBESITY & METABOLISM*. 2021;23(3):838–843. DOI:10.1111/dom.14264. PMID: 33236461. IF:6,577 (Q1/D2).
- Meek CL, Corcoy R, Asztalos E, Kusinski LC, Lopez E, Feig DS, Murphy HR, CONCEPTT GRP. Which growth standards should be used to identify large- and small-for-gestational age infants of mothers with type 1 diabetes? A pre-specified analysis of the CONCEPTT trial. *BMC Pregnancy and Childbirth*. 2021; 21(1):96. DOI:10.1186/s12884-021-03554-6. PMID:33514342. IF:3,007 (Q2/D4).
- Meek CL, Tundidor D, Feig DS, Yamamoto JM, Scott EM, Ma D, Halperin JA, Murphy HR, Corcoy R. Novel Biochemical Markers of Glycemia to Predict Pregnancy Outcomes in Women With Type 1 Diabetes. *DIABETES CARE*. 2021; 44(3). DOI:10.2337/dc20-2360. PMID:33495292. IF:19,112 (Q1/D1).
- Mendez KA, Rodríguez E, Sebastian D, Blanco R, Camacho M, Nan MN, Diarte E, Mato E, Lope S, Roglans N, Laguna JC, Alonso N, Mauricio D, Zorzano A, Villarroya F, Villena JA, Blanco F, Julve J. Nicotinamide Protects Against Diet-Induced Body Weight Gain, Increases Energy Expenditure, and Induces White Adipose Tissue Beiging. *MOLECULAR NUTRITION & FOOD RESEARCH*. 2021; 65(11):2100111. DOI:10.1002/mnfr.202100111. PMID:33870623. IF:5,914 (Q1/D2).
- Minambres I, Sánchez J, Cuixart G, Sánchez A, Sarroca J, Pérez A. Characterization of the hypertriglyceridemic waist phenotype in patients with type 2 diabetes mellitus in Spain: an epidemiological study. *REVISTA CLINICA ESPANOLA*. 2021; 221(10). PMID:34839890. IF:1,556 (Q3/D7).
- Nan MN, Roig R, Martínez S, Rives J, Urgell E, Espinos JJ, Tirado M, Carreras G, Aulinas A, Webb SM, Corcoy R, Blanco F, Tondo M. Comprehensive Genetic Testing of CYP21A2: A Retrospective Analysis in Patients with Suspected Congenital Adrenal Hyperplasia. *Journal of Clinical Medicine*. 2021; 10(6):1183. DOI:10.3390/jcm10061183. PMID:33809035. IF:4,241 (Q1/D3).
- Ortega E, Corcoy R, Gratacos M, Claramunt FXC, Mata M, Puig R, Real J, Vlachó B, Castelblanco E, Domingo P, Khunti K, Franch J, Mauricio D. Risk factors for severe outcomes in people with diabetes hospitalised for COVID-19: a cross-sectional database study. *BMJ Open*. 2021; 11(7):e051237. DOI:10.1136/bmjopen-2021-051237. PMID:34301668. IF:2,692 (Q2/D4).
- Oyaguez I, Gómez F, Artola S, Carrasco FJ, Carretero J, García J, Gómez R, Merino JF, Pérez A. Cost Analysis of FreeStyle Libre(R) 2 System in Type 2 Diabetes Mellitus Population. *Diabetes Therapy*. 2021; 12(9). DOI:10.1007/s13300-021-01064-4. PMID:33948909. IF:2,945 (Q3/D8).
- Paz-Graniel I, Babio N, Becerra-Tomás N, Toledo E, Camacho-Barcia L, Corella D, Castañer-Niño O, Romaguera D, Vioque J, Alonso-Gómez ÁM, Wärnberg J, Martínez JA, Serra-Majem L, Estruch R, Tinahones FJ, Fernández-Aranda F, Lapetra J, Pintó X, Tur JA, García-Ríos A, Bueno-Cavanillas A, Gaforio JJ, Matía-Martín P, Daimiel L, Sánchez VM, Vidal J, et al.; PREDIMED-Plus Investigators [Pérez A]. Association between coffee consumption and total dietary caffeine intake with cognitive functioning: cross-sectional assessment in an elderly Mediterranean population. *EUROPEAN JOURNAL OF NUTRITION*.

2021;60(5):2381-2396. DOI:10.1007/s00394-020-02415-w. PMID: 33125576. IF:5,614 (Q1/D3).

• Purroy F, Sanchez E, Lecube A, Arque G, Vicente M, Mauri G, Torreguitart N, Hernandez M, Barbe F, Fernandez E, Pamplona R, Farras C, Mauricio D, Bermudez M. Prevalence and Predictors of Cerebral Microangiopathy Determined by Pulsatility Index in an Asymptomatic Population From the ILERVAS Project. *Frontiers in Neurology*. 2021; 12:785640. DOI:10.3389/fneur.2021.785640. PMID:34970215. IF:4,003 (Q2/D4).

• Real J, Vlachos B, Ortega E, Valles JA, Mata M, Castelblanco E, Wittbrodt ET, Fenici P, Kosiborod M, Mauricio D, Franch J. Cardiovascular and mortality benefits of sodium-glucose co-transporter-2 inhibitors in patients with type 2 diabetes mellitus: CVD-Real Catalonia. *Cardiovascular Diabetology*. 2021; 20(1):139. DOI:10.1186/s12933-021-01323-5. PMID:34243779. IF:9,951 (Q1/D1).

• Revilla G, Cedo L, Tondo M, Moral A, Perez JI, Corcoy R, Lerma E, Fuste V, Reddy TS, Blanco F, Mato E, Escola JC. LDL, HDL and endocrine-related cancer: From pathogenic mechanisms to therapies. *SEMINARS IN CANCER BIOLOGY*. 2021; 73. DOI:10.1016/j.semcancer.2020.11.012. PMID:33249202. IF:15,707 (Q1/D1).

• Rojo MI, Castelblanco E, Real J, Hernandez M, Falguera M, Amigo N, Julve J, Alonso N, Franch J, Granada M, Mauricio D. Advanced Quantitative Lipoprotein Characteristics Do Not Relate to Healthy Dietary Patterns in Adults from a Mediterranean Area. *Nutrients*. 2021; 13(12):4369. DOI:10.3390/nu13124369. PMID:34959921. IF:5,717 (Q1/D2).

• Rotllan N, Camacho M, Tondo M, Diarte E, Canyelles M, Mendez KA, Benitez S, Alonso N, Mauricio D, Escola JC, Blanco F, Julve J. Therapeutic Potential of Emerging NAD plus -Increasing Strategies for Cardiovascular Diseases. *Antioxidants*. 2021; 10(12):1939. DOI:10.3390/antiox10121939. IF:6,312 (Q1/D1).

• Sampedro F, Stantonoyonge N, Martínez-Horta S, Nan N, Camacho V, Chico A. Increased cerebral FDG-PET uptake in type 1 diabetes patients with impaired awareness of hypoglycaemia. *JOURNAL OF NEUROENDOCRINOLOGY*. 2021;33(1):e12910. DOI:10.1111/jne.12910. PMID: 33176042. IF:3,627 (Q3/D6).

• Sanchez M, Sanchez E, Bermudez M, Torres G, Farras C, Pamplona R, Castro E, Valdivielso JM, Purroy F, Martinez M, Godoy P, Mauricio D, Fernandez E, Hernandez M, Rius F, Lecube A. Clinical Usefulness of Anthropometric Indices to Predict the Presence of Prediabetes. Data from the ILERVAS Cohort. *Nutrients*. 2021; 13(3):1002. DOI:10.3390/nu13031002. PMID:33808883. IF:5,717 (Q1/D2).

• Sorensen AE, van MNM, Desoye G, Damm P, Simmons D, Jensen DM, Dalgaard LT, Corcoy R, DALI Core Investigator GRP. The Predictive Value of miR-16,-29a and-134 for Early Identification of Gestational Diabetes: A Nested Analysis of the DALI Cohort. *Cells*. 2021; 10(1):170. DOI:10.3390/cells10010170. PMID:33467738. IF:6,600 (Q2/D3).

• Stantonoyonge N, Martinez S, Sampedro F, Sanchez MB, Chico A. Defective involuntary attention to novelty in type 1 diabetes and impaired awareness of hypoglycaemia. *DIABETES RESEARCH AND CLINICAL PRACTICE*. 2021; 177:108898. DOI:10.1016/j.diabres.2021.108898. PMID:34098058. IF:5,602 (Q1/D3).

• Stantonoyonge N, Sampedro F, Mendez J, Martinez S, Chico A, Gomez B. Structural Gray and White Matter Differences in Patients With Type 1 Diabetes and Impaired Awareness of Hypoglycemia. *JOURNAL OF CLINICAL ENDOCRINOLOGY & METABOLISM*. 2021; 106(2). DOI:10.1210/clinem/dgaa832. PMID:33180907. IF:5,958 (Q1/D2).

• Teis A, Cediell G, Amigo N, Julve J, Aranyo J, Andres J, Puig C, Castelblanco E, Gual F, Ferrer E, Vallejo N, Junca G, Lopez J, De Antonio M, Domingo M, Santiago E, Codina P, Mauricio D, Lupon J, Alonso N, Bayes A. Particle size and cholesterol content of circulating HDL correlate with cardiovascular death in chronic heart failure. *Scientific Reports*. 2021; 11(1):3141. DOI:10.1038/s41598-021-82861-6. PMID:33542459. IF:4,379 (Q1/D3).

• Tundidor D, Meek CL, Yamamoto J, Martinez C, Gich I, Feig DS, Murphy HR, Corcoy R. Continuous Glucose Monitoring Time-in-Range and HbA(1c) Targets in Pregnant Women with Type 1 Diabetes. *Diabetes Technology & Therapeutics*. 2021; 23(10). DOI:10.1089/dia.2021.0073. PMID:33945304. IF:6,118 (Q1/D2).

• Vlachos B, Mata M, Mundet X, Valles JA, Real J, Farre M, Cos X, Khunti K, Mauricio D, Franch J. Analysis of the Adherence and Safety of Second Oral Glucose-Lowering Therapy in Routine Practice From the Mediterranean Area: A Retrospective Cohort Study. *Frontiers in Endocrinology*. 2021; 12:708372. DOI:10.3389/fendo.2021.708372. PMID:34335477. IF:5,555 (Q1/D3).

• Vlachos B, Mundet X, Mata M, Valles JA, Real J, Farre M, Cos FX, Khunti K, Mauricio D, Franch J. Analysis of the effectiveness of second oral glucose-lowering therapy in routine clinical practice from the mediterranean area: A retrospective cohort study. *DIABETES RESEARCH AND CLINICAL PRACTICE*. 2021; 171:108616. DOI:10.1016/j.diabres.2020.108616. PMID:33310172. IF:5,602 (Q1/D3).

Other scientific production

• Escalada J, Perez A. COULD THE COVID-19 PANDEMIC BE AN OPPORTUNITY FOR IMPROVEMENT OF OUR CARE, TRAINING AND RESEARCH ACTIVITIES?. *Endocrinologia Diabetes y Nutricion*. 2021; 68(2). DOI:10.1016/j.endinu.2021.01.001. IF:1,417 (Q4/D9).

• Mendoza LC, Bolibar I, Puig T, Corcoy R. No deleterious effect of an additional pregnancy on glucose metabolism in women with previous gestational diabetes mellitus. The study design is a cohort study. *DIABETES RESEARCH AND CLINICAL PRACTICE*. 2021; 179:108949. DOI:10.1016/j.diabres.2021.108949. PMID:34270963. IF:5,602 (Q1/D3).

• Oyaguez I, Gomez F, Artola S, Carrasco FJ, Carretero J, Garcia J, Gomez R, Merino JF, Perez A. Cost Analysis of FreeStyle Libre

2 System in Type 2 Diabetes Mellitus Population (May, 10.1007/s13300-021-01064-4, 2021). *Diabetes Therapy*. 2021; 12(8). DOI:10.1007/s13300-021-01093-z. PMID:34241813. IF:2,945 (Q3/D8).

Other publications

- Ahmed RJ, Gafni A, Hutton EK, Hu ZJ, Sanchez JJ, Murphy HR, Feig DS, Corcoy R, CONCEPTT G. The cost implications of continuous glucose monitoring in pregnant women with type 1 diabetes in 3 Canadian provinces: a posthoc cost analysis of the CONCEPTT trial. *Cmaj Open*. 2021; 9(2)DOI:10.9778/cmajo.20200128. PMID:34088734.
- Armario P, Brotons C, Elosua R, de Lecinana MA, Castro A, Clara A, Cortes O, Rodriguez AD, Herranz M, Justo S, Lahoz C, Pedro J, Perez AP, Santamaria R, Tresserras R, Lain SA, Royo MA. Statement of the Spanish Interdisciplinary Vascular Prevention Committee on the updated European Cardiovascular Prevention Guidelines. *Clinica E Investigacion En Arteriosclerosis*. 2021; 33(2). DOI:10.1016/j.arteri.2020.11.004. PMID:33495044.
- Teis A, Castelblanco E, Cediell G, Amigó N, Julve J, Ribalta J, Guardiola M, Franch J, Bermúdez M, Codina P, Lupón J, Mauricio D, Alonso N, Bayés A. (1)H-magnetic resonance spectroscopy lipoprotein profile in patients with chronic heart failure versus matched controls. *Revista Espanola De Cardiologia (english Ed.)*. DOI:10.1016/j.rec.2021.09.008. PMID:34716123.

Books or chapters with ISBN

- Gonzalez C. Guía de uso: sistemas de asa cerrada. Edita 2021 Sociedad Española de diabetes (SED) (©). Primera edición. ISBN 978-84-09-31438-6

Communication and dissemination activities

Outreach activities

- European Researchers Night. "Del pacient a la recerca clínica. Model de recerca translacional. Centre cívic Vil·la Urània. Eugènia Mato, JL. Pérez. September 2021
- Salud sin bulos (<https://saludsinbulos.com/>). Permanent collaborator: C. Gonzalez
- Diabetes patient associations in Madrid and Catalunya. Permanent collaborator: C. Gonzalez.
<https://diabetesmadrid.org/que-es-la-diabetes-tipo-3c/>
<https://diabetesmadrid.org/esta-pancreas-artificial-a-la-vuelta-de-la-esquina/>
<https://adc.cat/wp-content/uploads/2021/02/Revista-Paraules-que-curen.pdf>

• Escolab Workshop for secondary school students. "Aplicació del mètode científic per la identificació de dianes terapèutiques que ajuden a desenvolupar nous fàrmacs antitumorals" Speakers: E. Mato, G. Revilla. March 2021.

• II CONGRESO VIRTUAL DEL MOVIMIENTO DIABETES. 12-15 April 2021. Title: Soluciones que aportan valor a la reconexión con el paciente con DM2. A. Pérez.

• Tercer Congrés de Diabetes Influencers. ADC, November 2021, Barcelona. Title: Noves tecnologies en diabetis i avenços. R. Corcoy.

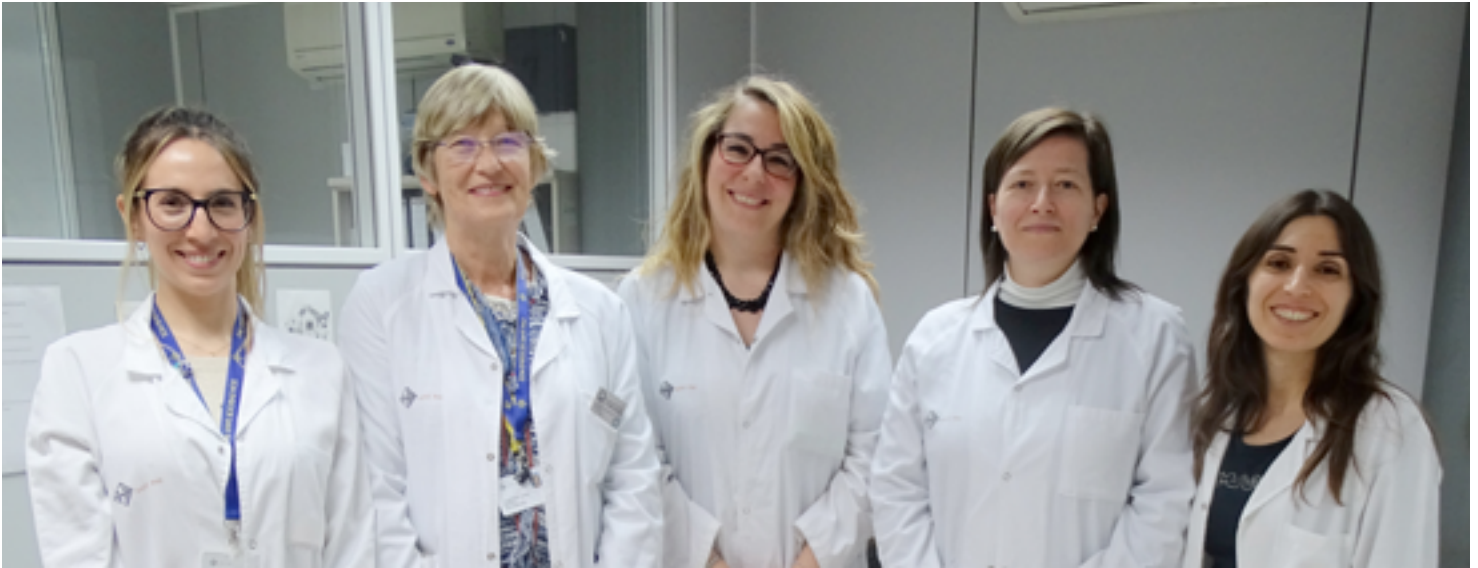
Scientific dissemination activities

- II Congreso Paraguayo de Endocrinología, Diabetes y Metabolismo. Virtual, 10 June 2021. Title: Enfermedad ateromatosa en diabetes tipo 1 y tipo 2. D. Mauricio.
- European Congress of Endocrinology 2021. The future of endocrinology AI and big data Conference. Title: Artificial intelligence in the clinical setting,. D. Mauricio. Online. 25 May 2021.
- II Congreso Paraguayo de Endocrinología, Diabetes y Metabolismo. Online. 11 June 2021. Title: Diabetes LADA y MODY. Criterios diagnósticos y manejo. D. Mauricio.
- Ascensia Diabetes Care. February 2021. Online. Title: Actualización en diabetes y gestación. R. Corcoy.
- Nicolae Paulescu Postgraduate Course. Type 1 diabetes and insulin-therapy at the Centenary of insulin. Novembre 2021, Romania. Title: Diabetes and pregnancy. R. Corcoy.
- 17 Congreso Portugués de Diabetes. 13 /03/ 2021 (online). Title: Teleconsulta de diabetes. C. Gonzalez.
- Congreso EASD 28.9.2021 (online).Title: Initial experience with AccuChek Insight-DBLG1-Diabeloop. Simposium satélite Where do we stand in terms of clinical evidence with closed Loop systems? A. Chico
- 53rd Annual Diabetes and Pregnancy Study Group Meeting. Title: Effects of vitamin D3 supplementation in obese pregnant women on maternal and fetal lipid metabolism. Authors: J Harreiter, L. Mendoza, G Desoye, D Simmons, MNM van Poppel, D. Bancher-Todesca, R Corcoy, A. Kautzky-Willer on behalf of DALI Core Investigator Group.
- 53rd Annual Diabetes and Pregnancy Study Group Meeting. Title: Relationship between vitamin D compounds and glucose homeostasis measures in obese pregnant women in the DALI study. Authors: L Mendoza, J Harreiter, G Desoye, D Simmons, JM Adelantado, A Kautzky-Willer, MNM van Poppel, R Corcoy on behalf of DALI Core Investigator Group.
- Congreso SEC21 de la Salud Cardiovascular. Zaragoza 28-30 Oct 2021. Title: ¿Cómo seleccionar los fármacos hipoglucemiantes en los pacientes con enfermedad cardiovascular? A. Pérez.

- Novenas Jornadas Científicas del CEIPV. Ministerio de Sanidad, Madrid 18 Nov 2021. Title: Papel de los inhibidores de la SGLT2 en la prevención vascular. A. Pérez.
- XXXIII Congreso de la SVEDyN 2021, Alicante, 26–27 Nov 2021. Title: 100 años de insulina: ¿En qué han mejorado? A. Pérez.
- XIV Foro Gerendia, Madrid 12 Nov 2021. Title: Telemedicina e Innovación en Diabetes. A. Pérez.
- XIX Jornadas de Actualización en Lípidos, Diabetes e Hipertensión. Castellón 27–28 Oct 2021. Title: ¿Cómo podemos individualizar/personalizar el tratamiento en la DM2? A. Pérez.
- XXXII Congreso de la SED. Online. 17 June 2021. Title: ¿Podemos reducir el riesgo cardiovascular en los pacientes con DM y CLDL en objetivo? A. Pérez.
- XXXII Congreso de la SED. Virtual 18 June 2021. Title: Necesidades no cubiertas en el abordaje del paciente con diabetes tipo 2 antes y después del covid-19. ¿estamos preparados para dar respuestas? A. Pérez.
- Sociedad Española de Bioquímica y Biología Molecular (SEBBM). Programa la bioquímica en la Ciudad. Barcelona, 2021. Title: Evolution and cancer: related or just a coincidence. Eugenia Mato
- 62 Congreso de la Sociedad Española de Endocrinología y Nutrición (SEEN). Sevilla, 14/10/2021. Title: MCG en situaciones especiales. C. Gonzalez
- XXXII Congreso Nacional de la Sociedad Española de Diabetes, Virtual, 16–18 June 2021. Title: Experiencia inicial con la microinfusora accucheck aviva solo en pacientes con diabetes tipo 1: elevado grado de satisfacción y mejoría del control glucémico. Authors: H. Sardà Simó , Q.Aslla , R. Corcoy, C. Martínez , B. Peñalba , C. González y A. Chico.
- XXXII Congreso Nacional de la Sociedad Española de Diabetes, Virtual, 16–18 June 2021. Title: Inmunoterapia oncológica y toxicidad endocrinológica, ¿qué efectos tiene? Authors: Q. Aslla Roca , H. Sardà Simó , È. Álvarez Guivernau , M. Mateu-Salat , Á.J. Rosales Rojas , J. Gavira Díaz , M. Riudavets Melià , M. Majem Tarruella , I. Genua Trullós y C. González Blanco.
- XXXII Congreso Nacional de la Sociedad Española de Diabetes, Virtual, 16–18 June 2021. Title: El sistema integrado híbrido accucheck insight -diabeloop incrementa tiempo en rango con descenso de hipoglucemias grado 1 en adultos con diabetes tipo 1. Authors: È. Álvarez Guivernau , R. Corcoy Pla, C. González Blanco, A. López Argudo y A. Chico Ballesteros.
- XXXII Congreso Nacional de la Sociedad Española de Diabetes, Virtual, 16–18 June 2021. Title: Características y evolución del síndrome de cushing paraneoplásico: serie de seis casos. Authors: Á. Rosales, È. Álvarez, Q. Aslla, H. Sardà, L. Alarcón, A. Aulinas, S. Webb, C. Gonzalez, I. Genua y A. Chico.
- 62 Congreso de la SEEN, Sevilla, 13–15 October 2021. Title: La diabetes como factor pronóstico de ingreso hospitalario en pacientes covid+. Estudio aphosdiab-covid. Authors: Ana Cebrián-Cuenca, Domingo Orozco-Beltrán, Luis Ávila Lachica, Inmaculada Candela Candela García, Franciso Javier Ortega Ríos, Manel Mata, Antonio Pérez-Pérez.
- 62 Congreso de la SEEN, Sevilla, 13–15 October 2021. Title: La retinopatía diabética es un predictor de enfermedad cardiovascular independiente de la ateromatosis en pacientes con diabetes tipo 2: un estudio prospectivo. Authors: Minerva Granado-Casas, Esmeralda Castelblanco, Eudald Correig, Marta Hernández, Emilio Ortega, Didac Mauricio.
- XXXII Congreso Nacional de la Sociedad Española de Diabetes (online).Title: Relación entre los compuestos de vitamina D y las medidas de homeostasis de la glucose en gestantes participantes en el estudio DALI. Authors: Lilian C Mendoza Mathison, Jürgen Harreiter, Gernot Desoye, David Simmons, Juan María Adelantado, Mireille NM van Poppel, Rosa Corcoy.

Courses

- Uso de los sistemas de monitorización flash de glucosa. C. Gonzalez. Curso on-line de la Sociedad Española de Diabetes. Update SEEN en DM1. A. Chico. Nov 2020–Feb 2021
- ¿Qué es la monitorización flash de glucosa? Actualización sobre monitorización flash de glucosa en diferentes niveles asistenciales. A. Chico. Area de conocimiento de diabetes de la SEEN. 22.4.21
- XXVII Curso Patología Endocrina Médico-quirúrgica. E.Mato. Organiser: Hospital Universitari Vall d'Hebron. Dec 2021.



Pituitary Gland Disorders

Coordinator

Webb Youdale, Susana FGS
swebb@santpau.cat

Members

Aulinas Maso, Anna	FGS	Resmini , Eugenia	CIBERER
Gil Ortega, Joan	CIBERER	Santos Vives, Alicia	IR
Martel Duguech, Luciana María	IR	Valassi , Elena	CIBERER

Main lines of research

- Role of myosteatosis in the development and persistence of residual muscle weakness in treated acromegaly and Cushing syndrome. Study of the involved mechanisms.
- Effect of an individualized exercise program on muscle structure and function, and patient well-being.
- ERCUSYN: European Registry of Cushing's Syndrome. Maintenance and operation of the database containing more than 2000 patients and is the largest one so far worldwide on these patients.
- Study of bone microarchitecture and resistance and factors that determine them in Cushing's syndrome or acromegaly in remission. Model for investigating the body's bone-fat interaction
- Study of the physiological and pathological secretion of oxytocin in humans besides pregnancy and lactation. Identification and clinical relevance of an oxytocin deficient state in patients with hypothalamic and pituitary diseases, who are presumably at highest risk for an oxytocin deficiency.
- Etiology and extent of impaired quality of life, fatigue and cognitive, affective and emotional dysfunction in patients with Cushing's syndrome. Prospective studies using structural and functional magnetic resonance imaging, positron emission tomography, genetic and cerebrospinal fluid analysis.
- Effects of Mindfulness therapy in patients with acromegaly and Cushing's syndrome
- Spanish Molecular Registry on Pituitary Adenomas (REMAH study).

- Collaboration in the international consortium to identify genes and pathogenic mechanisms involved in the development of craniopharyngiomas and pituitary adenomas.
- Epidemiology of hypothalamic pituitary diseases in Catalonia

Scientific Challenges

- Evaluate long-term persistent morbidity and mortality in patients who have had Cushing's syndrome or acromegaly especially bone quality, psychological outcomes, muscular dysfunction and quality of life.
- Analyze and update the European database of patients with Cushing syndrome (ERCUSYN), which in 2020 included over 2000 patients, with partners from 53 centers in 26 countries.
- Identification of a provocative test to unmask an oxytocin deficient state in patients with hypothalamic and pituitary diseases using a randomized, crossover, placebo-controlled design.
- Conduct in vitro molecular analysis of operated pituitary adenomas within the REMAH (Molecular Registry of Pituitary Adenomas) study, sponsored by the Spanish Endocrinology and Nutrition Society (SEEN), to investigate personalized markers of therapeutic response (mainly in acromegaly, corticotroph adenomas and non-functioning pituitary adenomas).
- Analyze clinical and molecular aspects of pituitary adenomas diagnosed at young age, in collaboration with Hospital Universitario Cruces.
- Perform an epidemiological study to obtain reliable data on the prevalence and incidence of pituitary diseases in Catalunya, to appraise the burden to the health system, and evaluate persistent morbidity and mortality. Lead by A Aulinas with the collaboration of 16 hospitals in Catalonia.

Collaborations

Collaborations with other IIB Sant Pau research groups

- Collaboration with the neuromuscular research group led by Drs Isabel Illa and Eduard Gallardo, to evaluate muscle in patients treated for acromegaly and Cushing's syndrome. This multidisciplinary group also includes Rehabilitation (Dr. H. Bascuñana and Mr. Jordi García), and Imaging (Dr. J. LLauger), and a CIBERER working group has been set up by Dr. E. Valassi to investigate non-invasive diagnostic tools for early detection of impairment of muscle architecture in patients with rare pituitary diseases.
- Collaboration by Dr Alicia Santos with the Psychiatry research group (mainly with Dr Joaquim Soler, Dr Juan Carlos Pascual and Dr Cristina Carmona) in order to analyze the effects of

compassionate therapy in patients with eating disorders and borderline personality disorder.

- Collaboration with the group of Jordi Surrallés on the study of telomeres in pituitary diseases.
- Collaboration with Dr. H. Corominas of Rheumatology in patients with acromegaly and Cushing's syndrome, in order to further evaluate persistent osteo-arthro-myopathy.

External collaborations

• **Participation in the project of Personalized Medicine of the ISCIII, number PMP 15/00027 "Improved and efficient therapy of acromegaly by implementation of a personalized and predictive algorithm including functional analysis, imaging and genomic information. Global PI: Manel Puig Domingo. Participating PIs:**

- IGTP Group/CIBERER GP: Manel Puig Domingo (PI); Sant Pau Group/CIBERER 747: Susan Webb (PI), E Resmini, E Valassi, A Santos, I Crespo, A Aulinas
- IDIBAPS/Clínica Group/CIBERER GV: Irene Halperin (PI)
- Hospital de la Ribera Group (Alzira): Carmiña Fajardo (PI)
- Hospital de la Princesa Group (Madrid)/CIBERER GP: Mónica Marazuela (PI)
- Complejo Hospitalario de Santiago de Compostela Group: Ignacio Bernabéu (PI)
- Hospital Universitario de Alicante/CIBERER GV: Antonio Picó (PI)
- IMS Health: Montserrat Roset (PI)
- Clinical study protocol on recently diagnosed patients with Cushing's syndrome, in collaboration with investigators in Leiden and Göteborg (mainly Drs. Alberto Pereira and Oskar Ragnarsson): The etiology and extent of impaired quality of life, fatigue and cognitive, affective and emotional dysfunction in patients with Cushing's syndrome
- Collaboration with investigators in Bordeaux (mainly Dr. Antoine Tabarin) on cognitive outcome of patients having suffered Cushing's disease: *Sequelles cognitives du syndrome de Cushing- MEMOCUSH*

• Clinical and molecular characterization of pituitary adenomas in children and adolescents. We have sent over 100 samples and a first publication is currently being written up. A Santos, SM Webb collaborating with Drs. Itxaso Rica and Luis Castaño from Hospital Universitario Cruces, Instituto de Investigación Sanitaria BioCruces.

- Bilateral collaboration between E Resmini and Richard Lee of Baltimore University,
- Departments of Psychiatry & Medicine, the Johns Hopkins University School of Medicine.

- Bilateral collaboration between E. Resmini & Dr Marco Losa, Università Vita e Salute of Milan, Italy, to study effects of different treatments modalities for acromegaly.
- Bilateral collaboration between E. Resmini and the Neuroendocrinology group of Ospedale Papa Giovanni XXI, Bergamo, Italy, to evaluate the effects of a Mindfulness program in patients with acromegaly and patients with Cushing's syndrome.
- Bilateral collaboration between E. Resmini, S.Webb & Dr.Carles Gaston-Massuet to evaluate "Genetic, molecular and clinical characterization of craniopharyngioma". St Bartholomew's Hospital & The London Charity Hospital.
- -Bilateral collaboration between E. Valassi & Oskar Ragnarsson, University of Göteborg (Sweden) to investigate the association between polymorphisms of genes involved in the steroidogenesis and the responsiveness to treatment with steroidogenesis inhibitors in Cushing's syndrome.
- Bilateral collaboration between E. Valassi and Adolfo Díaz, Hospital del Mar, to investigate the role of microRNAs in the pathogenesis of bone alterations in patients with Cushing's syndrome and acromegaly.
- Bilateral collaboration between E. Valassi and Chaysavanh Manichanh, Hospital Vall d'Hebron, to investigate the role of microbiome in the pathogenesis of metabolic alterations in patients with Cushing's syndrome.
- Bilateral collaboration between E. Valassi and María Morán (Hospital 12 de octubre, Madrid), Federico Pallardó and José Luis García (U733 CIBERER; Valencia University) to identify early markers of metabolic impairment in patients with Cushing's syndrome and acromegaly.
- Bilateral collaboration with Ospedale Papa Giovanni XXIII Bergamo; UOC Malattie Endocrine 1-Diabetologia. Bergamo, Italy. Effects of Mindfulness therapy in patients with acromegaly and Cushing's syndrome

Active grants

- SUSANA WEBB YOUNDALE. Grup de Recerca de Malalties de la Hipòfisi i Grup CIBERER 747 (CIBER de Malalties Rares). 2017 SGR 00750. Agència de Gestió d'Ajuts Universitaris i de Recerca. Duration 2017-2021. 0,00 €.
- ANNA AULINAS MASO. Contractes Juan Rodés 2019. JR19/00013. Instituto de Salud Carlos III. Duration 2020-2024. 180.000,00 €.
- ANNA AULINAS MASO. Identificación y relevancia clínica de un estado deficiente de oxitocina: estudio piloto fisiopatológico aleatorizado, cruzado y controlado con placebo. PI20/01165. Instituto de Salud Carlos III. Duration 2021-2023. 174.000,00 €. Note: Total amount granted to PI. It does not include indirect costs.

Other active grants

- PI 17/00749 PI Elena Valassi, PostDoctoral CIBERER researcher (2018-2020) "Role of myosteatosis in the development and persistence of residual muscular frailty in treated acromegaly and Cushing's syndrome tratados. Study of the mechanisms involved."
- PI21/01223 PI E Valassi with the collaboration of J Gil, H Corominas, H Codes & S Webb. "Persistencia de la morbilidad músculoesquelética y papel de los progenitores fibroadipogénicos (FAPs) en pacientes con acromegalia y síndrome de Cushing tratados: mecanismos involucrados".
- Post-residency grant 2021 awarded by the FGSHCSP to Queralt Asla in June 2021 that has allowed her to begin work on her Doctoral Thesis on oxytocin under the supervision of A Aulinas and S Webb .
- Junior Research Project Award of the FSEEN in 2021 by the Fundación de la Sociedad Española de Endocrinología y Nutrición for the Project entitled: "Identification and clinical relevance of an oxytocin deficient state after melatonin stimulation in patients with hypopituitarism: Physiological pilot study with a control group". October 2021 (15000 Eu). PI A Aulinas.
- Research Grant of the Societat Catalana d'Endocrinologia i Nutrició 2021, for the project entitled: "Epidemiology of pituitary diseases. Study of the epidemiology of pituitary diseases in Catalonia and analysis of health care provided to patients". November 2021 (12000 Eu) - . PI. A Aulinas

Awards

- FUNDACIÓN SEEN for the best Doctoral Thesis in 2020 to Joan Gil by the Fundación Sociedad Española de Endocrinología y Nutrición during the 62 Congress of the Spanish Society of Endocrinology and Nutrition 2021 in Sevilla.

Doctoral theses

- Luciana Martel Duguech, Role of myosteatosis in the development and persistence of residual muscle weakness in treated acromegaly and Cushing's syndrome. Study of the mechanisms involved., Universitat Autònoma de Barcelona, Elena Valassi, Susan M. Webb, 26/10/2021

Transfer products

Participation in International Clinical Practice Guidelines

- ESE Clinical Practice Guideline on functioning and nonfunctioning pituitary adenomas in pregnancy. A Luger, L H A Broersen, N R Biermasz, B M K Biller, M Buchfelder, P Chanson,

J O L Jorgensen, F Kelestimur, S Llahana, D Maiter, G Mintzioli, F Petraglia, R Verkauskiene, S M Webb and O M Dekkers. *Eur J Endocrinol* (2021) 185, G1–G33

- Consensus on diagnosis and management of Cushing's disease: a guideline update. Maria Fleseriu, Richard Auchus, Irina Bancos, Anat Ben-Shlomo, Jerome Bertherat, Nienke Biermasz, Cesar L. Boguszewski, Marcello D. Bronstein, Michael Buchfelder, John Carmichael, Felipe Casanueva, Frederic Castinetti, Philippe Chanson, James Findling, Mônica Gadelha, Eliza Geer, Andrea Giustina, Ashley Grossman, Mark Gurnell, Ken Ho, Adriana Ioachimescu, Ursula Kaiser, Niki Karavitaki, Larry Katznelson, Daniel Kelly, André Lacroix, Ann McCormack, Shlomo Melmed, Mark Molitch, Pietro Mortini, John Newell-Price, Lynette Nieman, Alberto M. Pereira, Stephan Petersenn, Rosario Pivonello, Hershel Raff, Martin Reincke, Roberto Salvatori, Carla Scaroni, Ilan Shimon, Constantine Stratakis, Brooke Swearingen, Antoine Tabarin, Yutaka Takahashi, Marilyn Theodoropoulou, Stylianos Tsagarakis, Elena Valassi, Elena V. Varlamov, Greisa Vila4, John Wass, Susan M. Webb, Maria Chiara Zatelli, Beverly M.K. Biller. *Lancet Diabetes Endocrinology* (2021). Dec;9(12):847–875. doi: 10.1016/S2213-8587(21)00235-7. Epub 2021 Oct 20.

Scientific production

- Aulinas A, Stantonyonge N, Garcia A, Adelantado JM, Medina C, Espinos JJ, Lopez E, Webb SM, Corcoy R. Hypopituitarism and pregnancy: clinical characteristics, management and pregnancy outcome. *Pituitary*. 2022; 25(2). DOI:10.1007/s11102-021-01196-7. PMID:34846622. IF:4,107 (Q2/D5).

- Biagetti B, Aulinas A, Casteras A, Pérez-Hoyos S, Simó R. HOMA-IR in acromegaly: a systematic review and meta-analysis. *Pituitary*. 2021;24(2):146–158. DOI:10.1007/s11102-020-01092-6. PMID: 33085039. IF:4,107 (Q2/D5).

- Calderon-Mediavilla M, Vila-Badia R, Dolz M, Butjosa A, Barajas A, Del Cacho N, Sánchez B, Pardo M, Baños I, Usall J, Ochoa S; GENIPE Group; PROFEP Group [Santos A, Nuñez C]. Depressive symptoms and their relationship with negative and other psychotic symptoms in early onset psychosis. *EUROPEAN CHILD & ADOLESCENT PSYCHIATRY*. 2021;30(9):1383–1390. DOI:10.1007/s00787-020-01618-0. PMID: 32865655. IF:4,785 (Q1/D1).

- De La Piscina IM, Najera NP, Rica I, Gaztambide S, Webb SM, Santos A, Moure MD, Fano MP, Hernandez MI, Chueca MJ, Hernandez LC, Soto A, Valdes N, Castano L, Hispanic A. Clinical and genetic characteristics in patients under 30 years with sporadic pituitary adenomas. *EUROPEAN JOURNAL OF ENDOCRINOLOGY*. 2021; 185(4). DOI:10.1530/EJE-21-0075. PMID:34313605. IF:6,664 (Q1/D2).

- Fleseriu M, Auchus R, Bancos I, Ben A, Bertherat J, Biermasz NR, Boguszewski CL, Bronstein MD, Buchfelder M, Carmichael JD, Casanueva FF, Castinetti F, Chanson P, Findling J,

Gadelha M, Geer EB, Giustina A, Grossman A, Gurnell M, Ho K, Ioachimescu AG, Kaiser UB, Karavitaki N, Katznelson L, Kelly DF, Lacroix A, McCormack A, Melmed S, et al. [Valassi E, Webb SM]. Consensus on diagnosis and management of Cushing's disease: a guideline update. *Lancet Diabetes & Endocrinology*. 2021; 9(12). DOI:10.1016/S2213-8587(21)00235-7. PMID:34687601. IF:32,069 (Q1/D1).

- Gil J, Marques M, Jorda M, Fajardo C, Garcia A, Sampedro M, Serra G, Salinas I, Blanco A, Valassi E, Sesmiló G, Carrato C, Camara R, Lamas C, Casano P, Alvarez CV, Bernabeu I, Webb SM, Pico A, Marazuela M, Puig M, Santos A, Vida JI. Molecular determinants of enhanced response to somatostatin receptor ligands after debulking in large GH-producing adenomas. *CLINICAL ENDOCRINOLOGY*. 2021; 94(5). DOI:10.1111/cen.14339. PMID:32978826. IF:3,478 (Q3/D7).

- Iglesias P, Nocete I, Rodriguez MDM, Venegas E, Ares J, Biagetti B, Berrocal VR, Guerrero F, Vicente A, Villar R, Cordido F, Paja M, Glerean M, Rivera NG, Fuentes ED, Blanco C, Alvarez C, Martin T, Webb SM, Bernabeu I, Villabona C, Soto A, Gaztambide S, Diez JJ. Craniopharyngioma in the Elderly: A Multicenter and Nationwide Study in Spain. *NEUROENDOCRINOLOGY*. 2021; 111(10). DOI:10.1159/000512161. PMID:33040060. IF:4,914 (Q2/D3).

- Iglesias P, Peiro I, Biagetti B, Paja M, Cobo DA, Gomez CG, Mateu M, Genua I, Majem M, Riudavets M, Gavira J, Lamas C, Pombo AF, Guerrero F, Villabona C, Agrícola JMC, Webb SM, Diez JJ. Immunotherapy-induced isolated ACTH deficiency in cancer therapy. *ENDOCRINE-RELATED CANCER*. 2021; 28(12). DOI:10.1530/ERC-21-0228. PMID:34609950. IF:5,678 (Q1/D3).

- Lee RS, Zandi PP, Santos A, Aulinas A, Carey JL, Webb SM, McCaul ME, Resmini E, Wand GS. Cross-species Association Between Telomere Length and Glucocorticoid Exposure. *JOURNAL OF CLINICAL ENDOCRINOLOGY & METABOLISM*. 2021; 106(12). DOI:10.1210/clinem/dgab519. PMID:34265046. IF:5,958 (Q1/D2).

- Losa M, Resmini E, Barzaghi LR, Albano L, Bailo M, Webb SM, Mortini P. Resistance to first-generation somatostatin receptor ligands does not impair the results of gamma knife radiosurgery in acromegaly. *CLINICAL ENDOCRINOLOGY*. 2021; 95(6). DOI:10.1111/cen.14547. PMID:34219264. IF:3,478 (Q3/D7).

- Luger A, Broersen L, Biermasz NR, Biller BMK, Buchfelder M, Chanson P, Jorgensen J, Kelestimur F, Llahana S, Maiter D, Mintzioli G, Petraglia F, Verkauskiene R, Webb SM, Dekkers OM. ESE Clinical Practice Guideline on functioning and nonfunctioning pituitary adenomas in pregnancy. *EUROPEAN JOURNAL OF ENDOCRINOLOGY*. 2021; 185(3). DOI:10.1530/EJE-21-0462. PMID:34425558. IF:6,664 (Q1/D2).

- Martel L, Alonso A, Bascunana H, Diaz J, Llauger J, Nunez C, Montesinos P, Webb SM, Valassi E. Prevalence of sarcopenia after remission of hypercortisolism and its impact on HRQoL. *CLINICAL ENDOCRINOLOGY*. 2021; 95(5). DOI:10.1111/cen.14568. PMID:34323296. IF:3,478 (Q3/D7).

- Martel L, Alonso J, Bascunana H, Diaz J, Llauger J, Nunez C, Montesinos P, Webb SM, Valassi E. Intramuscular fatty infiltration and physical function in controlled acromegaly. *EUROPEAN JOURNAL OF ENDOCRINOLOGY*. 2021; 185(1). DOI:10.1530/EJE-21-0209. PMID:33950861. IF:6,664 (Q1/D2).
- Martel L, Jorgensen J, Korbonits M, Johannsson G, Webb SM, ESE AGHD Study Pan GRP. ESE audit on management of adult growth hormone deficiency in clinical practice. *EUROPEAN JOURNAL OF ENDOCRINOLOGY*. 2021; 184(2). DOI:10.1530/EJE-20-1180. PMID:33320830. IF:6,664 (Q1/D2).
- Mc M, Crespo I, Webb SM, Valassi E. Quality of life in Cushing's syndrome. *BEST PRACTICE & RESEARCH CLINICAL ENDOCRINOLOGY & METABOLISM*. 2021; 35(1):101505. DOI:10.1016/j.beem.2021.101505. IF:4,690 (Q2/D4).
- Nan MN, Roig R, Martinez S, Rives J, Urgell E, Espinos JJ, Tirado M, Carreras G, Aulinas A, Webb SM, Corcoy R, Blanco F, Tondo M. Comprehensive Genetic Testing of CYP21A2: A Retrospective Analysis in Patients with Suspected Congenital Adrenal Hyperplasia. *Journal of Clinical Medicine*. 2021; 10(6):1183. DOI:10.3390/jcm10061183. PMID:33809035. IF:4,241 (Q1/D3).
- Reincke M, Albani A, Assie G, Bancos I, Brue T, Buchfelder M, Chabre O, Ceccato F, Daniele A, Detomas M, Di G, Elenkova A, Findling J, Grossman AB, Gomez CE, Heaney AP, Honegger J, Karavitaki N, Lacroix A, Laws ER, Losa M, Murakami M, Newell J, Giraldi FP, Perez LG, Pivonello R, Rainey WE, Sbierra S, Schopohl J, Stratakis CA, Theodoropoulou M, et al. [Valassi E]. Corticotroph tumor progression after bilateral adrenalectomy (Nelson's syndrome): systematic review and expert consensus recommendations. *EUROPEAN JOURNAL OF ENDOCRINOLOGY*. 2021; 184(2). DOI:10.1530/EJE-20-1088. PMID:33444221. IF:6,664 (Q1/D2).
- Santos A, Webb SM, Resmini E. Psychological complications of Cushing's syndrome. *Current Opinion in Endocrinology Diabetes and Obesity*. 2021; 28(3). DOI:10.1097/MED.0000000000000633. PMID:33764929. IF:3,243 (Q3/D7).
- Valassi E. Pituitary disease and pregnancy. *Endocrinologia Diabetes y Nutricion*. 2021; 68(3). DOI:10.1016/j.endinu.2020.07.007. PMID:33358152. IF:1,417 (Q4/D9).
- Webb SM, Kristensen J, Vitali D, van S, van C, Santos A, Nordenstrom A. EndoERN patient survey on their perception of health care experience and of unmet needs for rare endocrine diseases. *ENDOCRINE*. 2021; 71(3). DOI:10.1007/s12020-021-02625-0. PMID:33544353. IF:3,633 (Q3/D6).

Other scientific production

- Santos A, Webb SM. Cushing "Blues". *JOURNAL OF CLINICAL ENDOCRINOLOGY & METABOLISM*. 2021; 106(7). DOI:10.1210/clinem/dgab239. PMID:33838046. IF:5,958 (Q1/D2).

Books or chapters with ISBN

- Alicia Santos. ASPECTOS PSICOLÓGICOS EN EL MANEJO DE LA ACROMEGALIA, ORIENTACIONES PARA ENDOCRINÓLOGOS. ©2021 Pfizer, S.L.U. GRUPO EDITORIAL ENTHEOS, S.L.U. ISBN: 978-84-09-26174-1

Communication and dissemination activities

Outreach activities

- Videos produced to commemorate the International Cushing Syndrome Day, the 8th of April 2021, with the participation of Alicia Santos, Elena Valassi and Susan Webb. <https://youtu.be/LRWf3-XcwXA>
<https://youtu.be/ObCgacvrj58>
<https://youtu.be/4sAdxuVsYZk>
<https://www.youtube.com/watch?v=R4N9FDbQ5eM>

- Translation into Spanish of the document produced by AdrenalNET, the Dutch patient association BijnierNET on adrenal insufficiency sponsored by EndoERN on "Directrices sobre la toma de hidrocortisona para prevenir la crisis de Addison" and "Información para pacientes y sus allegados sobre el Síndrome de Cushing. Apéndice de la «Norma de Calidad de Atención para Trastornos Suprarrenales».

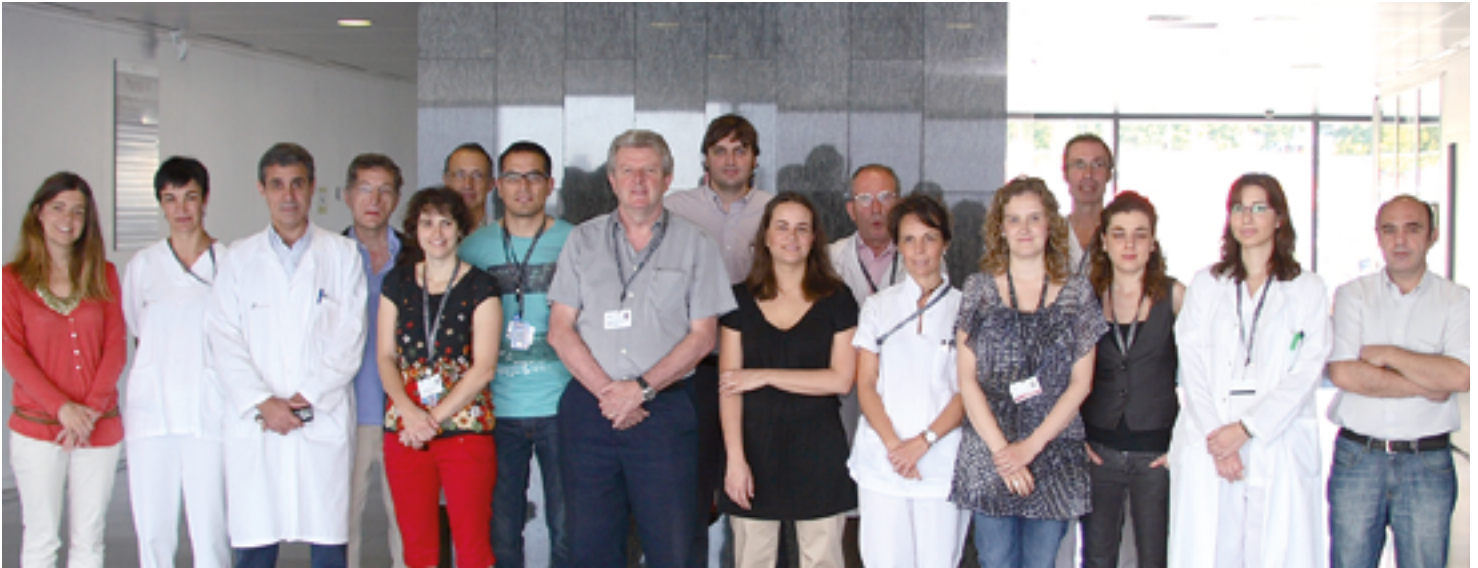
- Invited speaker E Valassi: "Persistence of muscle weakness in patients with controlled acromegaly and Cushing's syndrome in remission. Mechanisms and role of physical activity. World Alliance of Pituitary Organizations (WAPO) eSummit, 8-9 October 2021

Scientific Dissemination

- Participation in the Chilean Clinical Meeting of the Program on Pituitary Tumours of the Universidad Católica de Chile. Lecture entitled: "Oxytocin in hypopituitarism: What do we know?", 21st October 2021 by A Aulinas.
- S Webb is Member of the Endo-ERN Steering Committee, responsible for the Work Package "Quality of care and patient view". Annual meeting on line, 9th February 2021.
- S Webb is the Scientific SubDirector of the CIBERER Network of Excellence
- Medellín Endo Virtual Congress organized by the Asociación Colombiana de Endocrinología, Diabetes y Metabolismo. Lecture entitled "Actualización en el Diagnóstico y Tratamiento en el Déficit de GH en el Adulto" by S Webb. 6 th November 2021.

- Satellite Symposium on "Cushing Rhythms" at the 62nd Congress of the Sociedad Española de Endocrinología y Nutrición, Lectures by S Webb "The importance of restoring circadian rhythm in the treatment of Cushing's syndrome" and by E Valassi "Importance of nocturnal salivary cortisol". Sevilla, 13-15th October 2021.

- Lecture in the Symposium on Update on Pituitary Tumours” at the 62nd Congress of the Sociedad Española de Endocrinología y Nutrición, by S Webb entitled “Post-Cushing syndrome”. Sevilla, 13-15th October 2021.
- Lecture by S Webb entitled “QoL tools in acromegaly” at the The IPSEN Educational Exchange UK & Ireland Acromegaly and NET Nurse Study Day 2021. Virtual, 15th October 2021.
- Lecture by S Webb “Impact of acromegaly on QoL: Patient perspectives” at the virtual Masterclass sessions sponsored by Recordati, on “Evolving treatment landscape in Cushing’s syndrome, Re-examining treatment control in acromegaly, Cushing’s and acromegaly clinical experience exchange” October 7th, 2021
- S Webb chaired the ESE Clinical Update on Cushing’s Syndrome: Webinar 3: Challenging areas and future landscape in Cushing’s management”. 9th April 2021 on line.
- S Webb and M Puig-Domingo coordinators of ACROCAT: Therapeutic update seminar in acromegaly, on line, 26-27th April 2021.
- E Resmini: Lecture on “The value of acromegaly treatment”. 22nd European Congress of Endocrinology (ECE), 22-25 May 2021, Virtual.
- 7th ENEA (European Neuroendocrine Association) Virtual Workshop, 9-11th December 2021. E Valassitwo invited lectures: Clinical presentation and etiology of Cushing’s syndrome: data from ERCUSYN. AND: “Maintaining the biological rhythm in Cushing’s syndrome: why is it essential?”
- Invited lecture E Valassi , “What matters to patients with Cushing’s syndrome”. International Congress of Endocrinology (virtual ICE), Buenos Aires (Argentina), 27th February 2021
- Invited lecture E Valassi: “Cardiovascular health and Cushing’s disease”, Endocrine Society Meeting (virtual ENDO 2021), San Diego (EEUU), 20-23 March 2021.



Digestive Diseases

Coordinator

Escorsell Mañosa, M. Angels FGS
mescorsell@santpau.cat

Members

Alvarado Tapias,		Gordillo Abalos, Jorge	FGS
Edilmar Auxiliadora	FGS	Guarner Aguilar, Carlos	FGS
Bertoletti, Federico	FGS	Guarner Argente, Carlos	FGS
Brujats Rubirola, Anna	FGS	Murzi Pulgar, Marianne C.	FGS
Concepcion Martin,		Oblitas Susanibar, Elida	FGS
Maria Del Mar	FGS	Poca Sans, Maria	FGS
Cuyas Espí, Berta	FGS	Roman Abal, Eva Maria	FGS
Fournot, Tom Stephane	IR	Romero Mascarell, Cristina	FGS
Gallego Moya, Adolfo	FGS	Sainz Saenz-Torre, Sergio	FGS
Garcia Planella, Esther	FGS	Sanchez Ardid, Elisabet	CIBEREHD
Gomez Oliva, Cristina	FGS	Soriano Pastor, German	FGS
Gonzalez Juan, Dolores	FGS	Torras Colell, Javier	FGS
González Muñoz, Carlos	FGS	Villanueva Sanchez, Candid	FGS

Main lines of research

Experimental research

- Experimental rat model of cirrhosis and ascites.
- Mechanisms and prevention of bacterial translocation in rats with cirrhosis.
- Experimental model of spontaneous and induced bacterial peritonitis: physiopathology and treatment.
- MiRNAs expression profile in inflammatory bowel disease after stimulation with toll-like receptor ligands.

Clinical investigation

- Physiopathology, diagnosis, treatment and prevention of bacterial infections, ascites and hepatorenal syndrome in cirrhosis.
- Diagnosis and treatment of hepatic encephalopathy in cirrhosis.
- Cognitive impairment, falls and quality of life in patients with cirrhosis.
- Physiopathology, diagnosis, treatment and prevention of digestive haemorrhage due to non-varicose origin.

- Physiopathology, diagnosis, treatment and prevention of portal hypertension related complications.
- Diagnosis and treatment of chronic hepatitis B and C.
- Diagnosis, prevention and treatment of non-alcoholic fatty liver disease.
- Diagnosis and treatment of hepatocarcinoma.
- Physiopathology, diagnosis and treatment of intestinal inflammatory disease (inflammatory bowel disease).
- Diagnosis and treatment in advanced gastrointestinal endoscopy.
- Diagnosis and treatment of acute pancreatitis.
- Prevention of acute post-ERCP pancreatitis.
- Chronic pancreatitis and pancreatic neoplasms: molecular studies, early detection and treatment.
- Evaluation acute alcohol hepatitis.

Scientific Challenges

- Consolidate the CIBEREHD, CIBER, Institut de salut Carlos III research group by studying complications in cirrhosis.
- Research Grup de Recerca de la UAB (Universitat Autònoma de Barcelona): Grup de Recerca de Complicacions de la Cirrosi Hepàtica.
- Grup de Recerca Consolidat de la Generalitat (SGR)
- Expand the hepatology research lab and develop new research.
- Consolidate the portal hypertension research group.
- Consolidate the non-alcoholic fatty liver disease research group.
- Consolidate the pancreatic illness research line.
- Consolidate the inflammatory bowel disease research line.
- Consolidate the polyps and colon cancer research line.
- Develop a digestive endoscopy research line.
- Consolidate the endoscopy unit as CSUR (central for reference and excellency) in peroral endoscopic myotomy in Spain.
- Group CIBERehd-evs.

Collaborations

Collaborations with other IIB Sant Pau research groups

- **Universitat Autònoma de Barcelona (UAB) (Facultat de Medicina i Infermeria)**
- **Banc de Sang i Teixits**
 - CIM
 - AGDAC
 - Genomics and Transcriptomics Core Facility
 - Flow Cytometry Core Facility
 - Microscopy Core Facility
 - Biobank and immunohistochemistry core facility
 - Cellular culture service
- **Translational Medicine Research Area (Dr Didac Mauricio)**
 - Women and Perinatal Health (Elisa Llorba)
 - General and Digestive Surgery (Dr. Antonio Moral)
 - Inflammatory Diseases (Dra Silvia Vidal)
 - Endocrinology, Diabetes and Nutrition (Dr. Didac Mauricio).

- Pituitary Gland Disorders (Susan Webb)
- Microbiology and Infectious Diseases (Dr. Ferran Navarro)
- Multi-organ Damage (Dr Hèctor Corominas)
- **Cardiovascular Diseases (Dr Lina Badimon)**
 - Pathophysiology of lipid-related disease (Dr Francisco Blanco Vaca)
 - Clinical Research in Transfusion Medicine (Dr Ramón Salinas) Banc de teixits
- **Oncohematologic Diseases (Dr Javier Briones)**
 - Cancer predisposition and DNA repair syndromes (Jordi Surrallés)
- **Neurological Diseases, Neuroscience, and Mental Health (Dr Alberto Lleo)**
 - Genetic Diseases (Dr Pia Gallano)
 - Neuroradiology (Dr Beatriz Gómez Anson)
- **Epidemiology, Public Health and Primary Care (Dr Pablo Alonso Coello)**
 - Primary Care Research (Dr Carles Brotons)
- **Associated Groups**
 - Radiophysics and Radioprotection (Dr Pablo Carrasco de Fez)
 - Dermatology (Dr Lluís Puig)

External collaborations

National collaborations

- CIBER Groups: CIBEREHD: Dr. Albillos, Dr. Frances, Dr. Bosch, Dr. Bruix, Dr. Cabré, Dr. Forn, Dr. Genesca, Dr. Andrade, Dr. Romero Gomez, Dr. Bañares, Dr. Garcia-Pagán, Dra. Hernández-Gea (among others); CIBERSAM: Dr. Gish; CIBERER: Dr. Pia Gallano.
- Instituto de productos Lácteos (IPLA) Asturias.
- IMIM
- UAB
- Danone Nutricia Research Barcelona Spain.
- Gastrointestinal Oncology Group of the Spanish Gastroenterological Association.
- Spanish Collaborative Group for the Study of the Use of Hepatitis C Direct-Acting Drugs.
- Spanish DILI registry.
- SportDiet Collaborative Group.
- BLEPS Study Group. Spanish Collaborative Group for the Study of the Use of Hepatitis C Direct-Acting Drugs.
- Acting Drugs.
- Variceal Bleeding Study Group.
- Spanish Working Group on Crohn's Disease and Ulcerative Colitis (GETECCU).
- Young Grp AEG GETECCU
- ENEIDA project.
- Covid-19-EII Consortium ENEIDA
- Spanish Microscopic Colitis Group (SMCG).
- EndoCAR group of the Spanish Gastroenterological Association and Spanish Digestive
- Endoscopy Society.
- AEGastrum
- Infogastrum
- Upper GI Tract Study Group from the Spanish Gastroenterology
- Grupo Español de Resección Endoscópica de la S. Clinical

guidelines for endoscopic mucosal resection of non-pedunculated colorectal lesions

- Asociación Española de Gastroenterología
- Sociedad Española de Endoscopia Digestiva
- Societat Catalana de Pàncreas
- Societat Catalana de Digestologia
- Registro ColHai
- Programa Pacient Expert Catalunya
- Quecomiicat
- InTeam Consortium Study Investigators
- COHORTE HEPA-C
- ESTUDIO EPIBarrett
- PREDESCI STUDY GROUP
- Grp Invest PROCOLON

International collaborations

- Cleveland Abu Dhabi.
- University of Bologna Italia.
- EF Clif European Foundation for the study of chronic liver failure.
- CANONIC study investigators of the EASL-CLIF Consortium and the European Foundation for the Study of Chronic Liver Failure (EF-CLIF).
- Danone Nutricia Research.
- EPICOLON Consortium, Lynch Syndrome prediction model validation study group.
- BLEPS study group.
- Variceal Bleeding Study Group.
- European Study Group on Cystic Tumors of the Pancreas.
- Gilead
- Shionogui Group
- Actial
- Mendes
- Quintiles
- Tobira
- Boehringer Ingelheim
- American Society for Gastrointestinal Endoscopy
- Liverhope Study Grp
- Thesis Study Grp
- Cobalt Study Grp
- Preemptive TIPS Individual Data Me (Preemptive TIPS Individual Data Me)
- Int Variceal Bleeding Study (Int Variceal Bleeding Study) ;
- Baveno Cooperation Study Grp (Baveno Cooperation Study Grp)
- EVODIS Study Grp
- EIIMIGRA

Active grants

- CANDID VILLANUEVA SANCHEZ. Evolución de la circulación colateral portosistémica y la hiperdinamia asociadas a hipertensión portal con el tratamiento etiológico de la cirrosis. Influencia en el desarrollo de complicaciones.. PI16/01992. Instituto de Salud Carlos III. Duration 2017-2021. 101.500,00 €.

- CARLOS GUARNER AGUILAR. Grup de Recerca: Complicacions de la Cirrosi Hepàtica.. 2017 SGR 00956. Agència de Gestió d'Ajuts Universitaris i de Recerca. Duration 2017-2021. 0,00 €.

- GERMAN SORIANO PASTOR. Fragilidad en pacientes con cirrosis: valor pronóstico del ángulo de fase en pacientes hospitalizados y efecto de una intervención multifactorial (ejercicio en domicilio, aminoácidos ramificados y probiótico).. PI19/00275. Instituto de Salud Carlos III. Duration 2020-2022. 117.000,00 €.

- EVA MARIA ROMAN ABAL. Intervención multifactorial basada en ejercicio físico a domicilio, aminoácidos ramificados y prebiótico multiespecies en el tratamiento de la fragilidad en pacientes con cirrosis.. PI_011CNDE2018. Conferencia Nacional de Decanos de Enfermería. Duration 2018-2021. 3.000,00 €.

- EDILMAR AUXILIADORA ALVARADO TAPIAS. Contractes Juan Rodés 2020.. JR20/00047. Instituto de Salud Carlos III. Duration 2021-2025. 180.000,00 €.

- EVA MARIA ROMAN ABAL. Fragilidad en pacientes con cirrosis: efecto de una intervención multifactorial (ejercicio domicilio, aminoácidos ramificados y probióticos).. PR-415/2020. Fundació Infermeria i Societat. Duration 2021-2023. 4.800,00 €.

Note: Total amount granted to PI. It does not include indirect costs.

Other active grants

Competitive active grants

- PI21/00770 : Therapeutic potential of nicotinamide supplementation on adiposity, impaired insulin signaling and non-alcoholic liver fatty disease severity” en la Convocatoria “AES2021 Modalidad: Proyectos de Investigación en salud (PI)”, y cuya investigador/a principal es Dr. Josep Julve colaborate: Maria Poca, Elisabet Sánchez

Non-competitive active projects and clinical trials

- EHD15PE94B_B/2016-Estudios inmunologicos. Proyecto Hepatitis C: Impacto del tratamiento con nuevos antivirales.

- Caracterización evolutiva de la cirrosis por VHC y del síndrome de hipertensión portal asociado, tras la erradicación del VHC con tratamiento antiviral sin interferón. IIBSP-VHC-2015-20

- EFICACIA Y SEGURIDAD DE LOS ANTIVIRALES DE ACCIÓN DIRECTA (AAD) EN

- PACIENTES CON CIRROSIS HEPÁTICA POR EL VHC GENOTIPO 1 Y SIGNOS

- ENDOSCÓPICOS DE HIPERTENSIÓN PORTAL

- Evidencia en Vida Real de la efectividad de Paritaprevir/r/ Ombitasvir ± Dasabuvir (REGIMEN ABBVIE) ± Ribavirina en pacientes con Hepatitis C Crónica - Estudio Observacional

Retrospectivo en España. Código: ABB-OMB-2016-01
Promotor: AbbVie Spain, S.L.U.

• A Multicenter, Double-Blind, Randomized, Placebo-Controlled, Phase 2 Study to Evaluate the Efficacy and Safety of Elafibranor at Doses of 80 mg and 120mg after 12 Weeks of Treatment in Patients With Primary Biliary Cholangitis (PBC) and Inadequate Response to Ursodeoxycholic Acid.

- LIVERHOPE
- THESIS
- COBALT
- ADACOLON
- BARRET
- UW-DSE
- CAPSU-COVID
- UOC
- CYSTATB
- Endoscopic submucosal Dissection (ESD)
- Ecxoendoscopia
- EEO
- EMR
- ENDOHEM
- ENDOPRIOR
- ESCAMOS ESOFAG
- CAREMONIT
- FIT-ANEMIA
- FLUTE2
- GAVE
- LBSR
- ORG129
- PDTR
- PERFORACIO
- PERICAP
- PERIPROX
- POEM
- ENDOLYNCH
- INCIDENCIA
- TIMELY
- PYLORY8
- REGISTRO NACIONAL AXIOS
- TIMELY
- ULCERA GASTRICA
- WOPNPREDICTORS
- UFCBM
- ABC STUDY
- A TANGO

• ESTUDIO DE LA RESPUESTA INMUNE FRENTE A BACTERIAS MULTIRESISTENTES EN PACIENTES CON CIRROSIS IIBSP-RES-2018-91

• ESTUDIO DE LA RESPUESTA INMUNE DE LAS CÉLULAS DEL LÍQUIDO ASCÍTICO FRENTE A BACTERIAS MULTIRESISTENTES EN PACIENTES CON CIRROSIS. IIB-RES-2018-91

- CIRCOVID
- HEATMAP
- CAPSUCOVID
- CAPSULA
- COLHAI
- GENFIT
- AMGEN
- SEAVUE
- M15-722
- M20-371
- BIORECORD
- CAREMONIT
- CECUM
- COMPO CORPORE
- COVID-MII
- EIM-VDZ-UKG
- ENEIDA
- EVOLVE
- EXOSOMAS
- INFEII
- IMPACTO_2019
- ENTIVIO_TAKEDA
- ENEIDA
- RECURRENCIA TABAQUICA
- SUSTAIN
- TRACROLIMUS
- TO-REWARD

Grants awarded in 2021

• GERMAN SORIANO PASTOR, Convenio para asistir a eventos (junio 2021 a noviembre 2021)., G22-2001, W. L. Gore and Associates, 2021 - 2021, 2.350,00 €.

Note: Total amount granted to PI. It does not include indirect costs.

Awards

• EDILMAR AUXILIADORA ALVARADO TAPIAS, Contractes Juan Rodés 2020., JR20/00047, Instituto de Salud Carlos III, 2021 - 2025, 180.000,00 €.

• EVA MARIA ROMAN ABAL, Fragilidad en pacientes con cirrosis: efecto de una intervención multifactorial (ejercicio domicilio, aminoácidos ramificados y probióticos)., PR-415/2020, Fundació Infermeria i Societat, 2021 - 2023, 4.800,00 €.

Scientific production

• Albeniz E, Enguita M, Gimeno AZ, de Tejada AH, Nogales O, Espinos JC, Sanchez JR, Roson P, Guarner C, Marin JC, Bhandari P, Spadaccini M, Repici A, Hassan C, Alvarez MA, Beroiz BI. The Answer to "When to Clip" After Colorectal Endoscopic Mucosal Resection Based on a Cost-Effectiveness Analysis. *AMERICAN JOURNAL OF GASTROENTEROLOGY*. 2021; 116(2).

DOI:10.14309/ajg.0000000000000943. PMID:33149001.
IF:10,864 (Q1/D1).

- Algaba A, Guerra I, Ricart E, Iglesias E, Mañosa M, Gisbert JP, Guardiola J, Mínguez M, Castro B, de Francisco R, Nos P, Bertoletti F, Mesonero F, Barrio J, Martín-Arranz MD, Calvet X, García-López S, Sicilia B, Alcaín G, Esteve M, Márquez L, Piqueras M, Jiménez L, Perez-Calle JL, Bujanda L, García-Sepulcre M, Fernández A, Moraleja I, Lorente RH, Et al.; Spanish GETECCU Group (ENEIDA Project). Extraintestinal Manifestations in Patients with Inflammatory Bowel Disease: Study Based on the ENEIDA Registry. *DIGESTIVE DISEASES AND SCIENCES*. 2021;66(6):2014-2023. DOI:10.1007/s10620-020-06424-x. PMID: 32671587. IF:3,199 (Q3/D7).

- Ampuero J, Aller R, Gallego R, Crespo J, Abad J, Gonzalez A, Gomez J, Caballeria J, Lo Iacono O, Ibanez L, Garcia J, Martin R, Frances R, Fernandez C, Diago M, Soriano G, Andrade RJ, Latorre R, Jorquera F, Morillas RM, Escudero D, Estevez P, Hernandez M, Augustin S, Pareja MJ, Banales JM, Aspichueta P, Benlloch S, Rosales JM, Salmeron J, Turnes J, Romero M. Definite and indeterminate nonalcoholic steatohepatitis share similar clinical features and prognosis: A longitudinal study of 1893 biopsy-proven nonalcoholic fatty liver disease subjects. *LIVER INTERNATIONAL*. 2021; 41(9). DOI:10.1111/liv.14898. PMID:33896100. IF:5,828 (Q2/D3).

- Arab JP, Diaz LA, Baeza N, Idalsoaga F, Fuentes E, Arnold J, Ramirez CA, Morales D, Ventura M, Alvarado E, Zhang W, Clark V, Simonetto D, Ahn JC, Buryaska S, Mehta TI, Stefanescu H, Horhat A, Bumbu A, Dunn W, Attar B, Agrawal R, Haque ZS, Majeed M, Cabezas J, Garcia I, Parker R, Cuyas B, Poca M, Soriano G, Sarin SK, Maiwall R, Jalal PK, Abdulsada S, et al. Identification of optimal therapeutic window for steroid use in severe alcohol-associated hepatitis: A worldwide study. *JOURNAL OF HEPATOLOGY*. 2021; 75(5). DOI:10.1016/j.jhep.2021.06.019. PMID:34166722. IF:25,083 (Q1/D1).

- Arroyo JA, Julve J, Vlachos B, Corcoy R, Ponte P, Roman E, Navas E, Llauro G, Franch J, Domingo P, Mauricio D. Previous Vitamin D Supplementation and Morbidity and Mortality Outcomes in People Hospitalised for COVID19: A Cross-Sectional Study. *Frontiers in Public Health*. 2021; 9:758347. DOI:10.3389/fpubh.2021.758347. PMID:34631653. IF:3,709 (Q1/D2).

- Calafat M, Gonzalez C, Fortuny M, Roig C, Calm A, Mombiola A, Canete F, Bertoletti F, Gonzalez L, Teller M, Gordillo J, Manosa M, Garcia E, Domenech E. Impact of immunosuppressants on SARS-CoV-2 infection in elderly patients with inflammatory bowel disease. *AGING CLINICAL AND EXPERIMENTAL RESEARCH*. 2021; 33(8). DOI:10.1007/s40520-021-01917-9. PMID:34164799. IF:3,636 (Q3/D6).

- Casanova MJ, Chaparro M, Nantes O, Benitez JM, Rojas M, Castro J, Huguet JM, Martin A, Aicart M, Tosca J, Martin MD, Gonzalez C, Manosa M, Leo E, Lamuela LJ, Perez I, Bujanda L, Hinojosa J, Pajares R, Arguelles F, Perez JL, Rodriguez GE, Guardiola J, Barreiro M, Gisbert JP. Clinical outcome after anti-

tumour necrosis factor therapy discontinuation in 1000 patients with inflammatory bowel disease: the EVODIS long-term study. *ALIMENTARY PHARMACOLOGY & THERAPEUTICS*. 2021; 53(12). DOI:10.1111/apt.16361. PMID:33962482. IF:8,171 (Q1/D1).

- Chaparro M, Garre A, Iborra M, Sierra M, Barreiro M, Fernandez A, de Castro L, Bosca M, Casanova MJ, Lopez A, Lorente R, Rodriguez C, Carbajo AY, Arroyo MT, Gutierrez A, Hinojosa J, Martinez T, Villoria A, Bermejo F, Busquets D, Camps B, Canete F, Mancenido N, Monfort D, Navarro M, Perez JL, Ramos L, Rivero M, Angueira T, et al. [Gonzalez C, Garcia E]. Effectiveness and Safety of Ustekinumab in Ulcerative Colitis: Real-world Evidence from the ENEIDA Registry. *Journal of Crohns & Colitis*. 2021; 15(11). DOI:10.1093/ecco-jcc/jjab070. PMID:33860795. IF:9,071 (Q1/D2).

- Chaparro M, Garre A, Mesonero F, Rodriguez C, Barreiro M, Martinez J, Arroyo MT, Mancenido N, Sierra M, Vera I, Casanova MJ, Nos P, Gonzalez C, Martinez T, Bosca M, Calafat M, Busquets D, Girona E, Llauro J, Martin MD, Piqueras M, Ramos L, Suris G, Bermejo F, Carbajo AY, Casas D, Fernandez A, Garcia MJ, Ginard D, Gutierrez A, Hernandez L, et al. Tofacitinib in Ulcerative Colitis: Real-world Evidence From the ENEIDA Registry. *Journal of Crohns & Colitis*. 2021; 15(1). DOI:10.1093/ecco-jcc/jjaa145. PMID:32969471. IF:9,071 (Q1/D2).

- Chaparro M, Garre A, Ortiz AN, Palomares MTDL, Rodriguez C, Riestra S, Vela M, Benitez JM, Salgado EF, Rodriguez ES, Hernandez V, Ferreiro R, Diaz AP, Barrio J, Huguet JM, Sicilia B, Martin MD, Calvet X, Ginard D, Alonso I, Fernandez L, Trastoy PV, Rivero M, Vera I, Vega P, Navarro P, Sierra M, Cabriada JL, Aguas M, Vicente R, Navarro M, Echarri A, et al. [Gordillo J]. Incidence, Clinical Characteristics and Management of Inflammatory Bowel Disease in Spain: Large-Scale Epidemiological Study. *Journal of Clinical Medicine*. 2021; 10(13):2885. DOI:10.3390/jcm10132885. PMID:34209680. IF:4,241 (Q1/D3).

- De Paredes A, Villanueva C, Blanco C, Genesca J, Manicardi N, Garcia JC, Calleja JL, Aracil C, Morillas RM, Poca M, Penas B, Augustin S, Abalde JG, Alvarado E, Royo F, Garcia ML, Falcon JM, Banares R, Bosch J, Gracia J, Albillos A. Serum miR-181b-5p predicts ascites onset in patients with compensated cirrhosis. *Jhep Reports*. 2021; 3(6):100368. DOI:10.1016/j.jhepr.2021.100368. PMID:34712934. IF2021:9,917 (Q1/D2).

- Fernandez C, Alvarez M, Quintana I, Lopez A, Amigo J, Cameselle JM, Roman E, Gonzalez D, Llor X, Bujanda L, Bessa X, Jover R, Balaguer F, Castells A, Castellvi S, Capella G, Carracedo A, Valle L, Ruiz C. Exome sequencing of early-onset patients supports genetic heterogeneity in colorectal cancer. *Scientific Reports*. 2021; 11(1):11135. DOI:10.1038/s41598-021-90590-z. PMID:34045552. IF:4,379 (Q1/D3).

- Garcia A, Loras C, Guarner C, Velasquez JG, Andujar X, Salord S, Busquets J, Tebe C, Laquente B, Gornals JB. Is a coaxial plastic stent within a lumen-apposing metal stent useful for the management of distal malignant biliary obstruction?. *SURGICAL ENDOSCOPY AND OTHER INTERVENTIONAL TECHNIQUES*. 2021;

35(8). DOI:10.1007/s00464-021-08435-9. PMID:33721090. IF:4,584 (Q1/D2).

- Gil A, Ampuero J, Rojas A, Gallego R, Munoz R, Rico MC, Millan R, Garcia R, Frances R, Soriano G, Romero M. Development and Validation of a Clinical-Genetic Risk Score to Predict Hepatic Encephalopathy in Patients With Liver Cirrhosis. *AMERICAN JOURNAL OF GASTROENTEROLOGY*. 2021; 116(6). DOI:10.14309/ajg.0000000000001164. PMID:33852451. IF:10,864 (Q1/D1).

- Hernandez E, Santesmases R, Roman E, Porcel MA, Busquet AT, Perez MB, Verdu J. Prevalence and characteristics of older people with pressure ulcers and legs ulcers, in nursing homes in Barcelona. *Journal of Tissue Viability*. 2021; 30(1). DOI:10.1016/j.jtv.2021.01.003. PMID:33485786. IF:2,932 (Q1/D2).

- Julia A, Martinez SH, Domenech E, Canete JD, Ferrandiz C, Tornero J, Gisbert JP, Fernandez A, Dauden E, Barreiro M, Perez C, Queiro R, Lopez FJ, Carazo JLS, Mendoza JL, Alperi M, Montilla C, Venegas JJP, Munoz F, Castaneda S, Lasanta ML, Marsal S, Fonseca E, Rodriguez J, Carreira P, Garcia V, Pinto JA, Puig L, Ricart E, Blanco F, Gratacos J, et al. [Garcia E, Diaz C]. Food groups associated with immune-mediated inflammatory diseases: a Mendelian randomization and disease severity study. *EUROPEAN JOURNAL OF CLINICAL NUTRITION*. 2021; 75(9). DOI:10.1038/s41430-021-00913-6. PMID:33893449. IF:4,016 (Q2/D5).

- Llao J, Masnou H, Romero C, Bargallo A, Gely C, Manosa M, Gordillo J, Garcia E, Domenech E. Noninvasive assessment of liver fibrosis in Crohn's disease patients exposed to methotrexate. *EUROPEAN JOURNAL OF GASTROENTEROLOGY & HEPATOLOGY*. 2021; 33(6). DOI:10.1097/MEG.0000000000001799. PMID:32804842. IF:2,566 (Q4/D9).

- Martinez J, Hernandez V, Rodriguez E, Tellez L, Procopet B, Giraldez A, Amitrano L, Villanueva C, Thabut D, Ibanez L, Silva G, Genesca J, Bureau C, Trebicka J, Banares R, Krag A, Llop E, Laleman W, Palazon JM, Castellote J, Rodrigues S, Gluud LL, Noronha C, Canete N, Rodriguez M, Ferlitsch A, Schwarzer R, Mundi JL, Gronbaek H, Hernandez M, et al. [Alvarado E]. Bacterial infections in patients with acute variceal bleeding in the era of antibiotic prophylaxis. *JOURNAL OF HEPATOLOGY*. 2021; 75(2). DOI:10.1016/j.jhep.2021.03.026. PMID:33845059. IF:25,083 (Q1/D1).

- Massey V, Parrish A, Argemi J, Moreno M, Mello A, Garcia M, Altamirano J, Odena G, Dubuquoy L, Louvet A, Martinez C, Adrover A, Affo S, Morales O, Sancho P, Millan C, Alvarado E, Morales D, Caballeria J, Mann J, Cao S, Sun ZL, Shah V, Cameron A, Mathurin P, Snider N, Villanueva C, Morgan TR, Guinovart J, Vadigepalli R, Bataller R. Integrated Multiomics Reveals Glucose Use Reprogramming and Identifies a Novel Hexokinase in Alcoholic Hepatitis. *GASTROENTEROLOGY*. 2021; 160(5). DOI:10.1053/j.gastro.2020.12.008. PMID:33309778. IF:22,682 (Q1/D1).

- Mesonero F, Castro J, Benitez JM, Camps B, Iborra M, Lopez A, Torres P, Esteve M, Tosca J, Bertoletti F, Almela P,

Calvet X, Vera I, Bujanda L, Gomollon F, Rodriguez C, Antolin B, Busquets D, Hernandez A, Rivero M, Miquel D, Castano A, Gisbert JP, Domenech E, Lopez A. Effectiveness and safety of methotrexate monotherapy in patients with Crohn's disease refractory to anti-TNF-alpha: results from the ENEIDA registry. *ALIMENTARY PHARMACOLOGY & THERAPEUTICS*. 2021; 53(9). DOI:10.1111/apt.16315. PMID:33715177. IF:8,171 (Q1/D1).

- Nicoara O, Han GH, Rudler M, Angrisani D, Monescillo A, Torres F, Casanovas G, Bosch J, Lv Y, Thabut D, Fan DM, Hernandez V, Garcia JC, Alvarado E, Ripoll C. Effects of Early Placement of Transjugular Portosystemic Shunts in Patients With High-Risk Acute Variceal Bleeding: a Meta-analysis of Individual Patient Data. *GASTROENTEROLOGY*. 2021; 160(1). DOI:10.1053/j.gastro.2020.09.026. PMID:32980344. IF:22,682 (Q1/D1).

- Perea L, Rodriguez L, Nieto JC, Zamora C, Canto E, Soriano G, Poca M, Blanco P, Navarro F, Muniesa M, Vidal S. Bacteriophages immunomodulate the response of monocytes. *EXPERIMENTAL BIOLOGY AND MEDICINE*. 2021; 246(11). DOI:10.1177/1535370221995154. PMID:33641443. IF:2,691 (Q3/D7).

- Reig A, Alvarez C, Vergara M, Gomez E, Gallego A, Perez IM, Fabrega E, Hernandez M, Berenguer M, Estevez P, Arencibia A, Morillas RM, Horta D, Albillos A, Casado M, De la Cruz G, Fernandez E, Molina E, Hijona L, Diago M, Fernandez CM, Gonzalez JM, Sala M, Gomez J, Romero M, Suarez F, Vargas V, Ferre C, Andrade RJ, Chahri N, Pares A. Obeticholic Acid and Fibrates in Primary Biliary Cholangitis: Comparative Effects in a Multicentric Observational Study. *AMERICAN JOURNAL OF GASTROENTEROLOGY*. 2021; 116(11). DOI:10.14309/ajg.0000000000001343. PMID:34158466. IF:10,864 (Q1/D1).

- Rodríguez de Santiago E, Shimamura Y, Pioche M, Eleftheriadis N, Albéniz E, Bechara R, Yan Chiu PW, Guarner-Argente C, Herreros de Tejada A, Uchima H, Fujiyoshi Y, Ponchon T, González-Gete G, Hew S, Murzi-Pulgar M, Matallana V, Parejo-Carbonell S, Estremera-Arévalo F, Moll F, Onimaru M, Inoue H. Safety and effectiveness of peroral endoscopic myotomy in patients on antiplatelet or anticoagulant therapy: an international multicenter case-control study. *GASTROINTESTINAL ENDOSCOPY*. 2021;93(4):839-849. DOI:10.1016/j.gie.2020.07.030. PMID: 32717366. IF:9,427 (Q1/D2).

- Román E, Parramón M, Flavià M, Gely C, Poca M, Gallego A, Santesmases R, Hernández E, Nieto JC, Urgell E, Alvarado-Tapias E, Vidal S, Ferrero-Gregori A, Vargas V, Guarner C, Soriano G. Frailty in outpatients with cirrhosis: A prospective observational study. *Liver International*. 2021;41(2):357-368. DOI:10.1111/liv.14694. PMID: 33030788. IF:5,828 (Q2/D3).

- Roman E, Poca M, Amoros G, Rosell J, Gely C, Nieto JC, Vidal S, Urgell E, Ferrero A, Alvarado E, Cuyas B, Hernandez E, Santesmases R, Guarner C, Escorsell A, Soriano G. Phase angle by electrical bioimpedance is a predictive factor of hospitalisation, falls and mortality in patients with cirrhosis. *Scientific Reports*. 2021; 11(1):20415. DOI:10.1038/s41598-021-99199-8. PMID:34650096. IF:4,379 (Q1/D3).

• Stephens C, Robles M, Medina I, Garcia M, Ortega A, Sanabria J, Gonzalez A, Alvarez I, Slim M, Jimenez M, Gonzalez R, Fernandez MC, Casado M, Soriano G, Roman E, Hallal H, Romero M, Castiella A, Conde I, Prieto M, Moreno JM, Giraldez A, Moreno JM, Kaplowitz N, Lucena MI, Andrade RJ, Participating CTR. Comprehensive analysis and insights gained from long-term experience of the Spanish DILI Registry. *JOURNAL OF HEPATOLOGY*. 2021; 75(1). DOI:10.1016/j.jhep.2021.01.029. PMID:33539847. IF:25,083 (Q1/D1).

• Trebicka J, Fernandez J, Papp M, Caraceni P, Laleman W, Gambino C, Giovo I, Uschner FE, Jansen C, Jimenez C, Mookerjee R, Gustot T, Albillos A, Banares R, Jarcuska P, Steib C, Reiberger T, Acevedo J, Gatti P, Shawcross DL, Zeuzem S, Zipprich A, Piano S, Berg T, Bruns T, Danielsen KV, Coenraad M, Merli M, Stauber R, Zoller H, et al. [Soriano G, Alvarado E]. PREDICT identifies precipitating events associated with the clinical course of acutely decompensated cirrhosis. *JOURNAL OF HEPATOLOGY*. 2021; 74(5). DOI:10.1016/j.jhep.2020.11.019. PMID:33227350. IF:25,083 (Q1/D1).

• Ventura M, Simon M, Poca M, Ariza X, Masnou H, Sanchez J, Llop E, Canete N, Martin M, Amador A, Martinez J, Clemente A, Puente A, Torrens M, Alvarado E, Napoleone L, Miquel M, Ardevol A, Rodrigo MC, Calleja JL, Sole C, Soriano G, Genesca J. Effects of Albumin on Survival after a Hepatic Encephalopathy Episode: Randomized Double-Blind Trial and Meta-Analysis. *Journal of Clinical Medicine*. 2021; 10(21):4885. DOI:10.3390/jcm10214885. PMID:34768404. IF:4,241 (Q1/D3).

• Villanueva C, Albillos A, Genesca J, Garcia JC, Brujats A, Calleja JL, Aracil C, Banares R, Morillas RM, Poca M, Penas B, Augustin S, Abrales JG, Alvarado E, Torres F, Bosch J. Bacterial infections adversely influence the risk of decompensation and survival in compensated cirrhosis. *JOURNAL OF HEPATOLOGY*. 2021; 75(3). DOI:10.1016/j.jhep.2021.04.022. PMID:33905794. IF:25,083 (Q1/D1).

• Weersink RA, Alvarez-Alvarez I, Medina-Cáliz I, Sanabria-Cabrera J, Robles-Díaz M, Ortega-Alonso A, García-Cortés M, Bonilla E, Niu H, Soriano G, Jimenez-Perez M, Hallal H, Blanco S, Kaplowitz N, Lucena MI, Andrade RJ, [Antonijoan R, Gonzalez-Gallego J]. Clinical Characteristics and Outcome of Drug-Induced Liver Injury in the Older Patients: From the Young-Old to the Oldest-Old. *CLINICAL PHARMACOLOGY & THERAPEUTICS*. 2021;109(4):1147-1158. DOI:10.1002/cpt.2108. PMID: 33179256. IF:6,875 (Q1/D1).

Other scientific production

• Alvarado E, Vilades D, Brujats A, Villanueva C. Reply to: "Non-selective beta blockers and mortality in decompensated cirrhosis: Is cirrhotic cardiomyopathy the missing link?". *JOURNAL OF HEPATOLOGY*. 2021; 75(4). DOI:10.1016/j.jhep.2021.06.026. PMID:34224780. IF:25,083 (Q1/D1).

• Fajardo J, Nunez E, Szafranska J, Poca M, Lobo D, Martin B, Hernandez D, Roig C, Huerta A, Corominas H, Sanchez S,

Soriano G. We report a patient who presented intrahepatic cholangitis and cholecystitis after SARS-CoV-2 infection. *JOURNAL OF GASTROENTEROLOGY AND HEPATOLOGY*. 2021; 36(8). DOI:10.1111/jgh.15537. PMID:34105805. IF:4,029 (Q2/D5).

• Guarner C, Colan J, Gines A. Antibiotic Prophylaxis for Endoscopic Ultrasound-Guided Diagnostic Interventions on Pancreatic Cysts: A Never-Ending Story Reply. *GASTROENTEROLOGY*. 2021; 160(3). DOI:10.1053/j.gastro.2020.08.010. PMID:32798498. IF:22,682 (Q1/D1).

• Marino Z, Darnell A, Lens S, Sapena V, Diaz A, Belmonte E, Perello C, Calleja JL, Varela M, Rodriguez M, de Lope CR, Llerena S, Torras X, Gallego A, Sala M, Morillas RM, Minguez B, Llaneras J, Coll S, Carrion JA, Inarrairaegui M, Sangro B, Vilana R, Sole M, Ayuso C, Rios J, Fornis X, Bruix J, Reig M. Time association between hepatitis C therapy and hepatocellular carcinoma emergence in cirrhosis: Relevance of non-characterized nodules (vol 70, pg 874, 2019). *JOURNAL OF HEPATOLOGY*. 2021; 74(2). DOI:10.1016/j.jhep.2020.11.020. PMID:33317846. IF:25,083 (Q1/D1).

• Villanueva C, Bosch J, PREDESCI I. Reply to: "First things first! Can bacterial infections be considered as decompensating events per se?". *JOURNAL OF HEPATOLOGY*. 2021; 75(5). DOI:10.1016/j.jhep.2021.07.028. PMID:34358568. IF:25,083 (Q1/D1).

Other publications

• Covid-19. Reflexiones desde la mirada de una enfermera reincorporada a "trincheras" Román E. Narrativas-COVID. *Coviviendo* [web en Ciberindex] 21/01/2021. Disponible en: http://www.fundacionindex.com/fi/?page_id=1961
Plataforma #COVIviendo

• Història d'una monja. La imatge de la infermera a través del cinema. Jiménez A, Munar M, Puigdelmas V, Romo R, Sucarrats M i Román E. *Vida a l'Aula*. AgInf. Abril 2021 (V25) I-VI. 93806_Agora d'infermeria_ABRIL_2021_CAT.indd (agoradenfermeria.eu)

Meeting abstracts in press

• Endoscopi band ligation without resection of small-sized subepithelial tumours: results in long-term follow up of a multicentre prospective study (BANDING-SET). Author(s): Bas-Cutrina, F (Bas-Cutrina, Francesc); Loras, C (Loras, Carme); Balteiro, AP (Balteiro, Alberto Pardo); Ballester, R (Ballester, Raquel); Huertas, C (Huertas, Carlos); Guarner-Argente, C (Guarner-Argente, Carlos); Colan, J (Colan, Juan); Consiglieri, CF (Consiglieri, Claudia F.); Andujar, X (Andujar, Xavi); Vilanova-Serra, M (Vilanova-Serra, Magdalena); Gonzalez-Huix, F (Gonzalez-Huix, Ferran); Pardo-Grau, L (Pardo-Grau, Laura); Maisterra, S (Maisterra, Sandra); Ruiz-Ramirez, P (Ruiz-Ramirez, Pablo); Garcia-Sumalla, A (Garcia-Sumalla, Albert); Gornals, JB (Gornals, Joan B.) *GASTROINTESTINAL ENDOSCOPY Meeting Abstract: 3517677* Volume: 93 Issue: 6 Pages: AB222-AB223 Supplement: S Published: JUN 2021. Accession Number: WOS:000656222900409- ISSN: 0016-5107. eISSN: 1097-6779. IF: 9.427

- Impact of a loss-of-function variant in HSD17B13 on hepatic decompensation and mortality in cirrhotic patients. Gil-Gomez, A (Gil-Gomez, Antonio); Ampuero, J (Ampuero, Javier); Zambrano, SG (Gato Zambrano, Sheila); Montero-Vallejo, R (Montero-Vallejo, Rocio); Hernandez, RM (Munoz Hernandez, Rocio); Maya, D (Maya, Douglas); Gallego-Duran, R (Gallego-Duran, Rocio); Alvarez-Ossorio, AR (Rojas Alvarez-Ossorio, Angela); Frances, R (Frances, Ruben); Soriano, G (Soriano, German); Gomez, MR (Romero Gomez, Manuel). JOURNAL OF HEPATOLOGY Meeting Abstract: PO-2420 Volume: 75 Pages: S342-S342 Supplement: 2 Published: JUL 2021. WOS:000667753800242

• Alcohol related liver disease phenotype impacts survival after an acute variceal bleeding episode. Author(s): Villagrasa, A (Villagrasa, Ares); Hernandez-Gea, V (Hernandez-Gea, Virginia); Ventura-Cots, M (Ventura-Cots, Meritxell); Bataller, R (Bataller, Ramon); Giraldez, A (Giraldez, Alvaro); Procopet, B (Procopet, Bogdan); Amitrano, L (Amitrano, Lucio); Villanueva, C (Villanueva, Candid); Thabut, D (Thabut, Dominique); Samaniego, LI (Ibanez Samaniego, Luis); Silva-Junior, G (Silva-Junior, Gilberto); Albillos, A (Albillos, Agustin); Bureau, C (Bureau, Christophe); Trebicka, J (Trebicka, Jonel); Llop, E (Llop, Elba); Laleman, W (Laleman, Wim); Azorin, JMP (Palazon Azorin, Jose M.); Castellote, J (Castellote, Jose); Rodrigues, S (Rodrigues, Susana); Gluud, LL (Gluud, Lise L.); Ferreira, CN (Noronha Ferreira, Carlos); Canete, N (Canete, Nuria); Rodriguez, M (Rodriguez, MAnuel); Ferlitsch, A (Ferlitsch, Arnulf); Mundi, JL (Luis Mundi, Jose); Gronbaek, H (Gronbaek, Henning); Hernandez-Guerra, M (Hernandez-Guerra, Manuel); Sassatelli, R (Sassatelli, Roman); Dell'era, A (Dell'era, Alessandra); Senzolo, M (Senzolo, Marco); Abraldes, JG (Abraldes, Juan G.); Romero-Gomez, M (Romero-Gomez, Manuel); Zipprich, A (Zipprich, Alexander); Casas, M (Casas, Meritxell); Masnou, H (Masnou, Helena); Primignani, M (Primignani, Massimo); Krag, A (Krag, Aleksander); Tantau, M (Tantau, Marcel); Guardascione, MA (Anna Guardascione, Maria); Alvarado-Tapias, E (Alvarado-Tapias, Edilmar); Rudler, M (Rudler, Marika); Canizares, RB (Canizares, Rafael Banares); Martinez, J (Martinez, Javier); Robic, MA (Robic, Marie-Angele); Jansen, C (Jansen, Christian); Panero, JLC (Calleja Panero, Jose Luis); Nevens, F (Nevens, Frederik); Bosch, J (Bosch, Jaime); Garcia-Pagan, JC (Carlos Garcia-Pagan, Juan); Genesca, J (Genesca, Joan) HEPATOLOGY Meeting Abstract: 305 Volume: 74 Pages: 202A-203A Supplement: 1 Published: OCT 2021. DOI: 10.1016/j.jhepr.2021.100368. WOS:000707188001071

• Relationship between hepatic venous pressure gradient and presence of decompensation in non-alcoholic fatty liver disease. Bassegoda, O (Bassegoda, Octavi); Olivas, P (Olivas, Pol); Turco, L (Turco, Laura); Mandorfer, M (Mandorfer, Mattias); Burriel, MS (Burriel, Miquel Serra); Luis, T (Luis, Tellez); Kwanten, W (Kwanten, Wilhelmus); Laroyenne, A (Laroyenne, Alexia); Nicoara-Farcau, O (Nicoara-Farcau, Oana); Alvarado, E (Alvarado, Edilmar); Moga, L (Moga, Lucile); Vuille-Lessard, E (Vuille-Lessard, Elise); Fortea, JI (Fortea, Jose Ignacio); Ibanez, L (Ibanez, Luis); Tosetti, G (Tosetti, Giulia); Vanwolleghem, T (Vanwolleghem, Thomas); Larrue, H (Larrue, Helene); Burgos-Santamaria, D (Burgos-Santamaria, Diego); Horia, S (Horia, Stefanescu); Paternostro, R (Paternostro, Rafael); Cippitelli, A (Cippitelli, Annalisa); Lens, S (Lens, Sabela);

Augustin, S (Augustin, Salvador); Llop, E (Llop, Elba); Laleman, W (Laleman, Wim); Trebicka, J (Trebicka, Jonel); Johannes, C (Johannes, Chang); Masnou, H (Masnou, Helena); Zipprich, A (Zipprich, Alexander); Miceli, F (Miceli, Francesca); Semmler, G (Semmler, Georg); Forns, X (Forns, Xavier); Primignani, M (Primignani, Massimo); Banares, R (Banares, Rafael); Puente, A (Puente, Angela); Berzigotti, A (Berzigotti, Annalisa); Rautou, PE (Rautou, Pierre-Emmanuel); Villanueva, C (Villanueva, Candid); Gines, P (Gines, Pere); Pagan, JCG (Garcia Pagan, Juan Carlos); Procopet, B (Procopet, Bogdan); Bureau, C (Bureau, Christophe); Albillos, A (Albillos, Agustin); Francque, S (Francque, Sven); Reiberger, T (Reiberger, Thomas); Schepis, F (Schepis, Filippo); Graupera, I (Graupera, Isabel); Hernandez-Gea, V (Hernandez-Gea, Virginia). JOURNAL OF HEPATOLOGY Meeting Abstract: OS-571 Volume: 75 Pages: S252-S253 Supplement: 2 Published: JUL 2021. WOS:000667753800093

• Alcohol-related liver disease phenotype impacts survival after an acute variceal bleeding episode. Villagrasa, A (Villagrasa, Ares); Hernandez-Gea, V (Hernandez-Gea, Virginia); Ventura-Cots, M (Ventura-Cots, Meritxell); Bataller, R (Bataller, Ramon); Giraldez-Gallego, A (Giraldez-Gallego, Alvaro); Procopet, B (Procopet, Bogdan); Amitrano, L (Amitrano, Lucio); Villanueva, C (Villanueva, Candid); Thabut, D (Thabut, Dominique); Ibanez, L (Ibanez, Luis); Silva-Junior, G (Silva-Junior, Gilberto); Albillos, A (Albillos, Agustin); Bureau, C (Bureau, Christophe); Jonel, T (Jonel, Trebicka); Llop, E (Llop, Elba); Laleman, W (Laleman, Wim); Palazon, JM (Maria Palazon, Jose); Alonso, JC (Castellote Alonso, Jose); Rodrigues, SG (Rodrigues, Susana G.); Gluud, LL (Gluud, Lise Lotte); Ferreira, CN (Ferreira, Carlos Noronha); Canete, N (Canete, Nuria); Rodriguez, M (Rodriguez, Manuel); Ferlitsch, A (Ferlitsch, Arnulf); Mundi, JL (Luis Mundi, Jose); Gronbaek, H (Gronbaek, Henning); Hernandez-Guerra, M (Hernandez-Guerra, Manuel); Sassatelli, R (Sassatelli, Romano); Dell'Era, A (Dell'Era, Alessandra); Senzolo, M (Senzolo, Marco); Abraldes, J (Abraldes, Juan); Gomez, MR (Romero Gomez, Manuel); Zipprich, A (Zipprich, Alexander); Casas, M (Casas, Meritxell); Masnou, H (Masnou, Helena); Primignani, M (Primignani, Massimo); Krag, A (Krag, Aleksander); Tantau, M (Tantau, Marcel); Maria, G (Maria, Guardascione); Alvarado, E (Alvarado, Edilmar); Rudler, M (Rudler, Marika); Banares, R (Banares, Rafael); Martinez, J (Martinez, Javier); Robic, MA (Robic, Marie-Angele); Jansen, C (Jansen, Christian); Panero, JLC (Calleja Panero, Jose Luis); Nevens, F (Nevens, Frederik); Bosch, J (Bosch, Jaime); Pagan, JCG (Garcia Pagan, Juan Carlos); Genesca, J (Genesca, Joan). JOURNAL OF HEPATOLOGY Meeting Abstract: PO-48 Volume: 75 Pages: S307-S309 Supplement: 2 Published: JUL 2021. WOS:000667753800183

• Carvedilol improves risk of decompensation and survival in compensated cirrhosis. A competing-risk meta-analysis of individual patient data. Villanueva, C (Villanueva, Candid); Torres, F (Torres, Ferran); Shah, HA (Shah, Hasnain A.); Tripathi, D (Tripathi, Dhiraj); Sarin, SK (Sarin, Shiv Kumar); Brujats, A (Brujats, Anna); Rodrigues, SG (Rodrigues, Susana G.); Azam, Z (Azam, Zahid); Hayes, P (Hayes, Peter); Bhardwaj, A (Bhardwaj, Ankit); Abid, S (Abid, Shahab); Jindal, A (Jindal, Ankur); Alvarado, E (Alvarado, Edilmar); Bosch, J (Bosch, Jaime). JOURNAL OF HEPATOLOGY

Meeting Abstract: PO-1987 Volume: 75 Pages: S378-S380
Supplement: 2 Published: JUL 2021. WOS:000667753800300

- SARS-CoV-2 infection in Elderly patients with Inflammatory Bowel Disease with or without immunosuppressants during the first year of the pandemic. An observational, descriptive, cohort study. Sard, MC (Calafat Sard, M.); Gonzalez-Munoz, C (Gonzalez-Munoz, C.); Fortuny, M (Fortuny, M.); Roig, C (Roig, C.); Calm, A (Calm, A.); Mombiola, A (Mombiola, A.); Teller-Martin, N (Teller-Martin, N.); Canete, F (Canete, F.); Bertoletti, F (Bertoletti, F.); Gonzalez-Gonzalez, I (Gonzalez-Gonzalez, I.); Gordillo, J (Gordillo, J.); Manosa, M (Manosa, M.); Garcia-Planella, E (Garcia-Planella, E.); Domenech, E (Domenech, E.) JOURNAL OF CROHNS & COLITIS Meeting Abstract: P531 Volume: 15 Pages: S506-S507 DOI: 10.1093/ecco-jcc/jjab076.653 Supplement: 1 Published: MAY 2021. WOS:000709432400654.

- Effect of genetic polymorphisms in the folate pathway on the efficacy and safety of methotrexate in Crohn's disease. Salazar, J (Salazar, J.); Abalos, JG (Gordillo Abalos, J.); Fernandez, A (Fernandez, A.); Esteve, M (Esteve, M.); Gisbert, JP (Perez Gisbert, J.); Busquets, D (Busquets, D.); Lucendo, A (Lucendo, A.); Marquez, L (Marquez, L.); Guardiola, J (Guardiola, J.); Martin, MD (Martin, M. D.); Iglesias, E (Iglesias, E.); Monfort, D (Monfort, D.); Villoria, A (Villoria, A.); Canete, F (Canete, F.); Bell, O (Bell, O.); Ricart, E (Ricart, E.); Zabana, Y (Zabana, Y.); Domenech, E (Domenech, E.); Garcia-Planella, E (Garcia-Planella, E.) JOURNAL OF CROHNS & COLITIS Meeting Abstract: P671 Volume: 15 Pages: S593-S593 DOI: 10.1093/ecco-jcc/jjab076.791 Supplement: 1 Published: MAY 2021 . WOS:000709432400792

- Influence of Crohn's Disease phenotype in the retention rate of ustekinumab treatment: SUSTAIN Study. Chaparro, M (Chaparro, M.); Rey, IB (Baston Rey, I.); Fernandez-Salgado, E (Fernandez-Salgado, E.); Garcia, JG (Gonzalez Garcia, J.); Ramos, L (Ramos, L.); Palomares, MTDL (Diz-Lois Palomares, M. T.); Arguelles, E (Arguelles, E.); Flores, EI (Iglesias Flores, E.); Cabelo, M (Cabelo, M.); Iturria, SR (Rubio Iturria, S.); Ortiz, AN (Nunez Ortiz, A.); Charro, M (Charro, M.); Ginard, D (Ginard, D.); Sadornil, CD (Duenas Sadornil, C.); Ochoa, OM (Merino Ochoa, O.); David, B (David, B.); Iyo, E (Iyo, E.); Casbas, AG (Gutierrez Casbas, A.); de la Piscina, PR (Ramirez de la Piscina, P.); Bosca-Watts, MM (Bosca-Watts, M. M.); Arroyo, M (Arroyo, M.); Garcia, MJ (Garcia, M. J.); Hinojosa, E (Hinojosa, E.); Gordillo, J (Gordillo, J.); Montiel, PM (Martinez Montiel, P.); Jimenez, BV (Velayos Jimenez, B.); Ivorra, CQ (Quilez Ivorra, C.); Moron, JMV (Vazque Moron, J. M.); Huguet, JM (Huguet, J. M.); Lama, YG (Gonzalez Lama, Y.); Santos, AIM (Munagorri Santos, A. I.); Amo, VM (Amo, V. M.); Arranz, MDM (Martin Arranz, M. D.); Bermejo, F (Bermejo, F.); Cadilla, JM (Martinez Cadilla, J.); Salazar, PF (Fradejas Salazar, P.); Novella, C (Novella, C.); Vispo, E (Vispo, E.); Barreiro-de Acosta, M (Barreiro-de Acosta, M.); Gisbert, JP (Gisbert, J. P.) JOURNAL OF CROHNS & COLITIS Meeting Abstract: P263 Volume: 15 Pages: S299-S300 DOI: 10.1093/ecco-jcc/jjab076.389 Supplement: 1 Published: MAY 2021. WOS:000709432400389

- Influence of concomitant immunosuppressives in retention rate in Crohn's Disease patients under ustekinumab in the

SUSTAIN Study. Chaparro, M (Chaparro, M.); Rey, IB (Baston Rey, I.); Fernandez-Salgado, F (Fernandez-Salgado, F.); Garcia, JG (Gonzalez Garcia, J.); Ramos, L (Ramos, L.); Palomares, MTDL (Diz-Lois Palomares, M. T.); Arguelles, E (Arguelles, E.); Flores, EI (Iglesias Flores, E.); Cabello, M (Cabello, M.); Iturria, SR (Rubio Iturria, S.); Ortiz, AN (Nunez Ortiz, A.); Charro, M (Charro, M.); Ginard, D (Ginard, D.); Sadornil, CD (Duenas Sadornil, C.); Ochoa, OM (Merino Ochoa, O.); Busquets, D (Busquets, D.); Iyo, E (Iyo, E.); Casbas, AG (Gutierrez Casbas, A.); de la Piscina, PR (Ramirez de la Piscina, P.); Bosca-Watts, MM (Bosca-Watts, M. M.); Arroyo, M (Arroyo, M.); Garcia, MJ (Garcia, M. J.); Hinojosa, E (Hinojosa, E.); Gordillo, J (Gordillo, J.); Montiel, PM (Martinez Montiel, P.); Jimenez, BV (Velayos Jimenez, B.); Ivorra, CQ (Quilez Ivorra, C.); Moron, JMV (Vazquez Moron, J. M.); Huguet, JM (Huguet, J. M.); Lama, YG (Gonzalez Lama, Y.); Santos, AIM (Munagorri Santos, A. I.); Amo, VM (Amo, V. M.); Arranz, MDM (Martin Arranz, M. D.); Bermejo, F (Bermejo, F.); Cadilla, JM (Martinez Cadilla, J.); Salazar, PF (Fradejas Salazar, P.); Novella, C (Novella, C.); Vispo, E (Vispo, E.); Barreiro-de Acosta, M (Barreiro-de Acosta, M.); Gisbert, JP (Gisbert, J. P.) JOURNAL OF CROHNS & COLITIS Meeting Abstract: P509 Volume: 15 Pages: S489-S490 DOI: 10.1093/ecco-jcc/jjab076.631 Supplement: 1 Published: MAY 2021. WOS:000709432400632.

- Inflammatory bowel disease in immigrants to Spain: results of the EIIMIGRA study from GETECCU (ENEIDA registry). Casbas, AG (Gutierrez Casbas, A.); Zapater, P (Zapater, P.); Ricart, E (Ricart, E.); Gonzalez-Vivo, M (Gonzalez-Vivo, M.); Gordillo, J (Gordillo, J.); Olivares, D (Olivares, D.); Vera-Mendoza, I (Vera-Mendoza, I.); Manosa, M (Manosa, M.); Gisbert, JP (Gisbert, J. P.); Aguas, M (Aguas, M.); Sanchez-Rodriguez, E (Sanchez-Rodriguez, E.); Bosca, M (Bosca, M.); Laredo, V (Laredo, V.); Camps, B (Camps, B.); Marin-Jimenez, I (Marin-Jimenez, I.); Zabana, Y (Zabana, Y.); Martin-Arranz, MD (Martin-Arranz, M. D.); Munoz, R (Munoz, R.); Navarro-Llavat, M (Navarro-Llavat, M.); Sierra, E (Sierra, E.); Madero, L (Madero, L.); Vela, M (Vela, M.); Perez-Calle, J (Perez-Calle, J.); Sainz, E (Sainz, E.); Calvet, X (Calvet, X.); Sicilia, B (Sicilia, B.); Morales, V (Morales, V.); Bermejo, F (Bermejo, F.); Fernandez-Salazar, L (Fernandez-Salazar, L.); Van Domselaar, M (Van Domselaar, M.); De Castro, L (De Castro, L.); Rodriguez, C (Rodriguez, C.); Munoz-Villafranca, C (Munoz-Villafranca, C.); Lorente, R (Lorente, R.); Rivero, M (Rivero, M.); Iglesias, E (Iglesias, E.); Herreros, B (Herreros, B.); Barreiro-de-Acosta, M (Barreiro-de-Acosta, M.); Domenech, E (Domenech, E.); Frances, R (Frances, R.) Group Author(s): EIIMIGRA. JOURNAL OF CROHNS & COLITIS Meeting Abstract: P630 Volume: 15 Pages: S567-S568 Supplement: 1 Published: MAY 2021. WOS:000709432400751.

- Comorbidities and epidemiological risk factor but not immunosuppressive therapies increase the risk of COVID-19 in Inflammatory Bowel Disease (IBD): An ENEIDA-based, case-control study. Abdo, YZ (Zabana Abdo, Y.); Marin-Jimenez, I (Marin-Jimenez, I.); Rodriguez-Lago, I (Rodriguez-Lago, I.); Vera, I (Vera, I.); Martin, MD (Martin, M. D.); Guerra, I (Guerra, I.); Gisbert, JP (Gisbert, J. P.); Mesonero, F (Mesonero, F.); Benitez, O (Benitez, O.); Taxonera, C (Taxonera, C.); Ponferrada-Diaz, A (Ponferrada-Diaz, A.); Piqueras, M (Piqueras, M.); Lucendo, A (Lucendo, A.);

Caballol, B (Caballol, B.); Manosa, M (Manosa, M.); Martinez-Montiel, P (Martinez-Montiel, P.); Bosca-Watts, M (Bosca-Watts, M.); Gordillo, J (Gordillo, J.); Bujanda, L (Bujanda, L.); Mancenido, N (Mancenido, N.); Martinez-Perez, T (Martinez-Perez, T.); Lopez, A (Lopez, A.); Rodriguez, C (Rodriguez, C.); Garcia-Lopez, S (Garcia-Lopez, S.); Vega, P (Vega, P.); Rivero, M (Rivero, M.); Melcarne, L (Melcarne, L.); Calvo, M (Calvo, M.); Iborra, M (Iborra, M.); Barreiro-de Acosta, M (Barreiro-de Acosta, M.); Arias, L (Arias, L.); Barrio, J (Barrio, J.); Perez, JL (Perez, J. L.); Busquets, D (Busquets, D.); Perez-Martinez, I (Perez-Martinez, I.); Navarro-Llavat, M (Navarro-Llavat, M.); Hernandez, V (Hernandez, V.); Arguelles-Arias, F (Arguelles-Arias, F.); Domenech, E (Domenech, E.); Esteve, M (Esteve, M.)

Covid-19-EII Consortium ENEIDA. JOURNAL OF CROHNS & COLITIS Meeting Abstract: DOP40 Volume: 15 Pages: S078-S079 DOI: 10.1093/ecco-jcc/jjab073.079 Supplement: 1 Published: MAY 2021. WOS:000709432400080.

- Adherence to endoscopic surveillance guidelines for advanced lesions and colorectal cancer in Inflammatory Bowel Disease in Spain: a collaborative study of AEG and GETECCU. Ferre, MPB (Ballester Ferre, M. P.); Mesonero, E (Mesonero, E.); Florez-Diez, P (Florez-Diez, P.); Gomez, C (Gomez, C.); Fuentes-Valenzuela, E (Fuentes-Valenzuela, E.); Martin, N (Martin, N.); Senosiain, C (Senosiain, C.); Vela, M (Vela, M.); Fernandez-Clotet, A (Fernandez-Clotet, A.); Perez, P (Perez, P.); de Celix, CR (Rubin de Celix, C.); Calvino-Suarez, C (Calvino-Suarez, C.); Ferreiro-Iglesias, R (Ferreiro-Iglesias, R.); Hermida, B (Hermida, B.); Munoz, R (Munoz, R.); Gonzalez-Vivo, M (Gonzalez-Vivo, M.); Brunet, E (Brunet, E.); Jimenez, N (Jimenez, N.); Botella, B (Botella, B.); Yebra, J (Yebra, J.); Suarez, C (Suarez, C.); Bouhmid, A (Bouhmid, A.); Jurado, RM (Jurado, R. M.); Lopez, A (Lopez, A.); Algarra, A (Algarra, A.); Beso, P (Beso, P.); Ponferrada, A (Ponferrada, A.); Plaza, R (Plaza, R.); Duenas, C (Duenas, C.); Benitez, JM (Benitez, J. M.); Soto, P (Soto, P.); Castillo, E (Castillo, E.); Iyo, E (Iyo, E.); Carbonell-Asins, JA (Carbonell-Asins, J. A.); Beltran, B (Beltran, B.); Minguez, M (Minguez, M.) Group Author(s): Young Grp AEG GETECCU. JOURNAL OF CROHNS & COLITIS Meeting Abstract: P606 Volume: 15 Pages: S551-S552 DOI: 10.1093/ecco-jcc/jjab076.727 Supplement: 1 Published: MAY 2021. WOS:000709432400728

- Effectiveness and safety of ustekinumab in elderly patients: Real world evidence from ENEIDA registry. Deza, DC (Casas Deza, D.); Calvo, LJL (Lamuela Calvo, L. J.); Mainar, JMA (Arbones Mainar, J. M.); Ricart, E (Ricart, E.); Gisbert, JP (Gisbert, J. P.); Tirado, MR (Rivero Tirado, M.); Rodriguez, ES (Sanchez Rodriguez, E.); Sicilia, B (Sicilia, B.); Casbas, AG (Gutierrez Casbas, A.); Ochoa, OM (Merino Ochoa, O.); Marquez, L (Marquez, L.); de la Torre, VL (Laredo de la Torre, V.); Arranz, MDM (Martin Arranz, M. D.); Serrano, PL (Lopez Serrano, P.); Menendez, SR (Riestra Menendez, S.); Munoz, CG (Gonzalez Munoz, C.); Parga, LD (de Castro Parga, L.); Moya, MC (Calvo Moya, M.); Alonso, JG (Garcia Alonso, J.); Esteve, M (Esteve, M.); Colomino, MI (Iborra Colomino, M.); Gil, MD (Dura Gil, M.); de Acosta, MB (Barreiro de Acosta, M.); Poyatos, RL (Lorente Poyatos, R.); Mancenido, N (Mancenido, N.); Caballo, B (Caballo, B.); Calafat, M (Calafat, M.); Lago, IR (Rodriguez Lago, I.); Capo, JG (Guardiola

Capo, J.); Alvarado, VJM (Morales Alvarado, V. J.); Tardillo, C (Tardillo, C.); Bujanda, L (Bujanda, L.); Nunez, JFM (Munoz Nunez, J. F.); Nieto, YB (Ber Nieto, Y.); Bermejo, F (Bermejo, F.); Chaparro, M (Chaparro, M.); Almela, P (Almela, P.); Navarro, M (Navarro, M.); Domenech, E (Domenech, E.); Lopez, SG (Garcia Lopez, S.). ENEIDA Registry GETECCU. JOURNAL OF CROHNS & COLITIS Meeting Abstract: P262 Volume: 15 Pages: S298-S299 DOI: 10.1093/ecco-jcc/jjab076.388 Supplement: 1 Published: MAY 2021. WOS:000709432400388.

- Effectiveness and safety of ustekinumab in ulcerative colitis: Real-world evidence from the ENEIDA registry. Chaparro, M (Chaparro, M.); Garre, A (Garre, A.); Iborra, M (Iborra, M.); Sierra, M (Sierra, M.); Barreiro-de Acosta, M (Barreiro-de Acosta, M.); Fernandez-Clotet, A (Fernandez-Clotet, A.); de Castro, L (de Castro, L.); Bosca-Watts, M (Bosca-Watts, M.); Casanova, MJ (Casanova, M. J.); Lopez-Garcia, A (Lopez-Garcia, A.); Lorente, R (Lorente, R.); Rodriguez, C (Rodriguez, C.); Carbajo, AY (Carbajo, A. Y.); Arroyo, MT (Arroyo, M. T.); Gutierrez, A (Gutierrez, A.); Hinojosa, J (Hinojosa, J.); Martinez-Perez, T (Martinez-Perez, T.); Villoria, A (Villoria, A.); Bermejo, F (Bermejo, F.); Busquets, D (Busquets, D.); Camps, B (Camps, B.); Canete, F (Canete, F.); Mancenido, N (Mancenido, N.); Monfort, D (Monfort, D.); Navarro-Llavat, M (Navarro-Llavat, M.); Perez-Calle, JE (Perez-Calle, J. E.); Ramos, L (Ramos, L.); Rivero, M (Rivero, M.); Angueira, T (Angueira, T.); Camo, P (Camo, P.); Carpio, D (Carpio, D.); Garcia-de-la-Filia, I (Garcia-de-la-Filia, I.); Gonzalez-Munoz, C (Gonzalez-Munoz, C.); Hernandez, L (Hernandez, L.); Huguet, JM (Huguet, J. M.); Morales, VJ (Morales, V. J.); Sicilia, B (Sicilia, B.); Vega, P (Vega, P.); Domenech, E (Domenech, E.); Gisbert, JP (Gisbert, J. P.). ENEIDA Study Grp. JOURNAL OF CROHNS & COLITIS Meeting Abstract: P476 Volume: 15 Pages: S465-S466 DOI: 10.1093/ecco-jcc/jjab076.776 Supplement: 1 Published: MAY 2021. WOS:000709432400599.

- Management and outcome of postoperative Crohn's Disease in the elderly as compared to young adults: Data from Eneida registry. Ciria, MM (Manosa Ciria, M.); Calafat, M (Calafat, M.); Ricart, E (Ricart, E.); Nos, P (Nos, P.); Iglesias, E (Iglesias, E.); Riestra, S (Riestra, S.); Lopez-Sanroman, A (Lopez-Sanroman, A.); Vera, M (Vera, M.); Guardiola, J (Guardiola, J.); Hernandez, V (Hernandez, V.); Rivero, M (Rivero, M.); Carpio, D (Carpio, D.); Minguez, M (Minguez, M.); Alba, C (Alba, C.); Martin-Arranz, MD (Martin-Arranz, M. D.); Rodriguez, E (Rodriguez, E.); Gomollon, F (Gomollon, F.); Garcia-Lopez, S (Garcia-Lopez, S.); Casbas, AG (Gutierrez Casbas, A.); Calvet, X (Calvet, X.); Gonzalez-Munoz, C (Gonzalez-Munoz, C.); Barrio, J (Barrio, J.); Gisbert, JP (Gisbert, J. P.); Sicilia, B (Sicilia, B.); Perez-Calle, JL (Perez-Calle, J. L.); Bujanda, B (Bujanda, L.); Esteve, M (Esteve, M.); Ramos, L (Ramos, L.); Varela, P (Varela, P.); Sierra, M (Sierra, M.); Merino, O (Merino, O.); Bermejo, F (Bermejo, F.); Barreiro-de Acosta, M (Barreiro-de Acosta, M.); Rodriguez, A (Rodriguez, A.); Marquez, L (Marquez, L.); Garcia-Bosch, O (Garcia-Bosch, O.); Cabriada, JL (Cabriada, J. L.); Lorente, R (Lorente, R.); Canete, F (Canete, F.); Domenech, E (Domenech, E.). Group Author(s): ENEIDA. JOURNAL OF CROHNS & COLITIS Meeting Abstract: DOP31 Volume: 15 Pages:

S069-S070 DOI: 10.1093/ecco-jcc/jjab073.070 Supplement: 1
Published: MAY 2021 . WOS:000709432400071.

- Long-term outcomes of enterocutaneous fistula complicating Crohn's Disease: The ECUFIT study from GETECCU. Rodriguez-Lago, I (Rodriguez-Lago, I.); Perez, CG (Garcia Perez, C.); Calafat, M (Calafat, M.); Soto, MP (Soto, M. P.); Calvo, M (Calvo, M.); Rodriguez, ES (Sanchez Rodriguez, E.); Caballol, B (Caballol, B.); Vela, M (Vela, M.); Rivero, M (Rivero, M.); Munnoz, F (Munoz, F.); De Castro, L (De Castro, L.); Calvet, X (Calvet, X.); Garcia-Alonso, FJ (Garcia-Alonso, F. J.); Fornals, AU (Utrilla Fornals, A.); Ferreiro-Iglesias, R (Ferreiro-Iglesias, R.); Gonzalez-Munoz, C (Gonzalez-Munoz, C.); Chaparro, M (Chaparro, M.); Luis, B (Luis, B.); Sicilia, B (Sicilia, B.); Alfambra, E (Alfambra, E.); Rodriguez, A (Rodriguez, A.); Fernandez, RP (Perez Fernandez, R.); Rodriguez, C (Rodriguez, C.); Almela, P (Almela, P.); Arguelles, F (Arguelles, F.); Busquets, D (Busquets, D.); Tamarit-Sebastian, S (Tamarit-Sebastian, S.); Castro, CR (Reygosa Castro, C.); Jimenez, L (Jimenez, L.); Marin-Jimenez, I (Marin-Jimenez, I.); Alcaide, N (Alcaide, N.); Fernandez-Salgado, E (Fernandez-Salgado, E.); Gomez, AI (Iglesias Gomez, A.); Ponferrada, A (Ponferrada, A.); Pajares, R (Pajares, R.); Roncero, O (Roncero, O.); Morales-Alvarado, VJ (Morales-Alvarado, V. J.); Cabriada, JL (Cabriada, J. L.); Domenech, E (Domenech, E.); Barreiro-de Acosta, M (Barreiro-de Acosta, M.). Group Author(s): ENEIDA Registry. JOURNAL OF CROHNS & COLITIS Meeting Abstract: DOP32 Volume: 15 Pages: S070-S071 DOI: 10.1093/ecco-jcc/jjab073.071 Supplement: 1 Published: MAY 2021. WOS:000709432400072

- Long-term outcomes of biologic therapy in Crohn's disease complicated with internal fistulizing disease: BIOSCOPE study from GETECCU. Rodriguez-Lago, I (Rodriguez-Lago, I.); Fernandez-Clotet, A (Fernandez-Clotet, A.); Mesonero, F (Mesonero, F.); Garcia-Alonso, FJ (Garcia-Alonso, F. J.); Casanova, MJ (Casanova, M. J.); Fernandez-de la Varga, M (Fernandez-de la Varga, M.); Canete, F (Canete, F.); de Castro, L (de Castro, L.); Gutierrez, A (Gutierrez, A.); Sicilia, B (Sicilia, B.); Cano, V (Cano, V.); Merino, O (Merino, O.); Riestra, S (Riestra, S.); Gonzalez-Partida, I (Gonzalez-Partida, I.); Suris, G (Suris, G.); Torrealba, L (Torrealba, L.); Ferreiro-Iglesias, R (Ferreiro-Iglesias, R.); Castro, B (Castro, B.); Marquez, L (Marquez, L.); Sobrino, A (Sobrino, A.); Elorza, A (Elorza, A.); Calvet, X (Calvet, X.); Varela, P (Varela, P.); Betore, E (Betore, E.); Bujanda, L (Bujanda, L.); Lario, L (Lario, L.); Mancenido, N (Mancenido, N.); Garcia-Sepulcre, M (Garcia-Sepulcre, M.); Iglesias, E (Iglesias, E.); Rodriguez, C (Rodriguez, C.); Piqueras, M (Piqueras, M.); Rosique, JAF (Ferrer Rosique, J. A.); Lucendo, A (Lucendo, A.); Benitez, O (Benitez, O.); Garcia, M (Garcia, M.); Olivares, D (Olivares, D.); Gonzalez-Munoz, C (Gonzalez-Munoz, C.); Cabriada, JL (Cabriada, J. L.); Domenech, E (Domenech, E.); Barreiro-de Acosta, N (Barreiro-de Acosta, N.). ENEIDA Registry. JOURNAL OF CROHNS & COLITIS Meeting Abstract: P357 Volume: 15 Pages: S377-S378 Supplement: 1 Published: MAY 2021. DOI: 10.1093/ecco-jcc/jjab076.481. WOS:000709432400480.

- Beta-blockers induce lower portal pressure decreasing effect in patients with MAFLD-Cirrhosis than those with alcoholic or HCV-Cirrhosis. Brujats, A (Brujats, Anna); Espi, BC (Cuyas Espi, Berta);

Alvarado-Tapias, E (Alvarado-Tapias, Edilmar); Sans, MP (Poca Sans, Maria); Camps, CP (Pujol Camps, Claudia); Collell, XT (Torras Collell, Xavier); Manosa, AE (Escorsell Manosa, Angels); Sanchez, CV (Villanueva Sanchez, Candid). HEPATOLOGY Meeting Abstract: 145 Volume: 74 Pages: 99A-99A Supplement: 1 Published: OCT 2021. WOS:000707188000146.

- Impact of SarsCov2 pandemic on vascular liver diseases. Author(s): Baiges, A (Baiges, Anna); Reyes, EC (Cerdeja Reyes, Eira); Amicone, C (Amicone, Caroline); Luis, T (Luis, Tellez); Puente, A (Puente, Angela); Llop, E (Llop, Elba); Alvarado, E (Alvarado, Edilmar); Rocha, F (Rocha, Filipa); Orts, L (Orts, Lara); Ros, O (Ros, Oliva); Vizcarra, P (Vizcarra, Pamela); Serrano, MJ (Jose Serrano, Maria); Falga, MA (Angels Falga, M.); Magaz, M (Magaz, Marta); Olivas, P (Olivas, Pol); Sanchez, FB (Betancourt Sanchez, Fabian); Perez, V (Perez, Valeria); Turon, F (Turon, Fanny); Audrey, P (Audrey, Payance); Gorla, O (Gorla, Odile); Pe, R (Pe, Rautou); Hernandez-Gea, V (Hernandez-Gea, Virginia); Plessier, A (Plessier, Aurelie); Pagan, JCG (Garcia Pagan, Juan Carlos); Fortea, JI (Ignacio Fortea, Jose) JOURNAL OF HEPATOLOGY Meeting Abstract: PO-2902 Volume: 75 Pages: S694-S695 Supplement: 2 Published: JUL 2021. Accession Number: WOS:000667753801355. PubMed ID: 34968728

- Relationship between hepatic venous pressure gradient and presence of decompensation in non-alcoholic fatty liver disease. Author(s): Bassegoda, O (Bassegoda, Octavi); Olivas, P (Olivas, Pol); Turco, L (Turco, Laura); Mandorfer, M (Mandorfer, Mattias); Burriel, MS (Burriel, Miquel Serra); Luis, T (Luis, Tellez); Kwanten, W (Kwanten, Wilhelmus); Laroyenne, A (Laroyenne, Alexia); Nicoara-Farcau, O (Nicoara-Farcau, Oana); Alvarado, E (Alvarado, Edilmar); Moga, L (Moga, Lucile); Vuille-Lessard, E (Vuille-Lessard, Elise); Fortea, JI (Fortea, Jose Ignacio); Ibanez, L (Ibanez, Luis); Tosetti, G (Tosetti, Giulia); Vanwollegghem, T (Vanwollegghem, Thomas); Larrue, H (Larrue, Helene); Burgos-Santamaria, D (Burgos-Santamaria, Diego); Horia, S (Horia, Stefanescu); Paternostro, R (Paternostro, Rafael); Cippitelli, A (Cippitelli, Annalisa); Lens, S (Lens, Sabela); Augustin, S (Augustin, Salvador); Llop, E (Llop, Elba); Laleman, W (Laleman, Wim); Trebicka, J (Trebicka, Jonel); Johannes, C (Johannes, Chang); Masnou, H (Masnou, Helena); Zipprich, A (Zipprich, Alexander); Miceli, F (Miceli, Francesca); Semmler, G (Semmler, Georg); Forn, X (Forn, Xavier); Primignani, M (Primignani, Massimo); Banares, R (Banares, Rafael); Puente, A (Puente, Angela); Berzigotti, A (Berzigotti, Annalisa); Rautou, PE (Rautou, Pierre-Emmanuel); Villanueva, C (Villanueva, Candid); Gines, P (Gines, Pere); Pagan, JCG (Garcia Pagan, Juan Carlos); Procopet, B (Procopet, Bogdan); Bureau, C (Bureau, Christophe); Albillos, A (Albillos, Agustin); Francque, S (Francque, Sven); Reiberger, T (Reiberger, Thomas); Schepis, F (Schepis, Filippo); Graupera, I (Graupera, Isabel); Hernandez-Gea, V (Hernandez-Gea, Virginia). Source: JOURNAL OF HEPATOLOGY Meeting Abstract: OS-571 Volume: 75 Pages: S252-S253 Supplement: 2 Published: JUL 2021. Accession Number: WOS:000667753800093

- Alcohol-related liver disease phenotype impacts survival after an acute variceal bleeding episode. Author(s): Villagrasa, A (Villagrasa, Ares); Hernandez-Gea, V (Hernandez-Gea, Virginia);

Ventura-Cots, M (Ventura-Cots, Meritxell); Bataller, R (Bataller, Ramon); Giraldez-Gallego, A (Giraldez-Gallego, Alvaro); Procopet, B (Procopet, Bogdan); Amitrano, L (Amitrano, Lucio); Villanueva, C (Villanueva, Candid); Thabut, D (Thabut, Dominique); Ibanez, L (Ibanez, Luis); Silva-Junior, G (Silva-Junior, Gilberto); Albillos, A (Albillos, Agustin); Bureau, C (Bureau, Christophe); Jonel, T (Jonel, Trebicka); Llop, E (Llop, Elba); Laleman, W (Laleman, Wim); Palazon, JM (Maria Palazon, Jose); Alonso, JC (Castellote Alonso, Jose); Rodrigues, SG (Rodrigues, Susana G.); Gluud, LL (Gluud, Lise Lotte); Ferreira, CN (Ferreira, Carlos Noronha); Canete, N (Canete, Nuria); Rodriguez, M (Rodriguez, Manuel); Ferlitsch, A (Ferlitsch, Arnulf); Mundi, JL (Luis Mundi, Jose); Gronbaek, H (Gronbaek, Henning); Hernandez-Guerra, M (Hernandez-Guerra, Manuel); Sassatelli, R (Sassatelli, Romano); Dell'Era, A (Dell'Era, Alessandra); Senzolo, M (Senzolo, Marco); Abralde, J (Abralde, Juan); Gomez, MR (Romero Gomez, Manuel); Zipprich, A (Zipprich, Alexander); Casas, M (Casas, Meritxell); Masnou, H (Masnou, Helena); Primignani, M (Primignani, Massimo); Krag, A (Krag, Aleksander); Tantau, M (Tantau, Marcel); Maria, G (Maria, Guardascione); Alvarado, E (Alvarado, Edilmar); Rudler, M (Rudler, Marika); Banares, R (Banares, Rafael); Martinez, J (Martinez, Javier); Robic, MA (Robic, Marie-Angele); Jansen, C (Jansen, Christian); Panero, JLC (Calleja Panero, Jose Luis); Nevens, F (Nevens, Frederik); Bosch, J (Bosch, Jaime); Pagan, JCG (Garcia Pagan, Juan Carlos); Genesca, J (Genesca, Joan). Source: JOURNAL OF HEPATOLOGY Meeting Abstract: PO-48 Volume: 75 Pages: S307-S309 Supplement: 2 Published: JUL 2021. Accession Number: WOS:000667753800183

- Impact of a loss-of-function variant in HSD17B13 on hepatic decompensation and mortality in cirrhotic patients. Author(s): Gil-Gomez, A (Gil-Gomez, Antonio); Ampuero, J (Ampuero, Javier); Zambrano, SG (Gato Zambrano, Sheila); Montero-Vallejo, R (Montero-Vallejo, Rocio); Hernandez, RM (Munoz Hernandez, Rocio); Maya, D (Maya, Douglas); Gallego-Duran, R (Gallego-Duran, Rocio); Alvarez-Ossorio, AR (Rojas Alvarez-Ossorio, Angela); Frances, R (Frances, Ruben); Soriano, G (Soriano, German); Gomez, MR (Romero Gomez, Manuel). Source: JOURNAL OF HEPATOLOGY Meeting Abstract: PO-2420 Volume: 75 Pages: S342-S342 Supplement: 2 Published: JUL 2021. Accession Number: WOS:000667753800242.

- Carvedilol improves risk of decompensation and survival in compensated cirrhosis. A competing-risk meta-analysis of individual patient data. Author(s): Villanueva, C (Villanueva, Candid); Torres, F (Torres, Ferran); Shah, HA (Shah, Hasnain A.); Tripathi, D (Tripathi, Dhiraj); Sarin, SK (Sarin, Shiv Kumar); Brujats, A (Brujats, Anna); Rodrigues, SG (Rodrigues, Susana G.); Azam, Z (Azam, Zahid); Hayes, P (Hayes, Peter); Bhardwaj, A (Bhardwaj, Ankit); Abid, S (Abid, Shahab); Jindal, A (Jindal, Ankur); Alvarado, E (Alvarado, Edilmar); Bosch, J (Bosch, Jaime). Source: JOURNAL OF HEPATOLOGY Meeting Abstract: PO-1987 Volume: 75 Pages: S378-S380 Supplement: 2 Published: JUL 2021. Accession Number: WOS:000667753800300.

Communication and dissemination activities

Outreach activities

- Col.loquis formatius en Malaltia Inflamatòria Intestinal I – YouTube. El pacient Gran amb MII. Seguretat global dels farmàcs. Hem de fer servir immunosupressors? Quins Biològics? Esther Garcia Planella. https://www.youtube.com/watch?v=Ytw_8ffl0Ew. 29 Apr 2021.
- Curs d'Actualització en Patologies de l'Àparell Digestiu 2020-2021, 7 Apr 2021. YouTube. Hemostasia aplicada al aparell digestiu- Carlos Guarner Argente. https://www.youtube.com/watch?v=zgiNZ0jUu_E
- Sessió comunicacions IV – YouTube. <https://www.youtube.com/watch?v=pFT9fRvpvG8>. 29 Jan 2021.
- Sessió de posters Cirrosi – YouTube. <https://www.youtube.com/watch?v=yMwmXnWxMEQ>. 29 Jan 2021
- Sessió comunicacions II – YouTube. <https://www.youtube.com/watch?v=ZLcUi1KcoGc>. 29 Jan 2021
- Webinar: Novedades en el registro español de enfermedades vasculares hepáticas 1. 19 may 2021 – YouTube. <https://www.youtube.com/watch?v=cRCs4A8iK74>. Edilmar Alvarado
- News reléase: Determinan un algoritmo basado en datos clínicos y genéticos que predice el riesgo de encefalopatía en pacientes con cirrosis | CIBEREHD <https://www.ciberehd.org/noticias/determinan-un-algoritmo-basado-en-datos-clinicos-y-geneticos-que-predice-el-riesgo-de-encefalopatia-en-pacientes-con-cirrosis>
- News release: Subrayan la importancia de la medicina personalizada en pacientes con enfermedad hepática metabólica | CIBEREHD. <https://www.ciberehd.org/noticias/subrayan-la-importancia-de-la-medicina-personalizada-en-pacientes-con-enfermedad-hepatica-metabolica>

Position paper

- Indicacions i valoració del risc de les exploracions endoscòpiques en persones d'edat avançada o fràgils Desembre 2021. Francesc Riba*, Carles Guarner-Argente*, Mònica Solanes, Esther Francia, Pilar Garcia-Iglesias, Salvador Machlab, Juanjo Mascort, Juan Manuel Mendive, Jordi Ortiz, Xavier Calvet.

Teaching

- COORDINADORES DEL GRUPO DE ENFERMERÍA. Eva María Román. Grupo enfermería aeeh, Núria Fabrellas Padrés.
- Profesor del título propio en especialista en URGENCIAS Y EMERGENCIAS GASTROENTEROLOGÍA Y HEPATOLOGÍA. 22 Dec 2021 | 30 Sep 2022.12 | Claustro de profesores. ALVARADO EDILMAR I Hospital de la Santa Creu y de Sant Pau. Barcelona
- Profesor del título propio en especialista en URGENCIAS Y EMERGENCIAS GASTROENTEROLOGÍA Y HEPATOLOGÍA. 22

Dec 2021 | 30 Sep 2022. 12 | Claustro de profesores. GUARNER CARLOS I Hospital de la Santa Creu i Sant Pau. Barcelona, España

- Profesor del título propio en especialista en URGENCIAS Y EMERGENCIAS GASTROENTEROLOGÍA Y HEPATOLOGÍA. 22 Dec 2021 | 30 Sep de 2022. 12 | Claustro de profesores. VILLANUEVA CÁNDID I Hospital de la Santa Creu i Sant Pau. Barcelona, España

- 3r curso Inflamación intestinal 7 créditos ASIGNATURA Enfermedades inflamatorias intestinales e insuficiencia intestinal Coordinador de los materiales y asignatura: Eugeni Domènech Colaboradores de los materiales y profesores colaboradores de la asignatura: Isquemia mesentérica; colitis isquémica, angor intestinal; isquemia aguda. Esther Garcia-Planella. MÁSTER PROPIO EN PATOLOGÍA DEL APARATO DIGESTIVO.

- 3r curso Inflamación intestinal 7 créditos Enfermedad inflamatoria intestinal Coordinador de los materiales y asignatura: Eugeni Domènech Colaboradores de los materiales y profesores colaboradores de la asignatura: Guardiola Manejo de las complicaciones locales y sistémicas. Esther Garcia-Planella MÁSTER PROPIO EN PATOLOGÍA DEL APARATO DIGESTIVO.

- 4º curso Enfermedades funcionales, tumores intestinales y endoscopia básica ASIGNATURA 2 4 cr. Endoscopia básica y formación teórico-práctica. Coordinadora de los materiales y asignatura: Carme Loras. Colaboradores de los materiales y profesores colaboradores de la asignatura: Endoscopia digestiva básica: indicaciones, tipos de lesiones, seguridad Carlos Guarner-Argente Endoscopia digestiva alta Endoscopia digestiva baja Técnicas habituales: Resección endoscópica (aspectos técnicos, utensilios, seguridad); Hemostasia (térmica, esclerosis, mecánica); Otros (extracción de cuerpos extraños, desdoblamiento-descompresión, etc...) MÁSTER PROPIO EN PATOLOGÍA DEL APARATO DIGESTIVO.

- 5º curso Hepatitis y cirrosis hepática 8 crédito. ASIGNATURA 2 4 cr Enfermedades del hígado 2: Cirrosis hepática y complicaciones Coordinador de los materiales y asignatura: Germán Soriano Colaboradores de los materiales y profesores colaboradores de la asignatura: Acute on chronic liver failure. Xavier Ariza Encefalopatía hepática. Mireia Miquel Ascitis, síndrome hepatorenal, síndrome hepatopulmonar. Margarita Sala Hemorragia por hipertensión portal. Edilmar Alvarado Peritonitis bacteriana espontánea y otras infecciones en la cirrosis. Maria Poca Nutrición y curas del paciente con enfermedad hepática avanzada. Eva Román MÁSTER PROPIO EN PATOLOGÍA DEL APARATO DIGESTIVO.

- 6º curso Enfermedades metabólicas, vasculares y tumorales del hígado y patología biliar. Metodología de la investigación en aparato digestivo. 8 créditos ASIGNATURA 1 4 cr Enfermedades del hígado 3 Coordinador de los materiales y asignatura: Àlex Forner Colaboradores de los materiales y profesores colaboradores de la asignatura: Manejo de la insuficiencia hepática aguda. Àngels Escorsell. MÁSTER PROPIO EN PATOLOGÍA DEL APARATO DIGESTIVO

- X Curso Nacional de Emergencias en Gastroenterología y Hepatología 01/05/21 – 30/06/2021. 14.INSUFICIENCIA HEPÁTICA. Moderador: Dr. Alberto Lué. Hospital Universitario San Jorge, Huesca. Hepatitis fulminante. Dra. Àngels Escorsell Mañosa. Hospital de la Santa Creu i Sant Pau, Barcelona. Moderadora: Dra. Trinidad Serrano Aulló. Hospital Clínico Universitario Lozano Blesa, Zaragoza.

- X Curso Nacional de Emergencias en Gastroenterología y Hepatología 01/05/21 – 30/06/2021. 4.HEMORRAGIA GASTROINTESTINAL 1. Moderador: Dr. Miguel Montoro Huguet. Hospital Universitario San Jorge, Huesca. Hemorragia digestiva no varicosa: tratamiento. Dr. Càndid Villanueva Sánchez. Hospital de la Santa Creu i Sant Pau, Barcelona

- X Curso Nacional de Emergencias en Gastroenterología y Hepatología 01/05/21 – 30/06/2021. 12. COMPLICACIONES DE LA HIPERTENSIÓN PORTAL 1. Peritonitis bacteriana espontánea Edilmar Alvarado Tapias. Hospital de la Santa Creu i San Pau, Barcelona.

Conferences and seminars

- Curs formació continuada 2021-2022. Curs Societat Catalana de Digestologia. 03-01-2022 | 19:00 - 21:00 | Online Controvèrsies i recomanacions en el diagnòstic i maneig del pacient amb coledocalitias (Sessió). Moderato: Dr Carme Loras Alastruey. Hospital Mútua de Terrassa. Speakers: Dr Carlos Guarner Aguilar . Hospital de la Santa Creu i Sant Pau, Barcelona; Dr Carlos Huertas Nadal. Hospital Josep Trueta, Girona

- Curs d'Actualització en Patologies de l'Àparell Digestiu 2020-2021. Online. Curs Societat Catalana de Digestologia. Acadèmia Can Caralleu Hemostàsia aplicada a l'aparell digestiu. Moderador: Dr Carles Guarner Argente. Hospital de la Santa Creu i Sant Pau, Barcelona.

- Necessitats reals de la transfusió de plasma i de plaquetes a la cirrosi. Speaker: Dra. Fanny Turón. Hospital Clínic de Barcelona.

- Maneig dels anticoagulants en la HDA. Ponent: Dr. José Mateo Arranz. Hospital de la Santa Creu i Sant Pau, Barcelona. Maneig dels anticoagulants en l'endoscòpia. Ponent: Dr. Albert Pardo Balteiro. Hospital Joan XXIII, Tarragona

- Curs d'Actualització en Patologies de l'Àparell Digestiu 2020-2021 Online. Curs Societat Catalana de Digestologia. Acadèmia Can Caralleu Avaluació pre-quirúrgica i maneig postquirúrgic de patología digestiva. Moderador: Dr Graciela Martínez. Hospital Clínic

- En pacients amb cirrosis hepática. Ponent: Dra. Àngels Escorsell i Mañosa. Hospital de la Santa Creu i Sant Pau.

- En pacients amb càncer esòfag-gàstric. Ponent: Dr. Manuel Pera Roman. Parc Salut Mar.

- En pacients amb malaltia inflamatòria. Ponent: Dra. Montserrat Aceituno Quintanilla. Hospital Mútua de Terrassa

- Curs d'Actualització en Patologies de l'Aparell Digestiu 2020/2021 Online. Curs Societat Catalana de Digestologia. Acadèmia Can Caralleu 30-09-2021 | 19:00 - 21:00 | Sessió d'actualització del Màster UOC-Societat Catalana de Digestiu. Moderador: Dr Maria Esteve Comas. Hospital Mútua de Terrassa
 - La visió dels residents. Ponent: Dra. Anna Pocurull.
 - La visió dels professors Ponent: Dra. Montserrat Planella de Rubinat.
 - La visió dels coordinadors d'assignatura. Ponent: Dr. Germán Soriano Pastor.
 - XXX Congrés de la Societat catalana de digestologia. Moderador: Dr Cristina Romero. 28 Jan 2021.
 - Participacion en Simposi Tribulacions i assosescs d'una persona amb colitis ulcerosa. Parlarem de colitis ulcerosa (Dra Esther García Planella)
 - Liver Meeting: Lo más destacado de Liver meeting 17-18 Nov 2021 Session 1. Moderador: Miguel Ángel Simón (Zaragoza) Complicaciones de la cirrosis: ascitis y SHR. Speaker: Angels Escorsell (Barcelona).
 - 3ª reunión hepatología traslacional. Session 3. Inmunología e inflamación de la EHMG.22/10/21 Moderators: Rubén Francés (Alicante) María Arechederra (Pamplona) Alteraciones inmunológicas & inflamatorias sistémicas en el paciente con EHMG. Speaker: Germán Soriano (Barcelona) Papel del microbioma en dichas alteraciones. Speaker: Esther Caparrós (Alicante)
- Members of Organising Committees**
- XXX Congrés de la Societat catalana de digestologia. (Dra Escorsell)
 - ILC 2021. Eva Roman.
- Oral and poster communications.**
- **Societat Catalana de Digestologia**
 - C12 Valor del gradient de pressió venosa hepàtica en la malaltia per fetge gras no alcohòlic.
 - C15 Variants genètiques de la via del metotrexat relacionades amb la seva eficàcia i toxicitat a la malaltia de Crohn
 - P1341 Proctitis per clamídia: caracterització clínica, endoscòpica i histològica. Marta Taller;
 - C27 Infecció pel SARS-CoV-2 en els pacients amb malaltia inflamatoria intestinal IMITI. Dades del projecte ENEIDA de GETECCU.
 - C32 La cirurgia hariatrica predisposa al trastorn per abús d'alcohol i a la malaltia hepàtica associada a l'alcohol.
 - P34 El TIPS-preventivo es también el tratamiento de elección en pacientes con Hemorragia Aguda por Varices con Encetalopatía Hepática al ingreso.
 - P37 Trasplante hepático en la Enfermedad Vascular Porto-Sinusoidal. Resultados a largo plazo.
 - P48 Perfil de resistències dels microorganismes implicats en colangitis aguda: anàlisi retrospectiu dels casos d'una planta d'hospitalització de patologia digestiva.
 - P70 Impossibilitat d'identificar la necessitat futura de tractament immunosupressor o biològic al debut de la colitis ulcerosa: estudi d'una cohort incident.
 - P11 Estudi de coberts sobre la infecció per SARS-CoV-2 en pacients d'edat avançada amb malaltia inflamatoria intestinal amb a sense tractament immunosupressor
 - P79 Percepció de la telemedicina per part dels pacients amb malaltia inflamatoria intestinal
 - P81 Proctitis per clamídia : caracterització clínica, endoscòpica.
- AEEH**
- El carvedilol Mejora el riesgo de descompensación y la supervivencia en la cirrosis compensada. Un metaanálisis de riesgo competitivo de datos de pacientes individuales.
 - Papel de la Hepatitis alcohólica en pacientes con hemorragia aguda por varices.
 - Carvedilol asociado a simvastatina modulan la inflamación sistémica en la cirrosis con hipertensión portal y no respuesta a Beta bloqueantes: estudio clínico aleatorizado doble-cego.
 - Impacto of a loss-of-function variant in HSD17B13 on hepatic decompensation and mortality in cirrhotic patients
 - Relación entre el gradiente de presión venoso hepático y la presencia de descompensación en la enfermedad por hígado graso no alcohólico.
- 29th United European Gastroenterology Week Virtual 2021**
- 120 Endoscopi band ligation without resection of small-sized subepithelial tumours: results in long-term follow up of a multicentre prospective study (banding-set)
 - 79 Long-term outcomes of biologic therapy in Crohn's disease complicated with internal fistulizing disease: bioscopestudy from GETECCU
 - P0260 Inflammatory bowel disease in immigrants to Spain: results of the EIIMIGRA study from GETECCU (ENEIDA REGISTRY)
 - P0267 Inflammatory bowel disease (IBD) and immunosuppression do not worsen the prognosis of COVID-19. Results from the ENEIDA project of GETECCU.
 - Immunosuppressive therapies increase the risk of COVID-19 in inflammatory bowel disease (IBD): an ENEIDA-based case control study.
 - P0268 Comorbidities and epidemiological risk factor

- P0284 Clinical outcomes in familial versus sporadic inflammatory bowel disease diagnosed in the era of biological therapies. Prospective data from the ENEIDA registry.
 - P0328 Performance of screening strategies for latent tuberculosis infection in patients with inflammatory bowel disease: results from the ENEIDA registry of GETECCU.
 - P0423 Long-term outcomes of enterocutaneous fistula complicating Crohn's disease: ECUFIT study from GETECCU.
 - P0456 Observational study on the effectiveness and safety of vedolizumab in an ulcerative colitis population comprised by Bio-naïve patients with failure of one previous anti-TNF (EVOLVE-IB study)
 - P0458 Real world effectiveness and safety of vedolizumab in Crohn's disease when used as first biologic or after failure of one previous anti-TNF (EVOLVE-IB STUDY)
 - P0460 Inflammatory complications of the pouch, and therapeutic requirements after colectomy patients with ulcerative colitis. Results from the RESERVO study of GETECCU.
 - P0464 Efficacy of biological therapy for pouchitis and other inflammatory complications of the pouch, and the question of a second anti-TFN after anti-TFN failure. Results from the RESERVO study of GETECCU.
 - P0516 Management and outcome of postoperative Crohn's disease in the elderly as compared to young adults: data from ENEIDA registry.
 - P0541 Prevalence of adenomas in Lynch syndrome: gene-specific analysis and comparison with average familial CRC risk populations.
- **EASL 2021**
- OS-571 Relationship between hepatic venous pressure gradient and presence of decompensation in non-alcoholic fatty liver disease.
 - PO-48 Alcohol-related liver disease phenotype impacts survival after an acute variceal bleeding episode.
 - PO-2420 Impact of a loss-of-function variant in HSD17B13 on hepatic decompensation and mortality in cirrhotic patients.
 - PO-1987 Carvedilol improves risk of decompensation and survival in compensated cirrhosis. A competing-risk meta-analysis of individual patient data.
 - PO-2902 Impact of SarsCov2 pandemic on vascular liver diseases
- **LIVER MEETING 2021**
- O145. Beta-blockers induce lower portal pressure decreasing effect in patients with MAFLD-Cirrhosis than in those with alcoholic or HCV-Cirrhosis.
 - P305 Alcohol-related liver disease phenotype impacts survival after an acute variceal bleeding episode.



Microbiology and Infectious Diseases

Coordinator

Navarro Risueño, Ferran FGS
fnavarror@santpau.cat

Members

Ballarin Laliena, Gemma	FGS	Margall Coscojuela, Nuria	FGS
Cadafalch Arpa, Josep	FGS	Miro Cardona, Elisenda	FGS
Canal Girol, Cristina	F. PUIGVERT	Muñoz Batet, Carmen	FGS
Cermeño Reyes, Sílvia	FGS	Pascual Alonso, Pablo	IR
Córdoba Herrera, Christian	F. PUIGVERT	Pérez Mir, Mónica	F. PUIGVERT
Cortés Palacios, Ana Pilar	FGS	Piriz Marabajan, Marta S.	FGS
Cruells Gascón, Adrià	FGS	Pomar Solchaga, Virginia	FGS
De Benito Hernandez, María Natividad	FGS	Prim Bosch, Nuria	FGS
Español Fran, Montserrat	FGS	Rabella Garcia, Nuria	FGS
Facundo Molas, Carme	F. PUIGVERT	Rivera Martinez, Maria Alba	FGS
Fernández Piqueras, Engracia	FGS	Roch Villaverde, Nerea	FGS
Garrigó Fullola, Montserrat	FGS	Rubio Bueno, Marc	IR
Gomez Martinez, Laura	FGS	Sanchez Reus, Fernando	FGS
Gurgui Ferrer, Mercedes	FGS	Serra Cabañas, Nuria	F. PUIGVERT
Lopez-Contreras Gonzalez, Joaquin	FGS		

Main lines of research

• Clinical Microbiology

- Detection and characterisation of different antimicrobial mechanisms of resistance.
- Tuberculosis, epidemiology and antituberculosis resistance mechanisms.
- Molecular biology applications in

infectious disease detection, taxonomy and epidemiology.

- Microbiome description in different clinical samples.
- Leishmaniasis: Epidemiology, characterisation and diagnosis.
- Chagas diseases: Epidemiology, diagnosis and study of congenital infection.

- Viral infections: epidemiology, diagnosis and respiratory viruses characterization and enteroviruses.
- Medical care projects.

• Kidney Transplant

- Biomarkers for BKV in urine samples.
- T CD8+ immunity from CMV in renal transplant patients treated with Thymoglobulin.
- Renal transplant program of hepatitis C virus positive donors.
- Hepatitis E virus positive in haemodialysis and renal transplant patients.
- Microbiota study in recurrent urinary tract infections

• Infectious Diseases

- Restricted-use policies for antibiotic and antimicrobial agents and suitable use of antimicrobial agents.
- Study of infections due to antimicrobial multiresistant microorganisms requiring patient isolation.
- Study of infections associated with foreign bodies (joint prostheses, catheters, cardiac prostheses and pacemakers).
- Tuberculosis.

Scientific Challenges

• Clinical Microbiology

- Detection and characterisation of different antimicrobial mechanisms of resistance. Description of the molecular bases of bacterial resistance to the main antibiotics used in clinical practice, as well as the vectors associated with the gene expression (plasmids, transposons, integrons or phages).
- Tuberculosis, epidemiology and antituberculosis resistance mechanisms. Prospective monitoring of primary and acquired Mycobacterium tuberculosis resistance to first and second-line drugs. Molecular detection of resistance using a molecular antibiogram. Study of the epidemiology and spread of resistant strains and assessment of the impact of immigration and the contribution of new Mycobacterium tuberculosis families (Beijing, EAI, CAS).
- Molecular biology applications in infectious disease detection, taxonomy and epidemiology. Study of the usefulness of the 16S RNA gene for microbiological diagnosis and molecular identification. Description of nosocomial outbreaks applied in antimicrobial multiresistant bacteria, mycobacteria, fungi or viruses. Government health department agreement (ongoing) regarding the development of epidemiological surveillance support functions for nosocomial infections Use of the next generation sequencing as a tool for whole genome analysis. Genotype characterization of Cryptosporidium spp. oocysts from stool samples. Characterisation of Leishmania species. Genotyping of different viruses as hepatitis C virus, enterovirus or adenovirus.

- Microbiome description in different clinical samples. Role of the vaginal and intestinal microbiome in recurrent urinary tract infection.

- Detection and characterization of Leishmania from clinical samples.

- Diagnosis on Chagas. Monitoring of congenital infection in pregnant women with Chagas disease.

- Medical care projects. Government health department agreement (ongoing) regarding the flaccid paralysis. Study of mycoses indepth, especially invasive fusariosis and aspergillosis and respiratory tract viral infections in patients with onco-haematological diseases. Multicentre studies of HIV (ongoing). Research related to bacteraemia and endocarditis, nosocomial infections, prosthetic joint infections, central nervous system infections, and tuberculosis.

• Infectious Diseases

- Restricted-use policies for antibiotic and antimicrobial agents and suitable use of antimicrobial agents. To minimize resistance, reduce cost and improve compliance with surgical prophylaxis (at the time of administration) through suitable use of antimicrobial agents.

- Study of infections due to antimicrobial multiresistant microorganisms requiring patient isolation. To study epidemiology for our hospital to reduce incidence or to prevent/contain epidemic outbreaks and work with the Microbiology Unit in epidemiology and molecular studies.

- Study of infections associated with foreign bodies (joint prostheses, catheters, cardiac prostheses and pacemakers). To reduce incidence. To develop effective conservative treatment regimes. Infections in Transplant Patients (Heart, Haemopoietic Progenitors). To study current epidemiology. To assess the efficacy of prophylaxis and other preventive measures.

- Tuberculosis. To cooperate with studies of resistance and with new treatment regimens for tuberculosis.

- Chagas diseases. Collaboration in the protocol development of congenital infection in pregnant women with Chagas diseases.

• Other Projects

To continue with the government health department agreement regarding the development of support functions as follows:

- Epidemiological surveillance of nosocomial infections (VINCat).

- Tuberculosis control: Barcelona-Dreta Tuberculosis Operations Committee (coordinator: Dr. Sambeat).

- New influenza control: Barcelona-Dreta Epidemiological Surveillance Operations Committee (coordinator: Dr. López-Contreras).

- Database for monitoring CMV infections after renal transplantation.
- Database for monitoring BK virus infections after renal transplantation.
- Observational and multicentre case-controlled (1:2) study to compare the evolution of renal transplantation in patients with HIV infection (Dr. Canal, Dr. Facundo and Dr. Serra), sponsored by the Andalusian Organ and Tissue Transplantation Society.
- A phase 3, multicenter, randomized, open-label, active-controlled study to assess the efficacy and safety of maribavir treatment compared to Investigator-assigned treatment in transplant recipients with cytomegalovirus (CMV) infections that are refractory or resistant to treatment with ganciclovir, valganciclovir, foscarnet, or cidofovir, sponsored by Shire.

Active grants

- PEDRO COLL FIGA. Grup de Recerca en Patologia Infecciosa i Microbiologia Clínica. 2017 SGR 01096. Agència de Gestió d'Ajuts Universitaris i de Recerca. Duration 2017-2021. 0,00 €.
- JOAQUIN LOPEZ-CONTRERAS GONZALEZ. Neutrophil Extracellular Traps in Sepsis: Discovering prognostic and diagnosis markers and therapy targets. MARATO 20182310. Fundació La Marató de TV3. Duration 2019-2022. 125.500,00 €.
- FERRAN NAVARRO RISUEÑO. Papel del microbioma intestinal y genital en las infecciones urinarias recurrentes. PI19/00427. Instituto de Salud Carlos III. Duration 2020-2022. 67.000,00 €. Note: Total amount granted to PI. It does not include indirect costs.

Scientific production

- Abras A, Ballart C, Fernandez A, Llovet T, Gallego M, Munoz C. ARCHITECT Chagas (R) as a single test candidate for Chagas disease diagnosis: evaluation of two algorithms implemented in a non-endemic setting. *CLINICAL MICROBIOLOGY AND INFECTION*. 2021; 27(5). DOI:10.1016/j.cmi.2020.07.002. PMID:32653657. IF:8,067 (Q1/D1).
- Aznar ML, Espinosa J, Saborit N, Jove N, Martinez FS, Perez S, Vitoria A, Sanjoaquin I, Gallardo E, Llenas J, Pomar V, Garcia IO, Cacho J, Freitas LGD, San Martin JV, Rodriguez JFG, Jimenez MA, De Souza ML, Tortola T, Zules R, Molina I, Sanchez A. Impact of the COVID-19 pandemic on tuberculosis management in Spain. *INTERNATIONAL JOURNAL OF INFECTIOUS DISEASES*. 2021; 108. DOI:10.1016/j.ijid.2021.04.075. PMID:33930543. IF:3,623 (Q2/D5).
- Babich T, Naucler P, Valik JK, Giske CG, Benito N, Cardona R, Rivera A, Pulcini C, Fattah MA, Haquin J, MacGowan A, Grier S, Gibbs J, Chazan B, Yanovskaya A, Ben R, Landes M, Neshet L, Zaidman A, McCarthy K, Paterson DL, Tacconelli E, Buhl M, Mauer S, Rodriguez J, Morales I, Oliver A, de Gopegui ER, Cano A, Machuca I, Gozalo M, Martinez LM, Gonzalez EM, et al. Combination versus monotherapy as definitive treatment for *Pseudomonas aeruginosa* bacteraemia: a multicentre retrospective observational cohort study. *JOURNAL OF ANTIMICROBIAL CHEMOTHERAPY*. 2021; 76(8). DOI:10.1093/jac/dkab134. PMID:33993273. IF:5,790 (Q1/D2).
- Badia JM, Flores M, Vazquez A, Arroyo N, Puig M, Pares D, Pera M, Lopez J, Limon E, Pujol M. Oral Antibiotic Prophylaxis Lowers Surgical Site Infection in Elective Colorectal Surgery: Results of a Pragmatic Cohort Study in Catalonia. *Journal of Clinical Medicine*. 2021; 10(23):5636. DOI:10.3390/jcm10235636. PMID:34884337. IF:4,241 (Q1/D3).
- Barca LV, Vidal L, Farinas MC, Munoz P, Minero MV, de Alarcon A, Carretero EG, Cuadra MG, Camacho AM, Urkola XK, Agirre JG, Burgos GO, Lopez LE, Azpiroz JCP, Lopez J, Benito N, GAMES I. Analysis of sex differences in the clinical presentation, management and prognosis of infective endocarditis in Spain. *HEART*. 2021; 107(21). DOI:10.1136/heartjnl-2021-319254. PMID:34290038. IF:5,994 (Q1/D3).
- Benschop KSM, Albert J, Anton A, Andres C, Aranzamendi M, Armannsdottir B, Bailly J-L, Baldanti F, Baldvinsdottir GE, Beard S, Berginc N, Bottcher S, Blomqvist S, Bubba L, Calvo C, Cabrerizo M, Cavallero A, Celma C, Ceriotti F, Costa I, Cottrell S, Del Cuerpo M, Dean J, Dembinski JL, Diedrich S, Diez J, Dorenberg D, Duizer E, Dyrda R, Fanti D, et al. [Rabella N]. Re-emergence of enterovirus d68 in europe after easing the covid-19 lockdown, september 2021. *Eurosurveillance*. 2021; 26(45):pii=2100998. DOI:10.2807/1560-7917.ES.2021.26.45.2100998. PMID:34763750. IF:6,307 (Q1/D1).
- Berenguer J, Borobia AM, Ryan P, Rodriguez J, Bellon JM, Jarrin I, Carratala J, Pachon J, Carcas AJ, Yllescas M, Arribas JR, López J, Pascual P, Pomar V, Rabella N, Benito N, Domingo P, Bonfill X, Mancebo J, MARTIN A. Development and validation of a prediction model for 30-day mortality in hospitalised patients with COVID-19: the COVID-19 SEIMC score. *THORAX*. 2021; 76(9). DOI:10.1136/thoraxjnl-2020-216001. PMID:33632764. IF:9,139 (Q1/D2).
- Bertran X, Rubio M, Gomez L, Llovet T, Munoz C, Navarro F, Miro E. Taxonomic Identification of Different Species of the Genus *Aeromonas* by Whole-Genome Sequencing and Use of Their Species-Specific beta-Lactamases as Phylogenetic Markers. *Antibiotics-Basel*. 2021; 10(4):354. DOI:10.3390/antibiotics10040354. PMID:33800590. IF:4,639 (Q2/D3).
- Buxeda A, Arias C, Perez MJ, Cacho J, Pelegrin SC, Melilli E, Aladren MJ, Galeano C, Lorenzo I, Mazuecos A, Saura IM, Franco A, Ruiz MD, Sanchez LA, Siverio O, Martin ML, Gonzalez E, Lopez V, Martin PL, Moina I, Berrio EM, Moreso F, Portoles JM, Santana R, Zarraga S, Canal C, Sanchez E, Pascual J, Crespo M. Use and Safety of Remdesivir in Kidney Transplant Recipients With COVID-19. *Kidney International Reports*. 2021; 6(9). DOI:10.1016/j.ekir.2021.06.023. PMID:34250317. IF:4,164 (Q1/D3).

- Coll E, Fernandez M, Padilla M, Moreso F, Hernandez A, Yanez I, Molina M, Vazquez T, Crespo M, Facundo C, Rodriguez ML, Fuentes MCR, Loinaz C, Bernal G, Melilli E, Bravo C, Diekmann F, Llado L, Garcia TM, Salcedo M, Beneyto I, Castells L, Alonso R, Rodriguez A, Diaz C, Graus J, Ortiz C, Garcia MD, Hinojal R, Pena L, Dominguez B. COVID-19 in Solid Organ Transplant Recipients in Spain Throughout 2020: Catching the Wave?. *TRANSPLANTATION*. 2021; 105(10). DOI:10.1097/TP.0000000000003873. PMID:34241988. IF:4,939 (Q1/D2).
- Corominas H, Castellvi I, Diaz C, Matas L, de la Rosa D, Mangues MA, Moya P, Pomar V, Benito N, Moga E, Hernandez N, Casademont J, Domingo P. Sarilumab (IL-6R antagonist) in critically ill patients with cytokine release syndrome by SARS-CoV2. *MEDICINE*. 2021; 100(19):e25923. DOI:10.1097/MD.00000000000025923. PMID:34106658. IF:1,889 (Q3/D6).
- Corominas H, Castellvi I, Pomar V, Antonijoan R, Mur I, Matas L, Gich I, de Benito N, Laiz A, Castillo D, Villamarin L, Filella D, Mill AM, Quijada MA, Puig M, Casademont J, Domingo P. Effectiveness and safety of intravenous tocilizumab to treat COVID-19-associated hyperinflammatory syndrome: Covizumab-6 observational cohort. *CLINICAL IMMUNOLOGY*. 2021; 223:108631. DOI:10.1016/j.clim.2020.108631. PMID:33189888. IF:3,969 (Q3/D6).
- Cortes S, del Barrio E, Lopez C, Oliver A, Rivera A, GEMARA S. Predicting Pseudomonas aeruginosa susceptibility phenotypes from whole genome sequence resistome analysis. *CLINICAL MICROBIOLOGY AND INFECTION*. 2021; 27(11). DOI:10.1016/j.cmi.2021.05.011. PMID:34015532. IF:8,067 (Q1/D1).
- Del Toro López MD, Arias Díaz J, Balibrea JM, Benito N, Canut Blasco A, Esteve E, Horcajada JP, Ruiz Mesa JD, Manuel Vázquez A, Muñoz Casares C, Del Pozo JL, Pujol M, Riera M, Jimeno J, Rubio Pérez I, Ruiz-Tovar Polo J, Serrablo A, Soriano A, Badia JM; Grupo de Estudio de PA de la Sociedad Española de Enfermedades Infecciosas y Microbiología Clínica (SEIMC) y Asociación Española de Cirujanos (AEC). Executive summary of the Consensus Document of the Spanish Society of Infectious Diseases and Clinical Microbiology (SEIMC) and of the Spanish Association of Surgeons (AEC) in antibiotic prophylaxis in surgery. *Cirugía Española*. 2021;99(1):11-26. English, Spanish. DOI:10.1016/j.ciresp.2020.03.022. PMID: 32736791. IF:1,653 (Q3/D8).
- Domingo P, Pomar V, Mur I, Castellvi I, Corominas H, de Benito N. Not all COVID-19 pandemic waves are alike. *CLINICAL MICROBIOLOGY AND INFECTION*. 2021; 27(7). DOI:10.1016/j.cmi.2021.04.005. PMID:33887469. IF:8,067 (Q1/D1).
- Escribano P, Rodriguez B, Diaz J, Martin MT, Ibanez E, Rodriguez M, Pelaez T, de la Pedrosa E, Tejero R, Marimon JM, Reigadas E, Rezusta A, Labayru C, Perez A, Ayats J, Cobo F, Pazos C, Lopez L, Alastruey A, Munoz P, Guinea J, Sánchez F, Hernaez S. Azole resistance survey on clinical Aspergillus fumigatus isolates in Spain. *CLINICAL MICROBIOLOGY AND INFECTION*. 2021; 27(8). DOI:10.1016/j.cmi.2020.09.042. PMID:33010446. IF:8,067 (Q1/D1).
- Escrihuela-Vidal F, López-Cortés LE, Escolà-Vergé L, De Alarcón González A, Cuervo G, Sánchez-Porto A, Fernández-Hidalgo N, Luque R, Montejo M, Miró JM, Goenaga MÁ, Muñoz P, Valerio M, Ripa M, Sousa-Regueiro D, Gurguí M, Fariñas-Alvarez MC, Mateu L, García Vázquez E, Gálvez-Acebal J, Carratalà J; Grupo de Apoyo al Manejo de la Endocarditis Infecciosa en España (GAMES) Cohort Investigators and the Barcelona Endocarditis Study Team (BEST) [Benito N]. Clinical Features and Outcomes of Streptococcus anginosus Group Infective Endocarditis: A Multicenter Matched Cohort Study. *Open Forum Infectious Diseases*. 2021;8(6):ofab163. DOI:10.1093/ofid/ofab163. PMID: 34189163. IF:3,835 (Q2/D5).
- Flores MD, Abras A, Ballart C, Perez II, Perez P, Gallego M, Munoz C, Moure Z, Igual ES, Nieto J, Diez EG, Cruz I, Picado A. Evaluation of the Performance of the Loopamp Trypanosoma cruzi Detection Kit for the Diagnosis of Chagas Disease in an Area Where It Is Not Endemic, Spain. *JOURNAL OF CLINICAL MICROBIOLOGY*. 2021; 59(5):e01860-20. DOI:10.1128/JCM.01860-20. PMID:33692137. IF:5,948 (Q1/D2).
- Goffin E, Candellier A, Vart P, Noordzij M, Arnol M, Covic A, Lentini P, Malik S, Reichert LJ, Sever MS, Watschinger B, Jager KJ, Gansevoort RT; ERACODA Collaborators. COVID-19-related mortality in kidney transplant and haemodialysis patients: a comparative, prospective registry-based study [Canal C, Facundo C]. *NEPHROLOGY DIALYSIS TRANSPLANTATION*. 2021;36(11):2094-2105. DOI:10.1093/ndt/gfab200. PMID: 34132811. IF:5,992 (Q1/D2).
- Gomez J, Lora J, Baraia J, Sanchez M, Iribarren JA, Rodriguez D, Praena J, Sorli L, Bahamonde A, Riera M, Rico A, del Toro MD, Morata L, Cobo J, Falgueras L, Benito N, Munez E, Jover A, Pigrau C, Ariza J, Murillo O. Implant Removal in the Management of Prosthetic Joint Infection by Staphylococcus aureus: Outcome and Predictors of Failure in a Large Retrospective Multicenter Study. *Antibiotics-Basel*. 2021; 10(2):118. DOI:10.3390/antibiotics10020118. PMID:33530523. IF:4,639 (Q2/D3).
- Gomez S, Becerra F, Montesinos IL, de Gopegui ER, Grau I, Pintado V, Padilla B, Benito N, Boix L, Farinas MC, Penaranda M, Gamallo MR, Martinez JA, Morte E, Del Pozo JL, Duran X, Diaz J, Lopez D, Canton R, Oliver A, Ruiz P, Horcajada JP. A Large Multicenter Prospective Study of Community-Onset Healthcare Associated Bacteremic Urinary Tract Infections in the Era of Multidrug Resistance: Even Worse than Hospital Acquired Infections?. *Infectious Diseases and Therapy*. 2021; 10(4). DOI:10.1007/s40121-021-00537-0. PMID:34626347. IF:5,322 (Q1/D2).
- Grau-Pujol B, Camprubí-Ferrer D, Marti-Soler H, Fernández-Pardos M, Carreras-Abad C, Andrés MV, Ferrer E, Muelas-Fernandez M, Jullien S, Barilaro G, Ajanovic S, Vera I, Moreno L, Gonzalez-Redondo E, Cortes-Serra N, Roldán M, Arcos AA, Mur I, Domingo P, Garcia F, Guinovart C, Muñoz J. Pre-exposure prophylaxis with hydroxychloroquine for COVID-19: a double-blind, placebo-controlled randomized clinical trial. *Trials*. 2021;22(1):808. DOI:10.1186/s13063-021-05758-9. PMID: 34781981. IF:2,279 (Q4/D8).

- Grillo S, Cuervo G, Carratala J, San R, Aguado JM, Morata L, Gomez S, Lopez J, Gasch O, Gomila A, Iftimie S, Garcia G, Calbo E, Boix L, Orió I, Jover A, Lopez LE, Euba G, Aguirregabiria M, Garcia MJ, Gioia F, Pano JR, Pedro ML, Benitez RM, Perez MT, Meije Y, Loeches MB, Horna G, Berbel D, Dominguez MA, Padullés A, Cobo S, Hereu P, Videla S, Tebe C, et al. Multicentre, randomised, open-label, phase IV-III study to evaluate the efficacy of cloxacillin plus fosfomycin versus cloxacillin alone in adult patients with methicillin-susceptible *Staphylococcus aureus* bacteraemia: study protocol for the SAFO trial. *BMJ Open*. 2021; 11(8):e051208. DOI:10.1136/bmjopen-2021-051208. PMID:34353808. IF:2,692 (Q2/D4).
- Gutierrez B, del Toro MD, Borobia AM, Carcas A, Jarrin I, Yllescas M, Ryan P, Pachon J, Carratala J, Berenguer J, Arribas JR, Rodríguez J, López J, Pascual P, Pomar V, Rabella N, Benito N, Domingo P, Bonfill X, Puig M, Mancebo J, Martínez G. Identification and validation of clinical phenotypes with prognostic implications in patients admitted to hospital with COVID-19: a multicentre cohort study. *LANCET INFECTIOUS DISEASES*. 2021; 21(6). DOI:10.1016/S1473-3099(21)00019-0. PMID:33636145. IF:25,071 (Q1/D1).
- Gutiérrez-Villanueva A, Muñoz P, Delgado-Montero A, Olmedo-Samperio M, de Alarcón A, Gutiérrez-Carretero E, Zarauza J, García I Pares D, Goenaga MÁ, Ojeda-Burgos G, Goikoetxea-Agirre AJ, Reguera-Iglesias JM, Ramos A, Fernández-Cruz A; Spanish Collaboration on Endocarditis—Grupo de Apoyo al Manejo de la Endocarditis infecciosa en España (GAMES) [Benito N]. Mural Endocarditis: The GAMES Registry Series and Review of the Literature. *Infectious Diseases and Therapy*. 2021;10(4):2749-2764. DOI: 10.1007/s40121-021-00490-y. PMID: 34312819. IF:5,322 (Q1/D2).
- Hodcroft EB, Zuber M, Nadeau S, Vaughan TG, Crawford KHD, Althaus CL, Reichmuth ML, Bowen JE, Walls AC, Corti D, Bloom JD, Veessler D, Mateo D, Hernando A, Comas I, Candelas FG, Stadler T, Neher RA, Rabella N, Navarro F, Miró E, Fernandez I, Parra M. Spread of a SARS-CoV-2 variant through Europe in the summer of 2020. *NATURE*. 2021; 595(7869). DOI:10.1038/s41586-021-03677-y. PMID:34098568. IF:49,962 (Q1/D1).
- Kraef C, Bentzon A, Panteleev A, Skrahina A, Bolokadze N, Tetrádov S, Podlasiñ R, Karpov I, Borodulina E, Denisova E, Azina I, Lundgren J, Johansen IS, Mocroft A, Podlekareva D, Kirk O, Pomar V, Millet JP, Orcau A, HIV TBGRP. Delayed diagnosis of tuberculosis in persons living with HIV in Eastern Europe: associated factors and effect on mortality—a multicentre prospective cohort study. *BMC INFECTIOUS DISEASES*. 2021; 21(1):1038. DOI:10.1186/s12879-021-06745-w. PMID:34615474. IF:3,090 (Q3/D7).
- Kusejko K, Aunon A, Jost B, Natividad B, Strahm C, Thurnheer C, Pablo D, Slama D, Scanferla G, Uckay I, Waldmann I, Esteban J, Lora J, Clauss M, Fernandez M, Wouthuyzen M, Ferrari MC, Gassmann N, Sendi P, Jent P, Morand PC, Vijayvargiya P, Trebse R, Patel R, Kouyos RD, Corvec S, Kramer TS, Stadelmann VA, Achermann Y, ESCMID Study Implant GRP. The Impact of Surgical Strategy and Rifampin on Treatment Outcome in Cutibacterium Periprosthetic Joint Infections. *CLINICAL INFECTIOUS DISEASES*. 2021; 72(12). DOI:10.1093/cid/ciaa1839. PMID:33300545. IF:9,079 (Q1/D1).
- Lobo D, Corominas H, Pomar V. Suitability of serology tests for the diagnosis of Lyme disease. Single center urban cohort. *MEDICINA CLINICA*. 2021; 157(8). DOI:10.1016/j.medcli.2020.08.010. PMID:33279209. IF:1,725 (Q3/D7).
- Lopez MDD, Diaz JA, Balibrea JM, Benito N, Blasco AC, Esteve E, Horcajada JP, Mesa JDR, Vazquez AM, Casares CM, del Pozo JL, Pujol M, Riera M, Jimeno J, Perez IR, Polo JRT, Serrablo A, Soriano A, Badia JM. Executive summary of the Consensus Document of the Spanish Society of Infectious Diseases and Clinical Microbiology (SEIMC) and of the Spanish Association of Surgeons (AEC) in antibiotic prophylaxis in surgery. *ENFERMEDADES INFECCIOSAS Y MICROBIOLOGIA CLINICA*. 2021; 39(1). DOI:10.1016/j.eimc.2020.02.017. PMID:32709452. IF:1,731 (Q4/D9).
- Lopez MG, Chiner A, de Viedma DG, Ruiz P, Bracho MA, Cancino I, D'Auria G, de Marco G, Garcia N, Goig GA, Gomez I, Jimenez S, Martinez L, Ruiz P, Ruiz L, Torres M, Alberola J, Albert E, Zaldumbide MA, Bea MP, Boga JA, Bordoy AE, Canut A, Carvajal A, Eguiluz GC, Rodriguez MLC, Costa JJ, de Toro M, et al. [Rabella N, Navarro F, Miró E, Fernandez I, Martínez L]. The first wave of the COVID-19 epidemic in Spain was associated with early introductions and fast spread of a dominating genetic variant. *NATURE GENETICS*. 2021; 53(10). DOI:10.1038/s41588-021-00936-6. PMID:34594042. IF:38,330 (Q1/D1).
- Los-Arcos I, Iacoboni G, Aguilar-Guisado M, Alsina-Manrique L, Díaz de Heredia C, Fortuny-Guasch C, García-Cadenas I, García-Vidal C, González-Vicent M, Hernani R, Kwon M, Machado M, Martínez-Gómez X, Maldonado VO, Pla CP, Piñana JL, Pomar V, Reguera-Ortega JL, Salavert M, Soler-Palacín P, Vázquez-López L, Barba P, Ruiz-Camps I. Recommendations for screening, monitoring, prevention, and prophylaxis of infections in adult and pediatric patients receiving CAR T-cell therapy: a position paper. *Infection*. 2021;49(2):215-231. DOI:10.1007/s15010-020-01521-5. PMID: 32979154. IF:3,553 (Q2/D5).
- Miro E, del Cuerpo M, Rubio M, Berengua C, Espanol M, Marin P, Vela JI, Pomar V, Gutierrez C, Navarro F, Rabella N. Whole-genome analysis to describe a human adenovirus D8 conjunctivitis outbreak in a tertiary hospital. *JOURNAL OF MEDICAL VIROLOGY*. 2021; 93(8). DOI:10.1002/jmv.26850. PMID:33543795. IF:2,327 (Q4/D8).
- Mitra S, Jayanti A, Vart P, Coca A, Gallieni M, Ovrehus MA, Midtvedt K, Abd S, Gandolfini I, Buttner S, Franssen CFM, Hemmeler MH, Canal C, Facundo C, ERACODA C. Clinical triage of patients on kidney replacement therapy presenting with COVID-19: an ERACODA registry analysis. *NEPHROLOGY DIALYSIS TRANSPLANTATION*. 2021; 36(12). DOI:10.1093/ndt/gfab196. PMID:34129039. IF:5,992 (Q1/D2).

- Montero N, Toapanta N, Pallares N, Crespo M, Diekmann F, Guirado L, Esteban R, Codina S, Melilli E, Buxeda A, Velis G, Torres IB, Revuelta I, Andujar AM, Facundo C, Bardaji B, Riera L, Fiol M, Cruzado JM, Comas J, Giral M, Naesens M, Asberg A, Moreso F, Bestard O. Deciphering transplant outcomes of expanded kidney allografts donated after controlled circulatory death in the current transplant era. A call for caution. *TRANSPLANT INTERNATIONAL*. 2021; 34(12). DOI:10.1111/tri.14131. PMID:34626501. IF:3,782 (Q1/D3).
- Nemirosky JL, Espelt R, Grado EL, Sobrino J, Acera A, Perez J, Jensen JS, Sanchez F, Prim N. Macrolide resistance in *Mycoplasma genitalium* in Catalonia, Spain: a 1 year prospective study. *JOURNAL OF ANTIMICROBIAL CHEMOTHERAPY*. 2021; 76(10). DOI:10.1093/jac/dkab224. PMID:34278431. IF:5,790 (Q1/D2).
- Nomah DK, Reyes-Urueña J, Díaz Y, Moreno S, Aceiton J, Bruguera A, Vivanco-Hidalgo RM, Llibre JM, Domingo P, Falcó V, Imaz A, Cortés C, Force L, Letang E, Vilaró I, Casabona J, Miro JM; PISCIS study group [Mur I]. Sociodemographic, clinical, and immunological factors associated with SARS-CoV-2 diagnosis and severe COVID-19 outcomes in people living with HIV: a retrospective cohort study. *Lancet HIV*. 2021;8(11):e701-e710. DOI:10.1016/S2352-3018(21)00240-X. PMID: 34655549. IF:12,767 (Q1/D1).
- Paez A, Cantisan S, Aguera ML, Suner M, Facundo C, Yuste JR, Fernandez M, Montejo M, Redondo D, Lopez MO, Fernandez A, Farinas MC, Hernandez D, Len O, Munoz P, Valle J, Rodelo C, Cordero E, Torre J. Pretransplant CMV-Specific T-Cell Immunity But Not Dose of Antithymocyte Globulin Is Associated With Recovery of Specific Immunity After Kidney Transplantation. *JOURNAL OF INFECTIOUS DISEASES*. 2021; 223(7). DOI:10.1093/infdis/jiaa503. PMID:32779713. IF:5,226 (Q1/D2).
- Palacio-Vieira J, Reyes-Urueña JM, Imaz A, Bruguera A, Force L, Llaveria AO, Llibre JM, Vilaró I, Borràs FH, Falcó V, Riera M, Domingo P, de Lazzari E, Miró JM, Casabona J; PICIS study group [Gurgui M]. Strategies to reengage patients lost to follow up in HIV care in high income countries, a scoping review. *BMC Public Health*. 2021 Aug 28;21(1):1596. doi: 10.1186/s12889-021-11613-y. PMID: 34454444; PMCID: PMC8403456.
- Perea L, Rodriguez L, Nieto JC, Zamora C, Canto E, Soriano G, Poca M, Blanco P, Navarro F, Muniesa M, Vidal S. Bacteriophages immunomodulate the response of monocytes. *EXPERIMENTAL BIOLOGY AND MEDICINE*. 2021; 246(11). DOI:10.1177/1535370221995154. PMID:33641443. IF:2,691 (Q3/D7).
- Perez E, Alastruey A, Linares MJ, Soto JC, Abdala E, Garcia J, Montejo M, Munoz P, Lleti MS, Rezusta A, de Pipaon MRP, Yanez L, Merino E, Campos MI, Costa JM, Fortun J, Garcia T, Garcia C, Fernandez M, Sanchez F, Castro C, Guerrero I, Soler P, Aguado JM, Martinez L, Torre J, Nucci M. Invasive Fusariosis in Nonneutropenic Patients, Spain, 2000-2015. *EMERGING INFECTIOUS DISEASES*. 2021; 27(1). DOI:10.3201/eid2701.190782. PMID:33352085. IF:6,883 (Q1/D1).
- Perez S, Pallares N, Grijota MD, Sanchez A, Barcia L, Campos S, Pomar V, Rabunal R, Balcells ME, Gazel D, Montiel N, Vicente D, Goic I, Schon T, Paues J, Marekovic I, Cacho J, Barac A, Goletti D, Garcia M, Barcala JM, Tortola MT, Anibarro L, Suarez I, Moga E, Gude MJ, Naves R, Karsligil T, Martin T, Stevanovic G, Trigo M, Rubio V, Karaoglan I, Bayram N, et al. Identification of Recent Tuberculosis Exposure Using QuantiFERON-TB Gold Plus, a Multicenter Study. *Microbiology Spectrum*. 2021; 9(3):e00972-21. DOI:10.1128/Spectrum.00972-21. PMID:34756079. IF:7,171 (Q1/D2).
- Pericas JM, Ambrosioni J, Munoz P, de Alarcon A, Kestler M, Mari A, Moreno A, Goenaga MA, Farinas MC, Rodriguez R, Ojeda G, Galvez J, Hidalgo C, Noureddine M, Miro JM, Benito N, Gurgui M, GAMES I. Prevalence of Colorectal Neoplasms Among Patients With Enterococcus faecalis Endocarditis in the GAMES Cohort (2008-2017). *MAYO CLINIC PROCEEDINGS*. 2021; 96(1). DOI:10.1016/j.mayocp.2020.06.056. PMID:33413809. IF:7,616 (Q1/D2).
- Politi J, Martin M, Mercuriali L, Borrás B, Lopez J, Vilella A, Villar J, Orcau A, de Olalla PG, Rius C, Fernández A, Puigpinós R, Bonfill X, Villalbí JR. Epidemiological characteristics and outcomes of COVID-19 cases: mortality inequalities by socio-economic status, Barcelona, Spain, 24 February to 4 May 2020. *Eurosurveillance*. 2021; 26(20):2001138. DOI:10.2807/1560-7917.ES.2021.26.20.2001138. PMID:34018483. IF:6,307 (Q1/D1).
- Rivera A, Sanchez A, Luque S, Mur I, Puig L, Crusi X, Gonzalez JC, Sorli L, Gonzalez A, Horcajada JP, Navarro F, Benito N. Intraoperative Bacterial Contamination and Activity of Different Antimicrobial Prophylaxis Regimens in Primary Knee and Hip Replacement. *Antibiotics-Basel*. 2021; 10(1):18. DOI:10.3390/antibiotics10010018. PMID:33375415. IF:4,639 (Q2/D3).
- Ruiz P, Frances C, Chiner A, Lopez MG, Jimenez S, Cancino I, Ruiz P, Torres M, Bracho MA, D'Auria G, Martinez L, Guerreiro M, Montero M, Gomez MD, Pinana JL, Gonzalez F, Comas I, Marina A, Geller R, Coscolla M, Rabella N, Navarro F, Miró E, SeqCOVID C. Evolutionary and Phenotypic Characterization of Two Spike Mutations in European Lineage 20E of SARS-CoV-2. *mBio*. 2021; 12(6):e02315. DOI:10.1128/mBio.02315-21. PMID:34781748. IF:7,867 (Q1/D2).
- Serrano J, Gomez A, Sanchez W, Fajardo M, Lorenzo B, Sanchez F, Vidal I, Fernandez M, Sanchez I, de Alegria CR, del Pozo JL, Munoz P, Escribano P, Guinea J. Azole and Amphotericin B MIC Values against *Aspergillus fumigatus*: High Agreement between Spectrophotometric and Visual Readings Using the EUCAST EDef 9.3.2 Procedure. *ANTIMICROBIAL AGENTS AND CHEMOTHERAPY*. 2021; 65(1):e01693-20. DOI:10.1128/AAC.01693-20. PMID:33020164. IF:5,191 (Q1/D3).
- Shankar M, Vale CL, Godolphin PJ, Fisher D, Higgins JPT, Spiga F, Savovic J, Tierney J, Baron G, Benbenishty JS, Berry LR, Broman N, Cavalcanti AB, Colman R, De Buyser SL, Derde LPG, Domingo P, Omar SF, Fernandez A, Feuth T, Garcia F, Garcia R, Gonzalez I, Gordon AC, Haynes R, Hermine O, Horby PW, Horick NK, Kumar K, Lambrecht BN, et al. [Pomar V, Benito N]. Association Between Administration of IL-6 Antagonists

and Mortality Among Patients Hospitalized for COVID-19 AMeta-analysis. *JAMA-JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION*. 2021; 326(6). DOI:10.1001/jama.2021.11330. PMID:34228774. IF:56,272 (Q1/D1).

- Soler MJ, Noordzij M, Abramowicz D, de Arriba G, Basile C, van M, Covic A, Crespo M, Duivenvoorden R, Massy ZA, Ortiz A, Sanchez JE, Petridou E, Stevens K, White C, Vart P, Gansevoort RT, Canal C, Facundo C, ERACODA C. Renin-Angiotensin System Blockers and the Risk of COVID-19-Related Mortality in Patients with Kidney Failure. *Clinical Journal of the American Society of Nephrology*. 2021; 16(7). DOI:10.2215/CJN.18961220. PMID:34088718. IF:8,237 (Q1/D1).
- Territo A, Piana A, Fontana M, Diana P, Gallioli A, Gaya JM, Huguet J, Gavrilo P, Rodriguez O, Facundo C, Guirado L, Palou J, Mottrie A, Breda A. Step-by-step Development of a Cold Ischemia Device for Open and Robotic-assisted Renal Transplantation. *EUROPEAN UROLOGY*. 2021; 80(6). DOI:10.1016/j.eururo.2021.05.026. PMID:34059396. IF:20,096 (Q1/D1).
- Vilchez HH, Escudero R, Fernandez M, Murillo O, Aunon A, Rodriguez D, Jover A, del Toro MD, Rico A, Falgueras L, Praena J, Guio L, Iribarren JA, Lora J, Benito N, Morata L, Ramirez A, Riera M, Mur I, Coll P, Crusi X, Soriano A. Prosthetic Shoulder Joint Infection by *Cutibacterium acnes*: Does Rifampin Improve Prognosis? A Retrospective, Multicenter, Observational Study. *Antibiotics-Basel*. 2021; 10(5):475. DOI:10.3390/antibiotics10050475. PMID:33919103. IF:4,639 (Q2/D3).

- Villanego F, Mazuecos A, Perez IM, Moreso F, Andres A, Jimenez C, Molina M, Canal C, Sanchez LA, Zarraga S, Ruiz MD, Aladren MJ, Melilli E, Lopez V, Sanchez E, Crespo M, Pascual J. Predictors of severe COVID-19 in kidney transplant recipients in the different epidemic waves: Analysis of the Spanish Registry. *AMERICAN JOURNAL OF TRANSPLANTATION*. 2021; 21(7). DOI:10.1111/ajt.16579. PMID:33756067. IF:8,086 (Q1/D1).
- Wouthuyzen M, Sebillotte M, Arvieux C, Fernandez M, Senneville E, Barbero JM, Lora J, Aboltins C, Trebse R, Salles MJ, Kramer TS, Ferrari M, Garcia J, Benito N, Diaz V, Del Toro MD, Scarborough M, Soriano A. How to Handle Concomitant Asymptomatic Prosthetic Joints During an Episode of Hematogenous Periprosthetic Joint Infection, a Multicenter Analysis. *CLINICAL INFECTIOUS DISEASES*. 2021; 73(11). DOI:10.1093/cid/ciaa1222. PMID:32813012. IF:9,079 (Q1/D1).

Other scientific production

- Domingo P, de Benito N. Alpha variant SARS-CoV-2 infection: How it all starts. *EBioMedicine*. 2021; 74:103703. DOI:10.1016/j.ebiom.2021.103703. PMID:34800902. IF:8,143 (Q1/D2).
- Garcia C, Cubiro X, Tubau C, Mozos A, Munoz C, Puig L. Erythematous plaques with zosteriform distribution in a patient treated with TNF-alpha inhibitor adalimumab for psoriasis. *INTERNATIONAL JOURNAL OF DERMATOLOGY*. 2021; 60(11). DOI:10.1111/ijd.15710. PMID:34138480. IF:2,736 (Q3/D6).
- Trujols J, Cadafalch J, Alvarado PJ, Duran S. Prioritizing COVID-19 vaccination for people with addictive disorders. *Adicciones*. 2021; 33(3). PMID:34171116. IF:2,979 (Q3/D6).



Multi-organ Damage

Coordinator

Casademont Pou, Jordi FGS
jcasademont@santpau.cat

Members

Arroyo Diaz, Juan Antonio	FGS	Magallares Lopez, Berta Paula	FGS
Ballart Roig, Judith	IR	Malouf Sierra, Jorge	IR
Barcelo Trias, Montserrat	FGS	Mascaro Lamarca, Jordi	FGS
Castellvi Barranco, Ivan	FGS	Matas Pericas, Laia	FGS
Corominas Macias, Héctor	FGS	Monmany Roca, Jaume	FGS
Diaz Torne, Cesar	FGS	Moras Sarabia, Rebeca Desirée	FGS
Filella Agullo, David	FGS	Moya Alvarado, Patricia	FGS
Francia Santamaria, Esther	FGS	Ros Abarca, Sandra	IR
Hernandez De Sosa, Nerea	FGS	Torres Bonafonte, Olga Herminia	FGS
Laiz Alonso, Ana Maria	FGS		

Main lines of research

• Bone Metabolism and Osteoporosis

- Analysis of genetic influence on osteoporosis by means of aggregation studies in families of three or more generations with a minimum of 15 members.
- Bone structure study with quantitative CT of hip and spine, analysing the contribution of trabecular and cortical components using HRCT.
- Description of fat values and percentages in a normal population (in collaboration with the HIV Unit and CETIR Medical Group).

- Description of bone structure in patients with a history of acromegaly assessed by DXA and HRQCT.

• Hypertension and Vascular Risk

- Hypertension and quality of life.
- Refractory hypertension.
- Use of alirocumab in hypercholesterolaemia.

• Clinical Management, Internal Medicine and Geriatrics

- Health care quality indexes (mortality, readmissions, etc).

- Perioperative medicine, including orthogeriatrics.
 - Geriatric evaluation prior to cardiac and vascular invasive procedures
 - Central Sensitization Syndromes.
- **Rheumatology and Rheumatoid Arthritis**
 - Immunological basis and pathogenic studies of rheumatoid arthritis and other inflammatory conditions.
 - Pharmacogenetic studies of disease modifying and immunomodulatory drugs in autoimmune and inflammatory diseases
 - JAK-STAT pathway in autoimmune processes, mainly focused in rheumatoid arthritis.
 - **Systemic Sclerosis**
 - Capillaroscopy patterns and correlation with auto-antibodies and pulmonary function tests.
 - Study of capillaroscopy patterns in diffuse connective tissue diseases: QuantiCAP study.
 - **Gout**
 - Epidemiology of hyperuricaemia and gout.
 - Association of Parkinson and clinical gout and arthritis
 - **Sjögren Syndrome, SLE and others**
 - Study of the pattern of interstitial lung disease in primary Sjögren's syndrome.

Scientific Challenges

- To establish stable work relations between the HSCSP Bone Metabolism and Genomics of Complex Diseases Groups and the Bone Metabolism Unit of Hospital del Mar Medical Research Institute and the Faculty of Biology of the University of Barcelona.
- To strengthen ties between the HSCSP Rheumatology and Immunology departments regarding the study of immunological diseases.

Active grants

- OLGA HERMINIA TORRES BONAFONTE. Identificación de un inmunofenotipo de riesgo de mal pronóstico en ancianos que han sido ingresados por neumonía.. PI18/00684. Instituto de Salud Carlos III. Duration 2019-2021. 66.000,00 €.

Note: Total amount granted to PI. It does not include indirect costs.

Scientific production

- Alegre JJ, Juanola X, Rodriguez JM, Manero J, Villa I, Laiz A, Arteaga MJ, Cea L, Gonzalez CM. Effectiveness and persistence of golimumab as a second biological drug in patients with spondyloarthritis A retrospective study. *MEDICINE*. 2021; 100(13):e25223. DOI:10.1097/MD.0000000000002523. PMID:33787605. IF:1,889 (Q3/D6).

- Almirall M, Martínez SH, Alegre C, Collado A, Ojeda B, Arias A, Calandre EP, Hidalgo J, Carrillo MD, Huguet R, Tornero J, Alperi M, Fernández B, Julià A, Marsal S, Arranz LI, Blanco F, Pérez C, Olivè A, Corominas H, Martínez V, González I, Erra A, López M, Sanchez S, Fernández A, Gisbert J, Domènech E, Ferrándiz C, Cañete JD, IMIDC Project Collaborative G. Dietary habits in patients with fibromyalgia: A cross-sectional study. *CLINICAL AND EXPERIMENTAL RHEUMATOLOGY*. 2021; 39(3). PMID:34161227. IF:4,473 (Q2/D5).

- Alserawan L, Penacoba P, Echevarria S, Castillo D, Ortiz E, Martinez L, Naranjo EM, Domingo P, Castellvi I, Juarez C, Mariscal A. Growth Differentiation Factor 15 (GDF-15): A Novel Biomarker Associated with Poorer Respiratory Function in COVID-19. *Diagnostics*. 2021; 11(11):1998. DOI:10.3390/diagnostics11111998. PMID:34829345. IF:3,706 (Q2/D3).

- Arroyo JA, Julve J, Vlachó B, Corcoy R, Ponte P, Roman E, Navas E, Llauro G, Franch J, Domingo P, Mauricio D. Previous Vitamin D Supplementation and Morbidity and Mortality Outcomes in People Hospitalised for COVID19: A Cross-Sectional Study. *Frontiers in Public Health*. 2021; 9:758347. DOI:10.3389/fpubh.2021.758347. PMID:34631653. IF:3,709 (Q1/D2).

- Barcelo M, Torres OH, Mascaro J, Casademont J. Hip fracture and mortality: study of specific causes of death and risk factors. *Archives of Osteoporosis*. 2021; 16(1):15. DOI:10.1007/s11657-020-00873-7. PMID:33452949. IF:2,617 (Q2/D5).

- Cabrera J, Henriquez MS, Diaz M, Molini PS, Garcia FA, Montoya MJ, Filgueira J, Olmos JM, Coco MB, Castrillon JLP, Hernandez N, Tirado R. Profile of patients who visit medical internists for an osteoporosis assessment: The OSTEOMED registry. *REVISTA CLINICA ESPANOLA*. 2021; 221(1). DOI:10.1016/j.rce.2020.06.004. PMID:32682689. IF:1,556 (Q3/D7).

- Cai K, Fuller A, Zhang YL, Hensey O, Grossberg D, Christensen R, Shea B, Singh JA, McCarthy GM, Rosenthal AK, Filippou G, Taylor WJ, Diaz C, Stamp LK, Edwards NL, Pascart T, Becce F, Nielsen SM, Tugwell P, Beaton D, Abhishek A, Tedeschi SK, Dalbeth N. Towards development of core domain sets for short term and long term studies of calcium pyrophosphate crystal deposition (CPPD) disease: A framework paper by the OMERACT CPPD working group. *SEMINARS IN ARTHRITIS AND RHEUMATISM*. 2021; 51(4). DOI:10.1016/j.semarthrit.2021.04.019. PMID:34140183. IF:5,532 (Q1/D3).

- Castillo D, Barril S, Rodrigo A, Millan P, Suarez G, Alonso A, Franquet T, Lopez L, Castellvi I, Plaza V, Sibila O. EARLY HOSPITAL READMISSION INCREASES SHORT AND LONG - TERM MORTALITY IN PATIENTS WITH INTERSTITIAL LUNG DISEASE. *SARCOIDOSIS VASCULITIS AND DIFFUSE LUNG DISEASES*. 2021; 38(2):e2021021. DOI:10.36141/svld.v38i2.10709. PMID:34316260. IF:0,670 (Q4/D10).

- Corominas H, Castellvi I, Diaz C, Matas L, de la Rosa D, Mangués MA, Moya P, Pomar V, Benito N, Moga E, Hernandez N, Casademont J, Domingo P. Sarilumab (IL-6R antagonist) in critically ill patients with cytokine release syndrome by

SARS-CoV2. *MEDICINE*. 2021; 100(19):e25923. DOI:10.1097/MD.00000000000025923. PMID:34106658. IF:1,889 (Q3/D6).

• Corominas H, Castellvi I, Pomar V, Antonijoan R, Mur I, Matas L, Gich I, de Benito N, Laiz A, Castillo D, Villamarin L, Filella D, Mill AM, Quijada MA, Puig M, Casademont J, Domingo P. Effectiveness and safety of intravenous tocilizumab to treat COVID-19-associated hyperinflammatory syndrome: Covizumab-6 observational cohort. *CLINICAL IMMUNOLOGY*. 2021; 223:108631. DOI:10.1016/j.clim.2020.108631. PMID:33189888. IF:3,969 (Q3/D6).

• Diaz C, Ortiz MA, Garcia A, Jeria S, Sainz L, Fernandez S, Corominas H, Vidal S. The inflammatory role of silent urate crystal deposition in intercritical gout. *RHEUMATOLOGY*. 2021; 60(11). DOI:10.1093/rheumatology/keab335. PMID:33839783. IF:7,580 (Q1/D2).

• Díaz SM, Sánchez C, Fernández M, Andreu JL, Martínez V, Olivé A, Rosas J, Menor R, García Á, López FJ, Manrique S, García JA, López R, Narváez J, Galisteo C, González J, Naranjo A, Illera Ó, Moreira B, Raya E, Rodríguez M, Júdez E, Moriano C, Torrente V, García B, Guillén C, Castellvi I, Bohórquez C, Loricera J, Belzunegui J, Carreira PE, Sjogrenser G, Spanish Society of Rheumatology Systemic Autoimmune Diseases Study Group (. Digestive involvement in primary Sjögren's syndrome: Analysis from the Sjögrenser registry. *CLINICAL AND EXPERIMENTAL RHEUMATOLOGY*. 2021; 38(4). PMID:33025900. IF:4,473 (Q2/D5).

• Domingo P, Pomar V, Mur I, Castellvi I, Corominas H, de Benito N. Not all COVID-19 pandemic waves are alike. *CLINICAL MICROBIOLOGY AND INFECTION*. 2021; 27(7). DOI:10.1016/j.cmi.2021.04.005. PMID:33887469. IF:8,067 (Q1/D1).

• Fuller A, Cai K, Diaz C, Filippou G, Pascart T, Hensey O, Grossberg D, Christensen R, Shea B, Singh JA, Tedeschi SK, Dalbeth N, Abhishek A. Outcome domains reported by patients, caregivers, healthcare professionals and stakeholders for calcium pyrophosphate deposition (CPPD): A content analysis based on semi-structured qualitative interviews from the OMERACT CPPD working group. *SEMINARS IN ARTHRITIS AND RHEUMATISM*. 2021; 51(3). DOI:10.1016/j.semarthrit.2020.09.021. PMID:33461759. IF:5,532 (Q1/D3).

• Fuller A, Cai K, Filippou G, Pascart T, Diaz C, Hensey O, Grossberg D, Christensen R, Shea B, Singh JA, Tedeschi SK, Dalbeth N, Abhishek A. Experience and impact of crystal pyrophosphate deposition (CPPD) from a patient and caregiver perspective: A qualitative exploration from the OMERACT CPPD working group. *SEMINARS IN ARTHRITIS AND RHEUMATISM*. 2021; 51(3). DOI:10.1016/j.semarthrit.2021.04.010. PMID:33941385. IF:5,532 (Q1/D3).

• Garin N, Sole N, Lucas B, Matas L, Moras D, Rodrigo A, Gras L, Fonts N. Drug related problems in clinical practice: a cross-sectional study on their prevalence, risk factors and associated pharmaceutical interventions. *Scientific Reports*. 2021; 11(1):883. DOI:10.1038/s41598-020-80560-2. PMID:33441854. IF:4,379 (Q1/D3).

• Gomis M, Perez SM, Minguell ER, Loidi VB, Lopez LL, Abarca SR, Tugas EG, Mas N, Bafalluy M. Mobile Health to Improve Adherence and Patient Experience in Heart Transplantation Recipients: The mHeart Trial. *Healthcare*. 2021; 9(4):463. DOI:10.3390/healthcare9040463. PMID:33919899. IF:2,645 (Q2/D5).

• Julia A, Lopez M, Blanco F, Gomez A, Haro I, Mas AJ, Erra A, Vivar MLG, Monfort J, Sanchez S, Gonzalez I, Alperi M, Castellanos R, Fernandez A, Diaz C, Palau N, Lastra R, Lladós J, Sanmarti R, Marsal S. Interactions between rheumatoid arthritis antibodies are associated with the response to anti-tumor necrosis factor therapy. *BMC MUSCULOSKELETAL DISORDERS*. 2021; 22(1):372. DOI:10.1186/s12891-021-04248-y. PMID:33882889. IF:2,362 (Q2/D5).

• Julia A, Martinez SH, Domenech E, Canete JD, Ferrandiz C, Tornero J, Gisbert JP, Fernandez A, Dauden E, Barreiro M, Perez C, Queiro R, Lopez FJ, Carazo JLS, Mendoza JL, Alperi M, Montilla C, Venegas JJP, Munoz F, Castaneda S, Lasanta ML, Marsal S, Fonseca E, Rodriguez J, Carreira P, Garcia V, Pinto JA, Puig L, Ricart E, Blanco F, Gratacos J, et al. [Garcia E, Diaz C]. Food groups associated with immune-mediated inflammatory diseases: a Mendelian randomization and disease severity study. *EUROPEAN JOURNAL OF CLINICAL NUTRITION*. 2021; 75(9). DOI:10.1038/s41430-021-00913-6. PMID:33893449. IF:4,016 (Q2/D5).

• Lobo D, Corominas H, Pomar V. Suitability of serology tests for the diagnosis of Lyme disease. Single center urban cohort. *MEDICINA CLINICA*. 2021; 157(8). DOI:10.1016/j.medcli.2020.08.010. PMID:33279209. IF:1,725 (Q3/D7).

• Magallares B, Lobo D, Castellvi I, Moya P, Gich I, Martinez L, Park H, Millan AM, Laiz A, Diaz C, Fernandez S, Corominas H. Assessment of EULAR/ACR-2019, SLICC-2012 and ACR-1997 Classification Criteria in SLE with Longstanding Disease. *Journal of Clinical Medicine*. 2021; 10(11):2377. DOI:10.3390/jcm10112377. PMID:34071275. IF:4,241 (Q1/D3).

• Maher TM, Mayes MD, Kreuter M, Volkmann ER, Aringer M, Castellvi I, Cutolo M, Stock C, Schoof N, Alves M, Raghu G, SENCIS I. Effect of Nintedanib on Lung Function in Patients With Systemic Sclerosis-Associated Interstitial Lung Disease: Further Analyses of a Randomized, Double-Blind, Placebo-Controlled Trial. *Arthritis & Rheumatology*. 2021; 73(4). DOI:10.1002/art.41576. PMID:33142016. IF:10,995 (Q1/D1).

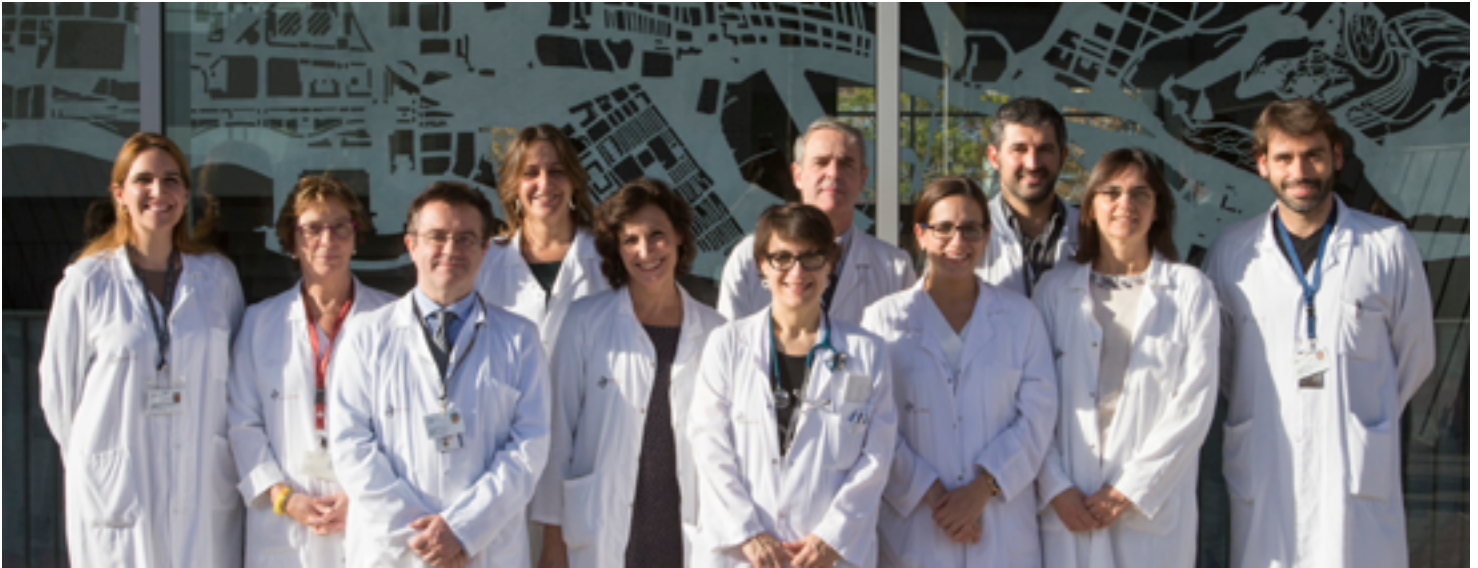
• Mariscal A, Milan M, Baucells A, Martinez MA, Guillen AG, Trallero E, Alvarado M, Martinez L, Alserawan L, Franco T, Sanz MT, Vinas L, Corominas H, Juarez C, Castellvi I, Selva A. Anti-TIF-1 gamma Antibody Detection Using a Commercial Kit vs In-House Immunoblot: Usefulness in Clinical Practice. *Frontiers in Immunology*. 2021; 11:625896. DOI:10.3389/fimmu.2020.625896. PMID:33613568. IF:7,561 (Q1/D2).

• Mariscal A, Zamora C, Magallares B, Salman TC, Ortiz MA, Diaz C, Castellvi I, Corominas H, Vidal S. Phenotypic and Functional Consequences of PLT Binding to Monocytes and Its Association with Clinical Features in SLE. *INTERNATIONAL JOURNAL*

OF MOLECULAR SCIENCES. 2021; 22(9):4719. DOI:10.3390/ijms22094719. PMID:33947017. IF:5,923 (Q1/D3).

- Marron SE, Gomez M, Aragones LT, Goni A, Vilarrasa E, Diaz RM, Garcia FJ, Campos R, Fuentelsaz V, Gilaberte Y, Gracia T, Morales AM, Ros S, Madrid MB, Puig L. Quality of Life in Hidradenitis Suppurativa: Validation of the HSQoL-24. *ACTA DERMATO-VENEREOLOGICA*. 2021; 101:adv00529. DOI:10.2340/00015555-3905. PMID:34427316. IF:4,437 (Q1/D3).
- Marsal S, Corominas H, de Agustin JJ, Perez C, Lopez M, Borrell H, Reina D, Sanmarti R, Narvaez J, Franco C, Peterfy C, Narvaez JA, Sharma V, Alataris K, Genovese MC, Baker MC. Non-invasive vagus nerve stimulation for rheumatoid arthritis: a proof-of-concept study. *Lancet Rheumatology*. 2021; 3(4). DOI:10.1016/S2665-9913(20)30425-2. IF:8,136 (Q1/D2).
- Masana L, Correig E, Ibarretxe D, Anoro E, Arroyo JA, Jerico C, Guerrero C, la Miret M, Naf S, Pardo A, Perea V, Perez R, Plana N, Ramirez R, Royuela M, Soler C, Urquizu M, Zamora A, Pedro J. Low HDL and high triglycerides predict COVID-19 severity. *Scientific Reports*. 2021; 11(1):7217. DOI:10.1038/s41598-021-86747-5. PMID:33785815. IF:4,379 (Q1/D3).
- Morillon MB, Christensen R, Singh JA, Dalbeth N, Saag K, Taylor WJ, Neogi T, Kennedy MA, Pedersen BM, McCarthy GM, Shea B, Diaz C, Tedeschi SK, Grainger R, Abhishek A, Gaffo A, Nielsen SM, Noerup A, Simon LS, Lassere M, Tugwell P, Stamp LK, Gout Working Group FTO. Serum urate as a proposed surrogate outcome measure in gout trials: From the OMERACT working group. *SEMINARS IN ARTHRITIS AND RHEUMATISM*. 2021; 51(6). DOI:10.1016/j.semarthrit.2021.11.004. PMID:34839932. IF:5,532 (Q1/D3).
- Mostaza JM, Suarez C, Cepeda JM, Manzano L, Sanchez D, Mascaró J, Maestre A. Demographic, clinical, and functional determinants of antithrombotic treatment in patients with nonvalvular atrial fibrillation. *BMC Cardiovascular Disorders*. 2021; 21(1):384. DOI:10.1186/s12872-021-02019-0. PMID:34372782. IF:2,298 (Q3/D7).
- Moya P, Leon AF, Corica ME, Marti VC, Lopez DA, Castellvi I, Corominas H. "The added value of 18f-FDG PET/CT in the assessment of onset and steroid resistant polymyalgia rheumatica". *PLoS One*. 2021; 16(9):e0255131. DOI:10.1371/journal.pone.0255131. PMID:34559822. IF:3,240 (Q2/D4).
- Murillo JD, Diaz C, Ortiz MA, Coras R, Gil P, Pedersen A, Corominas H, Vidal S, Guma M. Metabolomics profiling predicts outcome of tocilizumab in rheumatoid arthritis: an exploratory study. *Metabolomics*. 2021; 17(9):74. DOI:10.1007/s11306-021-01822-2. PMID:34402961. IF:4,290 (Q2/D5).
- Park HS, Laiz A, Sanchez J, del Campo PD, Martin MA, Guerra M, Corominas H. Valve Abnormalities, Risk Factors for Heart Valve Disease and Valve Replacement Surgery in Spondyloarthritis. A Systematic Review of the Literature. *Frontiers in Cardiovascular Medicine*. 2021; 8:719523. DOI:10.3389/fcvm.2021.719523. PMID:34631824. IF:6,050 (Q1/D3).
- Prieto D, Bernabeu P, Vela P, Narvaez J, Fernandez JC, Freire M, Gonzalez B, Solans R, Rubio JLC, Ortego N, Fernandez C, Rubio E, Garcia S, Minguez M, Fernandez C, de Miguel E, Melchor S, Salgado E, Bravo B, Romero S, Salvatierra J, Hidalgo C, Manrique S, Romero C, Moya P, Alvarez N, Mendizabal J, Ortiz F, de Pedro IP, Alonso JL, Perez L, et al. Tocilizumab in refractory Caucasian Takayasu's arteritis: a multicenter study of 54 patients and literature review. *Therapeutic Advances in Musculoskeletal Disease*. 2021; 13:1759720X211020917. DOI:10.1177/1759720X211020917. PMID:34211589. IF:5,346 (Q1/D3).
- Prior A, Sanchez C, Campos J, Manero FJ, Perez C, Bohorquez C, Busquets N, Blanco JM, Diaz C, Sanchez F, Mateo L, Holgado S. Clinical factors associated with discontinuation of ts/bDMARDs in rheumatic patients from the BIOBADASER III registry. *Scientific Reports*. 2021; 11(1):11091. DOI:10.1038/s41598-021-90442-w. PMID:34045525. IF:4,379 (Q1/D3).
- Riancho L, Martinez V, Rua I, Alonso F, Galindo M, Ovalles J, Olive A, Vazquez NM, Calvo J, Menor R, Tomero E, Uriarte E, Botenau A, Andres M, Freire M, Soler GS, Ruiz E, Ibanez M, Castellvi I, Galisteo C, Vila VQ, Raya E, Narvaez J, Exposito L, Hernandez JA, Horcada L, Aurrecochea E, Pego JM. Do all antiphospholipid antibodies confer the same risk for major organ involvement in systemic lupus erythematosus patients?. *CLINICAL AND EXPERIMENTAL RHEUMATOLOGY*. 2021; 39(3). PMID:32828148. IF:4,473 (Q2/D5).
- Sebastiani M, Luppi F, Sambataro G, Villegas DC, Cerri S, Tomietto P, Cassone G, Bocchino M, Aienza B, Cameli P, Alvarado PM, Faverio P, Bargagli E, Vancheri C, Gonzalez MA, Ciini E, Salvarani C, Manfredi A. Interstitial Lung Disease and Anti-Myeloperoxidase Antibodies: Not a Simple Association. *Journal of Clinical Medicine*. 2021; 10(12):2548. DOI:10.3390/jcm10122548. PMID:34207641. IF:4,241 (Q1/D3).
- Valero JA, Lopez R, Martin MA, Garcia C, Sanchez F, Sanchez JT, Gonzalez C, Revuelta E, Diaz C, Fernandez C, Perez C, Torrente V, Sanchez G, Perez T, Font P, Garcia ML, Aurrecochea E, Maiz O, Valls R, Miranda JA, Llorca J, Castaneda S, Gonzalez MA, CARMA GRP. Body Mass Index and Disease Activity in Chronic Inflammatory Rheumatic Diseases: Results of the Cardiovascular in Rheumatology (Carma) Project. *Journal of Clinical Medicine*. 2021; 10(3):382. DOI:10.3390/jcm10030382. PMID:33498379. IF:4,241 (Q1/D3).
- Fajardo J, Nunez E, Szafranska J, Poca M, Lobo D, Martin B, Hernandez D, Roig C, Huerta A, Corominas H, Sanchez S, Soriano G. We report a patient who presented intrahepatic cholangitis and cholecystitis after SARS-CoV-2 infection. *JOURNAL OF GASTROENTEROLOGY AND HEPATOLOGY*. 2021; 36(8). DOI:10.1111/jgh.15537. PMID:34105805. IF:4,029 (Q2/D5).
- Pou MA, Gayarre R, Ferrer S, Fernandez MI, Feijoo MV, Diaz C. The role of primary care in the COVID-19 crisis. Experience of an urban Primary Care team. *Atencion Primaria*. 2021; 53(7):102082. DOI:10.1016/j.aprim.2021.102082. PMID:33957554. IF:1,137 (Q4/D8).

Other scientific production



Chronic Respiratory Diseases

Coordinator

Plaza Moral, Vicente
vplaza@santpau.cat

FGS

Members

Alonso León, Ana María	FGS	Mayos Perez, Mercedes	FGS
Anton Albisu, Pedro Antonio	FGS	Miralda Galan, Rosa Maria	FGS
Bigorra Rodriguez, Teresa	IR	Pajares Ruiz, Virginia	FGS
Brienza , Sonia Nadia	IR	Palones Femenía, Esther	FGS
Castillo Villegas, Diego	FGS	Paz Del Río, Luís Daniel	FGS
Cendon Panades, Laia	FGS	Peiro Fabregas, Meritxell	FGS
Crespo Lessmann, Astrid Del Carmen	FGS	Podzamczar Valls, Inés	FGS
Curto Sánchez, Elena	IR	Puy Rion, Maria Carme	FGS
De la Rosa Carrillo, David	FGS	Rafecas Codern, Albert	FGS
Fortuna Gutierrez, Ana Maria	FGS	Ramos Barbon, David	FGS
Gimenez Palleiro, Ana Maria	FGS	Segura Medina, Macarena	FGS
Giner Donaire, Jordi	FGS	Solanes Garcia, Ingrid	FGS
Gutiérrez Pereyra, Fernando	FGS	Soto Retes, Lorena Concepcion	FGS
Gutierrez Rouco, Marta	FGS	Torrego Fernandez, Alfonso	FGS
Mateus Medina, Eder Fredy	IR		

Main lines of research

• Asthma

- Asthma exacerbations.
- Severe asthma.
- Good clinical practice guidelines for asthma.
- Bronchial inflammation.
- Experimental asthma and pathogenic mechanisms.

- Multicentre biobank specializing in bronchial biopsies for research into asthma.
- Bronchial thermoplasty.
- Clinical trials.

• COPD and Respiratory Failure

- Non-invasive mechanical ventilation.
- Respiratory rehabilitation.
- Pathophysiology.
- Exacerbation.

• **Obstructive Sleep Apnoea (OSA)**

- Physiology and clinical, diagnostic and treatment consequences of sleep disorders.
- Obesity-hypoventilation syndrome.
- Analysis of airway inflammation in patients with OSA.

Scientific Challenges

- Consolidate a leading clinical trial unit in respiratory diseases.
- Capture pre-clinical development contracts from the pharmaceutical and biotech industry, using the capabilities of our basic research lab and experimental animal models.
- Recruit research trainees seeking a doctoral degree.
- Support the development of multidisciplinary research networks such as the Barcelona Respiratory Network and the Programme for Integrated Research for Asthma of the Spanish Society of Pneumology and Thoracic Surgery (SEPAR), and collaborate with or become involved in existing networks such as CIBER-Respiratory Disorders.

Collaborations

Collaborations with other IIB Sant Pau research groups

- Ear, Nose and Throat Cancers (collaboration of Dr. V. Plaza in the EPONA study).
- Genetics and Vascular Surgery Departments (collaboration of Dr. V. Plaza in the TAGA study).

External collaborations

- The Respiratory Chronic diseases Research Group is associated with the Respiratory CIBER network (Centro de Investigaciones Biomédicas En Red, Instituto de Salud Carlos III, Ministry of Science and Innovation, Spain).
- David Ramos Barbón. Steering Committee member and national lead for the “Severe Heterogenous Asthma Research collaboration, Patient-centered (SHARP)” Program of the European Respiratory Society.
- Vicente Plaza Moral, Emergent Asthma Group, SEPAR.
- Vicente Plaza Moral, INASMA Group.
- Drs. V. Plaza and D. Ramos Barbón, Integrated Research Programme (PII) for Asthma, SEPAR.
- Diego Castillo Villegas, National Institute for Rare Diseases, Instituto de Salud Carlos III, Madrid, Spain.
- Diego Castillo Villegas, International Working Group on Langerhans Cell Histiocytosis and EUROHISTIONET.
- David Ramos Barbón (PI), Multicentre Biobank of Bronchial Biopsies for Asthma Research, with collaborators as follows:

• Dr Carlos Martínez Rivera from Hospital Universitari Germans Trias i Pujol, Badalona, Spain.

• Dr Antolín López Viña from Hospital Universitario Puerta de Hierro, Madrid, Spain.

• Dr Francisco Javier González Barcala from Complejo Hospitalario de Pontevedra, Spain.

• Dr Teresa Bazús González from Hospital Universitario Central de Asturias, Oviedo, Spain.

• Dr Luis Pérez de Llano from Hospital Lucus Augusti, Lugo, Spain (pending approval).

• Dr Patrick Berger from Université Bordeaux 2, Bordeaux, France.

• Dr James G Martin from McGill University, Montreal, Canada.

Active grants

• MERCEDES MAYOS PEREZ. Proyecto PASHOS: Plataforma avanzada para el estudio del síndrome de Apnea hipopnea Obstructiva del sueño (SAHS). SOCAP 2013-2014. Societat Catalana de Pneumologia. Duration 2014-2021. 10.909,08 €.

• ALFONSO TORREGO FERNANDEZ. Estudi dels mecanismes fisiopatològics i resultats de l'aplicació de termoplàstia bronquial en asma greu. BECA VIFOR - FUCAP 2015. Fundació Catalana de Pneumologia. Duration 2015-2021. 10.363,65 €.

• VICENTE PLAZA MORAL. Asma Neutròfílica y/o No Eosinofílica. Proyecto ANNE. PI17/01950. Instituto de Salud Carlos III. Duration 2018-2022. 87.000,00 €.

• ORIOL SIBILA VIDAL. El proyecto PRINCE; Predictores Inmunológicos de Infección Bronquial en Enfermedades Respiratorias Crónicas. PI18/00311. Instituto de Salud Carlos III. Duration 2019-2021. 97.000,00 €.

• DAVID RAMOS BARBON. Cercamiento de subproductos de células madre mesenquimales mediadores de anti-remodelación de músculo liso bronquial y prueba farmacológica preclínica en asma experimental. PI18/01102. Instituto de Salud Carlos III. Duration 2019-2021. 122.000,00 €.

• LORENA CONCEPCION SOTO RETES. Papel del sistema nervioso autónomo en el asma no controlada y en el fenotipo paucigranulocítico.. SEPAR 2016. Fundació RESPIRA. Duration 2018-2021. 23.750,00 €.

• VIRGINIA PAJARES RUIZ. Biopsia electrónica de tejido pulmonar in-vivo basada en espectroscopia de impedancia eléctrica. RTI2018-098116-B-C22. Ministeri de Ciència, Innovació i Universitats. Duration 2019-2022. 25.000,00 €.

- VICENTE PLAZA MORAL. Asma neutrofílica y/o no eosinofílica (Proyecto ANNE). SEPAR 2017. Societat Espanyola de Pneumologia i Cirurgia Toràctica. Duration 2018-2021. 9.845,45 €.

- SANDRA GIMENEZ BADIA. The impact of Alzheimer's disease on sleep in adults with Down Syndrome. JEROME LEJEUNE 2019. Jérôme Lejeune Fondation. Duration 2020-2022. 78.030,00 €.

- SANDRA GIMENEZ BADIA. Síndrome de apnea-hipopnea del sueño y síndrome de Down: cognición, biomarcadores de Enfermedad de Alzheimer en plasma, líquido cefalorraquídeo y resonancia magnética. PI20/00836. Instituto de Salud Carlos III. Duration 2021-2023. 64.000,00 €.

- VICENTE PLAZA MORAL. Non-Eosinophilic Neutrophilic Asthma. RAMÓN PLA ARMENGOL 2018. Fundació Ramón Pla Armengol. Duration 2019-2022. 63.636,36 €.

- ANA MARIA LAPUENTE TORRENTS. Micromioma bronquial en el asma neutrofílica.. SEPAR 2017-1. Societat Espanyola de Pneumologia i Cirurgia Toràctica. Duration 2020-2021. 15.218,18 €.

- ASTRID DEL CARMEN CRESPO LESSMANN. Exacerbaciones en pacientes con asma neutrofílica. Influye el microbioma bronquial. LETI 2020. Fundació Catalana de Pneumologia. Duration 2021-2022. 8.773,76 €.

Note: Total amount granted to PI. It does not include indirect costs.

Other active grants

- Mercedes M. Mayos Pérez. Estudio de la influencia del SAHS en la función cognitiva de los sujetos adultos con Síndrome de Down. Efecto del tratamiento con CPAP. BECAS de Investigación SEPAR 2018 (2019-2021). Principal investigator.

- Ensayo clínico: Estudio sobre la carga que supone para el sistema sanitario y los pacientes la tos crónica refractaria o inexplicada. (Study on the healthcare and patient burden of refractory/unexplained chronic cough). Burden. MSD. Alpha Bioresearch. CODIGO: MER-COD-2020-01. Investigadora principal: Astrid Crespo Lessmann. Hospital de Sant Pau. Estudio Multicéntrico.

- Ensayo clínico. David Ramos Barbón, IP global. Código PBF-680CT-05. EudraCT number: 2017-003663-35. A phase II, double-blind, randomized, placebo-controlled multi-center study to investigate the effect of the adenosine A1 receptor antagonist PBF-680 on forced expiratory volume in 1 second (FEV1) in patients with mild-to moderate persistent atopic asthma. Sponsor: Palobiofarma S.L.

- Ensayo clínico. David Ramos Barbón, IP de centro. Estudio multinacional, de un solo grupo, observacional para evaluar la eficacia y el patrón de uso en la vida real de mepolizumab en pacientes con asma eosinofílica grave. Protocol Number:

204710 Número EucraCT: 2015-002361-32. Promotor: GlaxoSmithKline.

- Ensayo clínico. Estudio sobre la carga que supone para el sistema sanitario y los pacientes la tos crónica refractaria o inexplicada. (Study on the healthcare and patient burden of refractory/unexplained chronic cough). Burden. MSD. Alpha Bioresearch. CODIGO: MER-COD-2020-01. Investigadora principal: Astrid Crespo Lessmann. Hospital de Sant Pau. Estudio Multicéntrico.

- Elena Curto Sánchez. Beca SEPAR 2021 (REF 1151). "Impacto de la COVID-19 en la función pulmonar y el control de los pacientes con asma: proyecto IMCAS". Principal investigator.

- Ajuts per a projectes de recerca BRN (Barcelona Respiratory Network) - Fundació Ramón Pla i Armengol corresponent a l'any 2018. Avaluació internacional (gestionada per l'AGAUR). Projecte: Non-Eosinophilic Neutrophilic Asthma. IP: Dr. Vicente Plaza. Importe: 80.000 euros.

- Beca SEPAR 2018 por el proyecto: Exacerbaciones en pacientes con asma neutrofílica ¿influye el microbioma bronquial?. 9.000 euros.IP: Astrid Crespo

- Beca FUCAP Leti 2020 12.000€. por el proyecto Exacerbaciones en pacientes con asma neutrofílica ¿influye el microbioma bronquial? IP: Astrid Crespo

- Ayuda internacional de proyectos competitivos. The Supported Studies Programme GSK. Por el proyecto. "Neutrophilic asthma, does the microbiome influence exacerbations?" importe 33127,60 euros <https://iss.gsk.com/> IP: Astrid Crespo

- Beca SEPAR 2020 por el proyecto: Tos crónica y CANVAS (Cerebellar Ataxia with Neuropathy and bilateral Vestibular Areflexia Syndrome). Screening de mutaciones en la subunidad 1 del complejo del factor de replicación (RFC1). Estudio piloto inicial. 6000 euros. IP: Astrid Crespo

Awards

- Mercedes M. Mayos Pérez, Patricia Peñacoba, Ana María Fortuna. Best Clinical Communication at XXXVIII Diada Pneumològica 2021. Model PASHOS: una nova eina per al cribatge de la SAHS en Atenció Primària.

- Elena Curto Sánchez. Concurso Innovación en asma grave: Nuevas Fórmulas Asistenciales en el Paciente con Asma Grave. Organiser: SEPAR. Funded by AZ, 2021. Third prize.

Doctoral theses

- Patricia Peñacoba Toribio Proyecto PASHOS: Plataforma avanzada para el estudio del síndrome de apnea hipopnea

obstructiva del sueño (SAHS). Estudio multicéntrico de validación de un modelo de cribaje de SAHS en atención primaria. Universitat Autònoma de Barcelona, Mercedes M. Mayos Pérez, 28/05/2021.

Scientific production

- Alserawan L, Penacoba P, Echevarria S, Castillo D, Ortiz E, Martinez L, Naranjo EM, Domingo P, Castellvi I, Juarez C, Mariscal A. Growth Differentiation Factor 15 (GDF-15): A Novel Biomarker Associated with Poorer Respiratory Function in COVID-19. *Diagnosics*. 2021; 11(11):1998. DOI:10.3390/diagnostics11111998. PMID:34829345. IF:3,706 (Q2/D3).
- Cano E, Rodriguez TV, Martin I, Villegas DC, Garcia JJ, de Miguel EB, Robles A, Galvan MF, Roibas CM, Lara SH, Bermudo G, Moyano MG, Portal J, Torres JS, Narvaez J, Molina M. Diagnostic delay of associated interstitial lung disease increases mortality in rheumatoid arthritis. *Scientific Reports*. 2021; 11(1):9184. DOI:10.1038/s41598-021-88734-2. PMID:3391185. IF:4,379 (Q1/D3).
- Casado P, Vazquez L, Botana M, Andrade MA, Ferreiro L, Capilla ES, Nunez A, de Miguel EB, Pajares V, Fernandez A. A rapid calprotectin test for the diagnosis of pleural effusion. *PLoS One*. 2021; 16(6):e0252714. DOI:10.1371/journal.pone.0252714. PMID:34111153. IF:3,240 (Q2/D4).
- Casanova C, Gonzalez E, Martinez C, Cosio BG, Fuster A, Feu N, Solanes I, Cabrera C, Marin JM, Balcells E, Peces G, de Torres JP, Marin M, Calle M, Golpe R, Ojeda E, Divo M, Pinto V, Amado C, Lopez JL, Celli BR. Natural Course of the Diffusing Capacity of the Lungs for Carbon Monoxide in COPD Importance of Sex. *CHEST*. 2021; 160(2). DOI:10.1016/j.chest.2021.03.069. PMID:33878339. IF:9,410 (Q1/D1).
- Castillo D, Barril S, Rodrigo A, Millan P, Suarez G, Alonso A, Franquet T, Lopez L, Castellvi I, Plaza V, Sibila O. EARLY HOSPITAL READMISSION INCREASES SHORT AND LONG - TERM MORTALITY IN PATIENTS WITH INTERSTITIAL LUNG DISEASE. *SARCOIDOSIS VASCULITIS AND DIFFUSE LUNG DISEASES*. 2021; 38(2):e2021021. DOI:10.36141/svld.v38i2.10709. PMID:34316260. IF:0,670 (Q4/D10).
- Corominas H, Castellvi I, Diaz C, Matas L, de la Rosa D, Mangues MA, Moya P, Pomar V, Benito N, Moga E, Hernandez N, Casademont J, Domingo P. Sarilumab (IL-6R antagonist) in critically ill patients with cytokine release syndrome by SARS-CoV2. *MEDICINE*. 2021; 100(19):e25923. DOI:10.1097/MD.00000000000025923. PMID:34106658. IF:1,889 (Q3/D6).
- Corominas H, Castellvi I, Pomar V, Antonijoan R, Mur I, Matas L, Gich I, de Benito N, Laiz A, Castillo D, Villamarin L, Filella D, Mill AM, Quijada MA, Puig M, Casademont J, Domingo P. Effectiveness and safety of intravenous tocilizumab to treat COVID-19-associated hyperinflammatory syndrome: Covizumab-6 observational cohort. *CLINICAL IMMUNOLOGY*. 2021; 223:108631. DOI:10.1016/j.clim.2020.108631. PMID:33189888. IF:3,969 (Q3/D6).
- Crespo A, Bernal S, del Rio E, Rojas E, Martinez C, Marina N, Pallares A, Pascual S, Garcia JL, Padilla A, Curto E, Cisneros C, Serrano J, Baiget M, Plaza V. Association of the CFTR gene with asthma and airway mucus hypersecretion. *PLoS One*. 2021; 16(6):e0251881. DOI:10.1371/journal.pone.0251881. PMID:34086689. IF:3,240 (Q2/D4).
- Crespo A, Plaza V. Multidisciplinary consensus on sputum induction biosafety during the COVID-19 pandemic. *ALLERGY*. 2021; 76(8). DOI:10.1111/all.14697. PMID:33314245. IF:13,146 (Q1/D1).
- De Torres JP, O'Donnell DE, Marin JM, Cabrera C, Casanova C, Marin M, Ezponda A, Cosio BG, Martinez C, Solanes I, Fuster A, Neder JA, Gonzalez J, Celli BR. Clinical and Prognostic Impact of Low Diffusing Capacity for Carbon Monoxide Values in Patients With Global Initiative for Obstructive Lung Disease I COPD. *CHEST*. 2021; 160(3). DOI:10.1016/j.chest.2021.04.033. PMID:33901498. IF:9,410 (Q1/D1).
- Perez de Llano LP, Davila I, Martinez E, Dominguez J, Almonacid C, Colas C, Garcia JL, Carmona L, de Yebenes MJG, Cosio BG, Torrego A, MENA AH. Development of a Tool to Measure the Clinical Response to Biologic Therapy in Uncontrolled Severe Asthma: The FEV1, Exacerbations, Oral Corticosteroids, Symptoms Score. *Journal of Allergy and Clinical Immunology-In Practice*. 2021; 9(7). DOI:10.1016/j.jaip.2021.01.033. PMID:33549843. IF:8,861 (Q1/D2).
- Fischer JB, Frisk LK, Scholkmann F, Delgado R, Mayos M, Durduran T. Cerebral and systemic physiological effects of wearing face masks in adults. *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*. 2021; 118(41):e2109111118. DOI:10.1073/pnas.2109111118. PMID:34607955. IF:11,205 (Q1/D2).
- Garcia A, de la Rosa D, Oscullo G, Castillo D, Lopez R, Martinez MA. Coagulation disorders and thromboembolic disease in COVID-19 review of current evidence in search of a better approach. *Journal of Thoracic Disease*. 2021; 13(2). DOI:10.21037/jtd-20-3062. PMID:33717596. IF:2,895 (Q3/D6).
- Martinez MA, Faner R, Oscullo G, de la Rosa D, Soler JJ, Ballester M, Muriel A, Agusti A. Risk Factors and Relation with Mortality of a New Acquisition and Persistence of Pseudomonas aeruginosa in COPD Patients. *COPD-Journal of Chronic Obstructive Pulmonary Disease*. 2021; 18(3). DOI:10.1080/15412555.2021.1884214. PMID:33941014. IF:2,409 (Q4/D8).
- Martinez MA, Faner R, Oscullo G, la Rosa D, Soler JJ, Ballester M, Muriel A, Agusti A. Chronic bronchial infection and incident cardiovascular events in chronic obstructive pulmonary disease patients: A long-term observational study. *RESPIROLOGY*. 2021; 26(8). DOI:10.1111/resp.14086. PMID:34002922. IF:6,424 (Q1/D2).
- Martinez MA, Villa C, Dobarganes Y, Giron R, Maiz L, Garcia M, Sibila O, Golpe R, Rodriguez J, Barreiro E, Rodriguez JL, Menendez R, Prados C, de la Rosa D, Oliveira C. RIBRON: The spanish Online Bronchiectasis Registry. Characterization of the First 1912 Patients. *ARCHIVOS DE BRONCONEUMOLOGIA*. 2021;

57(1). DOI:10.1016/j.arbres.2019.12.021. PMID:32081438. IF:4,872 (Q2/D3).

• Milagro J, Soto L, Giner J, Varon C, Laguna P, Bailon R, Plaza V, Gil E. Asthmatic subjects stratification using autonomic nervous system information. *Biomedical Signal Processing and Control*. 2021; 69:102802. DOI:10.1016/j.bspc.2021.102802. IF:3,880 (Q2/D4).

• Millán P, Pajares V, Guerrero R, Villalba J, Torrego A. Recurrent Haemoptysis Secondary to Abnormal Arterial Supply to the Right Lower Lobe of the Lung. *ARCHIVOS DE BRONCONEUMOLOGIA*. 2021; 57(10). DOI:10.1016/j.arbres.2020.10.004. PMID:33223304. IF:4,872 (Q2/D3).

• Navarro A, de la Rosa D, Esquinas C, Miravittles M, Martínez MA, Almagro P. Evolution and Comparative Analysis of Hospitalizations in Spain Due to COPD and Bronchiectasis between 2004 and 2015. *COPD—Journal of Chronic Obstructive Pulmonary Disease*. 2021; 18(2). DOI:10.1080/15412555.2021.1896692. PMID:33729066. IF:2,409 (Q4/D8).

• Plaza V, Arnedillo A, Blanco M, Ignacio JM, Urrutia I. Consensus on the treatment of allergic asthma with sublingual house dust mite immunotherapy in the field of pneumology. *Expert Review of Respiratory Medicine*. 2021; 15(10). DOI:10.1080/17476348.2021.1942846. PMID:34128758. IF:3,772 (Q2/D4).

• Plaza V, Giner J, Curto E, Alonso MB, Orue MI, Vega JM, Cosio BG. Assessing Adherence by Combining the Test of Adherence to Inhalers With Pharmacy Refill Records. *JOURNAL OF INVESTIGATIONAL ALLERGOLOGY AND CLINICAL IMMUNOLOGY*. 2021; 31(1). DOI:10.18176/jiaci.0461. PMID:31599726. IF:4,333 (Q2/D5).

• Posadas T, Oscullo G, Zaldivar E, Villa C, Dobarganes Y, Giron R, Oliveira C, Maiz L, Garcia M, Sibila O, Golpe R, Rodriguez J, Barreiro E, Rodriguez JL, Menendez R, Prados C, de la Rosa D, Martinez MA. C-Reactive Protein Concentration in Steady-State Bronchiectasis: Prognostic Value of Future Severe Exacerbations. Data From the Spanish Registry of Bronchiectasis (RIBRON). *ARCHIVOS DE BRONCONEUMOLOGIA*. 2021; 57(1). DOI:10.1016/j.arbres.2019.12.017. PMID:32331706. IF:4,872 (Q2/D3).

• Reyes D, Alonso J, Mayos M, Nunez C, Llauger J, Belmonte I, Pedrosa I, Segovia S, Diaz J. Correlation Between Respiratory Accessory Muscles and Diaphragm Pillars MRI and Pulmonary Function Test in Late-Onset Pompe Disease Patients. *Frontiers in Neurology*. 2021; 12:621257. DOI:10.3389/fneur.2021.621257. PMID:33732206. IF:4,003 (Q2/D4).

• Rial MJ, Alvarez MJ, Arismendi E, Caballero ML, Canas JA, Cruz MJ, Gonzalez FJ, Luna JA, Martinez C, Mullol J, Munoz X, Olaguibel JM, Picado C, Plaza V, Quirce S, Romero C, Salgado FJ, Sastre B, Soto L, Valero A, Valverde M, Sastre J, del Pozo V. Clinical and inflammatory characteristics of patients with asthma in the Spanish MEGA project cohort. *Clinical and Translational Allergy*. 2021; 11(1):e12001. DOI:10.1002/ctt2.12001. PMID:33900052. IF:5,871 (Q2/D3).

• Rubio MC, Hermosa JLR, de Torres JP, Marin JM, Martínez C, Fuster A, Cosio BG, Peces G, Solanes I, Feu N, Lopez JL, Casanova C, CHAIN I. COPD Clinical Control: predictors and long-term follow-up of the CHAIN cohort. *RESPIRATORY RESEARCH*. 2021; 22(1):36. DOI:10.1186/s12931-021-01633-y. PMID:33541356. IF:5,631 (Q1/D3).

• Sebastiani M, Luppi F, Sambataro G, Villegas DC, Cerri S, Tomietto P, Cassone G, Bocchino M, Atienza B, Cameli P, Alvarado PM, Faverio P, Bargagli E, Vancheri C, Gonzalez MA, Clini E, Salvarani C, Manfredi A. Interstitial Lung Disease and Anti-Myeloperoxidase Antibodies: Not a Simple Association. *Journal of Clinical Medicine*. 2021; 10(12):2548. DOI:10.3390/jcm10122548. PMID:34207641. IF:4,241 (Q1/D3).

• Shull JG, Pay MT, Lara Compte C, Olid M, Bermudo G, Portillo K, Sellarés J, Balcells E, Vicens-Zygmunt V, Planas-Cerezales L, Badenes-Bonet D, Blavia R, Rivera-Ortega P, Moreno A, Sans J, Perich D, Barril S, Esteban L, Garcia-Bellmunt L, Esplugas J, Suarez-Cuartin G, Bordas-Martinez J, Castillo D, Jolis R, Salvador I, Eizaguirre Anton S, Villar A, et al. Mapping IPF helps identify geographic regions at higher risk for disease development and potential triggers. *Respirology*. 2021;26(4):352–359. DOI:10.1111/resp.13973. PMID: 33167075. IF:6,424 (Q1/D2).

• Tabar AI, Delgado J, Gonzalez E, Arroabarren E, Retes LS, Dominguez J. Recent Advances in Allergen-Specific Immunotherapy as Treatment for Allergic Asthma: A Practical Overview. *INTERNATIONAL ARCHIVES OF ALLERGY AND IMMUNOLOGY*. 2021; 182(6). DOI:10.1159/000513811. PMID:33631755. IF:2,749 (Q3/D7).

• Torrego A, Herth FJ, Munoz AM, Puente L, Facciolongo N, Bicknell S, Novali M, Gasparini S, Bonifazi M, Dheda K, Andreo F, Votruba P, Langton D, Flandes J, Fielding D, Bonta PI, Skowasch D, Schulz C, Darwiche K, McMullen E, Grubb GM, Niven R. Bronchial Thermoplasty Global Registry (BTGR): 2-year results. *BMJ Open*. 2021; 11(12):e053854. DOI:10.1136/bmjopen-2021-053854. PMID:34916324. IF:2,692 (Q2/D4).

• Valero AL, Trigueros JA, Plaza V. Multidisciplinary consensus on inhaled therapy in asthma. *Expert Review of Respiratory Medicine*. 2021;15(3):425–434. DOI:10.1080/17476348.2021.1841639. PMID: 33170733. IF:3,772 (Q2/D4).

• Villegas DC, Barril S, Giner J, Millan P, Rodrigo A, Merino JL, Sibila O. Study of diffuse interstitial lung disease with the analysis of volatile particles in exhaled air. *ARCHIVOS DE BRONCONEUMOLOGIA*. 2022; 58(1). DOI:10.1016/j.arbres.2021.03.023. IF:4,872 (Q2/D3).

• Wang XJ, Villa C, Dobarganes Y, Oliveira C, Giron R, Garcia M, Maiz L, Sibila O, Golpe R, Menendez R, Rodriguez J, Prados C, Martinez MA, Rodriguez JL, de la Rosa D, Duran X, Barreiro E. Differences in Nutritional Status and Inflammatory Biomarkers between Female and Male Patients with Bronchiectasis: A Large-Cohort Study. *Biomedicines*. 2021; 9(8):905. DOI:10.3390/biomedicines9080905. PMID:34440109. IF:6,081 (Q1/D2).

- Wang XJ, Villa C, Dobarganes Y, Oliveira C, Giron R, Garcia M, Maiz L, Sibila O, Golpe R, Menendez R, Rodriguez J, Prados C, Martinez MA, Rodriguez JL, de la Rosa D, Duran X, Garcia J, Barreiro E. Phenotypic Clustering in Non-Cystic Fibrosis Bronchiectasis Patients: The Role of Eosinophils in Disease Severity. *International Journal of Environmental Research and Public Health*. 2021; 18(16):8431. DOI:10.3390/ijerph18168431. PMID:34444179. IF:3,390 (Q1/D3).

Other scientific production

- Almonacid C, Blanco M, Dominguez J, Giner J, Molina J, Plaza V. Teleconsultation in the follow-up of the asthma patient. Lessons after COVID-19. *ARCHIVOS DE BRONCONEUMOLOGIA*. 2021; 57. DOI:10.1016/j.arbres.2020.10.005. IF:4,872 (Q2/D3).

- Curto E, Torrego A, Garin N, Crespo A, Plaza V. Reply to “Managing T2-high severe asthma in HIV-infected patients”. *Journal of Allergy and Clinical Immunology-In Practice*. 2021; 9(2). DOI:10.1016/j.jaip.2020.11.014. PMID:33551032. IF:8,861 (Q1/D2).

- Martinez MA, Gonzalez FJ, de Granda JI, Castillo D, Barrecheguren M, Viller F. Archivos de Bronconeumologia: Continue to Growth, Everyone’s Goal. *ARCHIVOS DE BRONCONEUMOLOGIA*. 2021; 57(3). DOI:10.1016/j.arbres.2021.02.001. PMID:33750547. IF:4,872 (Q2/D3).

- Ojanguren I, Plaza V. FeNO for Asthma Diagnosis in Adults: More Lights Than Shadows. *ARCHIVOS DE BRONCONEUMOLOGIA*. 2021;57(2):85–86. English, Spanish. DOI:10.1016/j.arbres.2020.03.035. PMID: 32456799. IF:4,872 (Q2/D3).

- Pena D, Dronda SB, Diaz D, Carrillo DD. One Year On: Are We Ready for COVID?. *ARCHIVOS DE BRONCONEUMOLOGIA*. 2021; 57(8). DOI:10.1016/j.arbres.2021.02.016. PMID:34059451. IF:4,872 (Q2/D3).

- Perez de Llano L, Gancedo SQ, Moral VP. Treatment of Moderate-severe Asthma: An Alternative Strategy to the Guidelines Recommendations. *ARCHIVOS DE BRONCONEUMOLOGIA*. 2021; 57(4). DOI:10.1016/j.arbres.2020.04.017. PMID:32499097. IF:4,872 (Q2/D3).

- Plaza V, Blanco M, García G, Korta J, Molina J, Quirce S; en representación del Comité Ejecutivo de GEMA. Highlights of the Spanish Asthma Guidelines (GEMA), version 5.0. *ARCHIVOS DE BRONCONEUMOLOGIA*. 2021;57(1):11-12. English, Spanish. DOI:10.1016/j.arbres.2020.10.003. PMID: 33213964; PMCID: PMC7577883. IF:4,872 (Q2/D3).

- Plaza V, Trigueros JA, Cisneros C, Dominguez J, Cimbollek S, Fernandez S, Hernandez J, Lopez JD, Ojanguren I, Padilla A, Pallares A, Sanchez FJ, Torrego A, Urrutia I, Quirce S. The Importance of Small Airway Dysfunction in Asthma: The GEMA-FORUM III Task Force. *JOURNAL OF INVESTIGATIONAL ALLERGOLOGY AND CLINICAL IMMUNOLOGY*. 2021; 31(5). DOI:10.18176/jiaci.0686. PMID:33720836. IF:4,333 (Q2/D5).

- Rial MJ, Valverde M, del Pozo V, Gonzalez FJ, Martinez C, Munoz X, Olaguibel JM, Plaza V, Curto E, Quirce S, Barranco P, Dominguez J, Mullol J, Picado C, Valero A, Bobolea I, Arismendi E, Ribo P, Sastre J. Clinical characteristics in 545 patients with severe asthma on biological treatment during the COVID-19 outbreak. *Journal of Allergy and Clinical Immunology-In Practice*. 2021; 9(1). DOI:10.1016/j.jaip.2020.09.050. PMID:33045398. IF:8,861 (Q1/D2).

- Scholkmann F, Fischer JB, Frisk LK, Delgado R, Mayos M, Highton D, Wolf U, Wolf M, Durduran T. Influence of study design on effects of mask wearing on fMRI BOLD contrast and systemic physiology - A comment on Law et al. (2021). *NEUROIMAGE*. 2021; 244:118549. DOI:10.1016/j.neuroimage.2021.118549. PMID:34508896. IF:6,556 (Q1/D1).

Other publications

- Arenas M, Martin R, Royo BU, Fernandez I, Velando AG, Garcia LN, Clemente CC, Garcia FA, Codern AR, Fernandez C, Ruiz VP, Fernandez AT, Rajas O, Iturricastillo G, Lujan RG, Casanova LC, Sanchez A, Aguilar R, Larrosa R, Garcia RG, Cordovilla R, Nunez A, Briones A, Viedma EC, Franco J, Povedano JC, Rodriguez ML, Gallardo JJC, Delgado MN, et al. The role of bronchoscopy in patients with SARS-CoV-2 pneumonia. *Erj Open Research*. 2021; 7(3):00165–2021. DOI:10.1183/23120541.00165–2021. PMID:34258257.

- De la Rosa D, López JL, Blanco M, Villar F. Recomendaciones SEPAR y nuevos retos sobre la vacuna contra la COVID-19 en las enfermedades respiratorias. *Vacunas*. 2021; 22(3). DOI:10.1016/j.vacun.2021.05.001. PMID:34031633.

- Marqués Espi JA, Crespo-Lessmann A, Domínguez Ortega J, Pérez de Llano L, Blanco-Aparicio M, Santiñá M, Palop Cervera M, Álvarez FJ, Fraj J. <https://sedisa.net/2021/02/09/proyecto-carabela-caracterizacion-del-modelo-asistencial-de-asma-grave-para-la-mejora-de-la-eficiencia-de-las-unidades-de-asma/>. Proyecto Carabela: caracterización del modelo asistencial de Asma Grave para la mejora de la eficiencia de las Unidades de Asma. 9 febrero, 2021.

- Peñacoba Toribio P, Fortuna Gutiérrez AM, Mayos Pérez M. Editorial: Manejo de la apnea obstructiva del sueño en atención primaria en relación con el nuevo documento de consenso internacional. *Open Respiratory Archives*. 2021; 4(1): 100150. DOI:10.1016/j.opresp.2021.100150.

- Serra C, Torrego A, Pajares V, Millan P, Barril S, Alonso A, Navarro M, Lopez L, Franquet T, Castillo D. Bronchoalveolar lavage complements transbronchial cryobiopsy diagnosis in diffuse interstitial lung diseases. *Journal Of Bronchology And Interventional Pulmonology*. DOI:10.1097/LBR.0000000000000770. PMID:33828048.

- Villar-Álvarez F, Martínez-García MA, Jiménez D, Fariñas-Guerrero F, Ortiz de Lejarazu-Leonardo R, López-Campos JL, Blanco-Aparicio M, Royo-Crespo I, García-Ortega A, Trilla-García

A, Trujillo-Reyes JC, Fernández-Prada M, Díaz-Pérez D, Laporta-Hernández R, Valenzuela C, Menéndez R, de la Rosa-Carrillo D. Recomendaciones SEPAR sobre la vacuna COVID-19 en las enfermedades respiratorias. *Open Respiratory Archives* 3. 2021;100097. DOI: 10.1016/j.opresp.2021.100097.

Proceeding papers

• Fischer JB, Kobayashi L, Tachtsidis I, Delgado R, Mayos M, Scholkmann F, Durduran T. Does wearing a non-medical face mask cause changes in cerebral hemodynamics?. *SPIE*. 2021. p.119200J.

Books or chapters with ISBN

• Alonso León, Ana María; Antón Albisu, Antonio; Arilla Soriano, Marina; Barril Farré, Silvia; Belda Sanchís, Josep; Belda Soler, Alicia; Bigorra Rodríguez, Teresa; Blanco Valle, José Manuel; Blanco Béjar, Marta; Burrel Deicke, Cristina; Carrasco Expósito, Marina; Castellví Barranto, Iván; Castillo Villegas, Diego; Cendón Panadés, Laia; Cermeño Reyes, Silvia; Cladellas Gutiérrez, Esther; Crespo Lessmann, Astrid; Curto Sánchez, Elena; de la Rosa Carrillo, David; Esteban Novella, Olga; Farré i Maduell, Ariadna; Fernández Arias, Carmen; Flotats Giralt, Albert; Fortuna Gutiérrez, Ana María; Francia Santamaría, Esther; Galván Blasco, Paula; Garín Escrivá, Noé; Garrigo Fullola, Montserrat; Giner Donaire, Jordi; Guarino, Mauro; Güell i Rous, María Rosa; Guerrero Vara, Rubén; Gutiérrez Rouco, Marta; Hidalgo Pérez, José Alberto; León Vintró, Xavier; López Suárez, Sandra; Lozano Polo, Laura; Luque Toro, María Dolores; Majem Tarruella, Margarita; Martín Gutiérrez, María Isabel; Martínez Téllez, Elisabeth; Mascaró Lamarca, Jordi; Mateo Arranz, José; Mayos Pérez, Mercè; Millán Billi, Paloma; Miralles Bagán, Jordi; Moliné Pareja, Antoni; Morante Vélez, Fátima; Morós Garcés, Pilar; Navarro Colom, Marta; Noelia Pérez Márquez; Orozco Echeverría, Sandra; Pajares Ruiz, Virginia; Palomares Lloret, Carolina; Pascual López, Antonio; Paz del Río, Lluís; Peiró i Fàbregas, Meritxell; Pelegrí Pedret, Anna; Peñacoba Toribio, Patricia; Pérez Márquez, Noelia; Planas Cánovas, Georgina; Plaza Moral, Vicente; Pomar Solchaga, Virginia; Puy Rión, Carme; Rafecas Codern, Albert; Ramos Barbón, David; Ricard Rojas García; Rodríguez García, Concepción; Romero Roca, Laura; Sánchez Maza, Soraya; Segura Medina, Macarena; Serra, Candela; Solanes García, Ingrid; Soto Retes, Lorena; Subirana Domenech, María Teresa; Torrego Fernández, Alfons; Torres Bonafonte, Olga; Trejo Gutiérrez, Olga; Trujillo Reyes, Juan Carlos; Vila Perales, Montserrat; Vilanueva Sánchez, Cándid; Villalba Auñón, Jordi. **PROTOCOLOS Y PROCEDIMIENTOS del Servicio de Neumología y Alergia del Hospital de la Santa Creu i Sant Pau de Barcelona**. 3ª Edición. 2021 Associació Pneumologia Sant Pau. Ed. ERGON (Madrid). ISBN (Edición digital): 978-84-18576-38-6

• V. Plaza y FJ Callejas. La SEPAR que viene 2021. Editorial Respira-Fundación Española del Pulmón-SEPAR. Barcelona 2021. ISBN: 978-84-122872-6-4.

• Guía Española para el Manejo del Asma (GEMA 5.1). Coordinador: V. Plaza Moral. Editorial Iuzan5. Madrid 2021. ISBN: 978-84-18626-28-9. Depósito Legal: M-13324-2021

• Meritxell Peiró Fàbregas. Manual del investigador novel. Coauthor of Chapter 3.2 Hipótesis y objetivo de estudio. ISBN: 978-84-122872-5-7 Editorial Respira Fundación española del Pulmón SEPAR. SEPAR 2021.

• Meritxell Peiró Fàbregas. Manual Educación Terapéutica Enfermedades Respiratorias crónicas. Web-APP Coordinator and coauthor of chapter: Intervención del tabaquismo Editorial ec europe NP-ES-RS-VID-210004 (V2) 04/2021 ISBN: 978-84-09-29900-3.

• Curto E. Tratamiento de inicio en el asma. GEMA 5.1. Medicina Respiratoria. 2021 oct 14 (2), 49-55. ISSN 188-1535.

• David de la Rosa Carrillo. Aspectos farmacoeconómicos de los antibióticos inhalados. In: Antibióticos inhalados. Editorial Neumología y Salud. ISBN: 978-84-945694-5-6.

• David de la Rosa, Diego Castillo, Fernando Gutiérrez. Capítulo 12: Seguimiento del paciente post-COVID. In: Fisiopatología de la COVID-19 en diferentes órganos y sistemas. Editorial Elsevier. ISBN: 978-84-1382-160-3.

Communication and dissemination activities

Congress communications

• Jürgen Hetzel, Athol Wells, Ulrich Costabel, Thomas V. Colby, Simon L.F. Walsh, Johny Verschakelen, Alberto Cavazza, Sara Tomassetti, Claudia Ravaglia, Michael Böckeler, Werner Spengler, Michael Kreuter, Ralf Eberhardt, Kaid Darwiche, Alfons Torrego, Virginia Pajares, Katja Stiebeling, Regina Musterle, Marius Horgler, Falko Fend, Arne Warth, ClausPeter Heussel, Sara Piciucchi, Alessandra Dubini, Dirk Theegarten, Tomas Franquet, Enrique Lerma, Venerino Poletti, Maik Häntsche. Histological confidence of transbronchial cryobiopsy in interstitial lung diseases is influenced by sample size *ERJ*. 2021 58: OA233; DOI: 10.1183/13993003.congress-2021.OA233.

• Crespo-Lessmann A, Mateus E, Curto E, Belda A, Martín MI, Sánchez-Maza S, Soto-Retes L, Ramos D, Plaza V. Recuento de células del esputo inducido en pacientes con asma mediante microscopía óptica y citometría de flujo. Correlación entre ambos métodos. E-poster at SEPAR 2021 (Sevilla).

• Espejo D, Arismendi E, Barroso B, Bobolea I, Cruz MJ, Curto E, del Pozo V, González FJ, Martínez C, Mulo J, Nieto JJ, Olaguibel JM, Picado C, Plaza V, Quirce S, Rial MJ, Romero CE, Salgado FJ, Sastre J, Sastre B, Valverde M, Muñoz X. Estudio de cohorte prospectivo de seguimiento de los pacientes con asma relacionado con el trabajo. E-Poster at SEPAR 2021 (Sevilla).

• Crespo-Lessmann A, Curto E, Bigorra T, Soto-Retes L, Ramos D, Torrego A, Plaza V. Experiencia de mepolizumab en pacientes

con asma grave no controlada eosinofílica y características de los super-respondedores al tratamiento. E-Poster at SEPAR 2021 (Sevilla).

- Dacal D, Pérez de Llano L, Malanda NM, Curto E, Gullón JA, Muñoz M, Fernández C, Martínez E, Harbenau A, García-Cosío FdB. Respuesta clínica a fármacos biológicos en ACO vs asma grave. E-Poster at SEPAR 2021 (Sevilla).
- Podzmaczer I, Curto E, Palones E, Cendón L, Rafecas A, Gutiérrez-Pereyra F, Plaza V. Pacientes con sospecha clínica de COVID-19 pero PCR negativa: características clínicas, formas de diagnóstico y criterios predictivos de COVID-19. E-Poster at SEPAR 2021 (Sevilla).
- Curto E, Palones E, Podzmaczer I, Sánchez-Maza S, Soto-Retes S, Crespo-Lessmann A, Plaza V. Cambios detectados en la oscilometría tras la prueba broncodilatadora: correlación con la espirometría forzada. Silver Oral Communication at SEPAR 2021 (Sevilla).
- Curto E, Ali I, Arias B, Arismendi E, Blanco N, Bravo FJ, Campano FJ, Castaño G, Castilla M, Climent M, Dorado S, Enriquez AI, Escribano I, Fernández A, García A, Gómez-Bastero A, Gómez-Larrauri A, Laorden D, Celeste M, Mardones A, Muñoz M, Ruiz R, Saldaña LE, Valenzuela PM, Ojanguren I, Cisneros C, Blanco M, Serrano J. ¿Cómo abordamos el asma no eosinofílica? Resultados de una encuesta propuesta por el Grupo Emergente de Asma. E-Poster at SEPAR 2021 (Sevilla).
- Curto, E. Crespo, A. Sánchez, S. Utilitat de l'Oscil·lometria en el diagnòstic d'asma. VI Jornades d'Infermeria. 17-18 Nov 2021. Hospital de la Santa Creu i Sant Pau. Barcelona
- Albert Rafecas Codern, Astrid Crespo Lessmann, Elena Curto Sánchez, Candela Serra, Soraya Sánchez Maza, Jordi Giner Donaire, Vicente Plaza Moral. Experiencia del uso de fibrorinolaringoscopia en una consulta de neumología de tos crónica y asma grave no controlada. SOCAP. Girona 2021.
- Elena Curto, Sandra Orozco, Paulina Trujillo, Jordi Giner, Soraya Sánchez-Maza, Astrid Crespo-Lessmann, Vicente Plaza. Valoración de la función pulmonar por medio de la oscilometría de impulsos: comparación con la espirometría forzada. SOCAP. Girona 2021.
- Elena Curto, Sandra Orozco, Paulina Trujillo, Jordi Giner, Soraya Sánchez-Maza, Astrid Crespo-Lessmann, Vicente Plaza. Utilidad de la oscilometría en el diagnóstico de asma. SOCAP. Girona 2021.
- Soraya Sánchez Maza, Jordi Giner Donaire, Elena Curto Sánchez, Astrid Crespo Lessmann, Vicente Plaza Moral. ESPIROMETRÍA VS OSCILOMETRIA, RESULTADOS Y PREFERENCIAS DEL PACIENTE. SOCAP. Girona 2021. Best nurse communication.
- Elena Curto Sánchez, Astrid Crespo Lessmann Lessmann, Candela Serra, Eder Mateus Medina, Ruben Osuna Gómez, Mariana Mercedes Muñoz Esquerre, Carlos Martínez Rivera, Ana

Lapuente Torrents, Lorena Soto Retes, David Ramos Barbón, Vicente Plaza Moral. Diferencias entre el perfil de interleucinas tipo no t2 en asmáticos neutrofílicos graves: resultados preliminares del proyecto ANNE. SOCAP. Girona 2021.

Courses / seminars / conferences

- Meritxell Peiró Fábregas. Webinar "Abordaje no farmacológico del paciente con SARS-CoV-2 y en paciente respiratorio en confinamiento domiciliario". April 30th, 2021.
- Meritxell Peiró Fábregas. Director of SEPAR Solidaria.
- Ingrid Solanes García. Professor of Master Cátedra Inspira. Sociedad Española de Neumología y Cirugía Torácica.
- Ingrid Solanes García. Organization Committee member of 50th Curso de Neumología Sant Pau.
- Ingrid Solanes García. Professor of Máster Biomarcadores en EPOC, Universitat de Barcelona.
- Mercedes M. Mayos Pérez. Profesora Máster de Avances en Diagnóstico y Tratamiento de los trastornos del sueño. 2ª Edición on line. Excesiva somnolencia diurna. Cátedra Neumología UCAM-SEPAR.
- Mercedes M. Mayos Pérez. Lecturer at Curs d'Actualització Pneumologia SOCAP, Nivell 3. 2021-22. Tema: Valoració pre operatoria i Prova d'esforç cardio pulmonar.
- Mercedes M. Mayos Pérez. Invited speaker at 2ª Reunión virtual conjunta de áreas SEPAR: La situación de las unidades de sueño vista desde SEPAR. Junio 2021. Online session.
- Mercedes M. Mayos Pérez. Invited speaker at PII Sueño: Más allá del IAH: Explorando nuevas señales en la apnea del sueño. Junio 2021. Online session.
- Mercedes M. Mayos Pérez. Invited speaker at 12º Encuentros SEPAR para residentes: Presente y Futuro en Neumología. Actualizaciones en patología del sueño, 2012-2021. Online sesión.
- Coordination and participation of JORNADA DE CRIOBIOPSIAS (Jornada mixta: teórica on-line y práctica presencial). Hospital de Sant Pau. 28 Sept 2021. Coordination: Dr Alfons Torregro and Dr Virginia Pajares.
- Curto E. Taller práctico de oscilometría y FENO: utilidad de la oscilometría en el manejo del asma. Congreso SEPAR 2021 (Sevilla).
- Curto E. Evaluación mediante oscilometría: perspectiva transdisciplinar. Round table, session at Congreso SEPAR 2021 (Sevilla).
- Curto E. Papel de la oscilometría en el asma: indicaciones en el presente y en el futuro. Round table / session at 1ª Reunión virtual Áreas SEPAR 2021.

- Curto E. Papel de la oscilometría en el asma: indicaciones en el presente y en el futuro. Round table / Session at 1º Reunión virtual Áreas SEPAR 2021.
- Curto E. Eos academy 2021. Ágora de casos clínicos complejos: Paciente con asma grave eosinofílica corticodependiente y diferente respuesta a antiIL5. Astra Zéneca. Madrid, 26-27 Nov 2021.
- Curto E. Invited speaker. Clinical Sessions Hospital Vall d'Hebron. Asma neutrofílica: fisiopatología, diagnóstico y tratamiento. 29 Nov 2021.
- Curto E. Preceptorship virtual: Inmersión en El manejo del paciente con asma grave. GSK. Barcelona, 29 Nov - 1 Dec de 2021.
- David de la Rosa Carrillo. Lecturer of Máster en Neumología Avanzada. "Infecciones Respiratorias y Bronquiectasias". Cátedra Inspira. Universidad Autónoma de Barcelona.
- David e la Rosa Carrillo. President of Scientific Committee. "2º Congreso Nacional Multidisciplinar COVID-19 de las Sociedades Científicas de España"
- David de la Rosa Carrillo. Coordinator of: Curso online sobre el manejo de la COVID-19". Comité de Fomación y Docencia de SEPAR. 11/03/2021 - 10/03/2022.
- David de la Rosa Carrillo, Fernando Gutiérrez. Elaboración de artículo para SEPARVISION: "Selección de artículos sobre COVID-19". Dirigido a todos los socios de SEPAR a través de esta revista online de divulgación científica. Autores: <http://www.separcontenidos.es/separvision/2021/09/16/seleccion-imprescindible-de-articulos-sobre-covid-19/>
- Patricia Peñacoba Toribio. Lecturer at Máster en Neumología Avanzada. "Terapias Respiratorias Domiciliarias: Insuficiencia Respiratoria" and "Terapias Respiratorias Domiciliarias: Trastornos Respiratorios del Sueño". Cátedra Inspira. Universidad Autónoma de Barcelona.
- Patricia Peñacoba Toribio. Lecturer at Diplomatura de Postgrado en Atención al Paciente con Sistemas de Soporte Respiratorio No Invasivo. "VNI en la Insuficiencia Respiratoria Aguda. Sistemas de Presión". Workshop: "Evaluación del paciente con Insuficiencia Respiratoria". Cátedra Inspira. Universidad Autónoma de Barcelona.
- Ástrid Crespo-Lessmann. IMPACTo de la GesEPOC en la Triple terapia. GSK. Speaker. June 2021. Webinar.
- Ástrid Crespo-Lessmann. Speaker at BioComarcales Bellvitge 2021 titulada: Fenotipado en Asma Grave: esputo inducido. 11 May 2021. Webinar.
- Ástrid Crespo-Lessmann. Sesión de inhaladores para residentes de Neumología y médicos de atención primaria. Boheringer. March 2021. Webinar.
- Ástrid Crespo-Lessmann. Sesión Ecoinspira. GSK. February 2021.
- Ástrid Crespo-Lessmann. Speaker at Sesión de competidores. Reunión ciclo II. Novartis. Asma Grave. April 2021. Webinar.
- Ástrid Crespo-Lessmann. Oline course: Asma grave. 19 June 2021. Sessions: El esputo inducido y otras técnicas inflamométricas; and Evaluación de la respuesta y Switching. Cátedra inspira. Funded by AstraZeneca.
- Ástrid Crespo-Lessmann. Presentación del proyecto COMETA: control como meta en la era de la telemedicina en el asma. GSK. Webinar. February 2021.
- Ástrid Crespo-Lessmann. Pneumofarm. 21 Sept 2021. Hotel Gallery - Sala Crillon & Robert Carrer del Rosselló. Coordinators: Dr Xavier Muñoz, Hosp. Univ. Vall d'Hebron, Dr Sonia Jornet, Servei Farmàcia, Hosp. Univ. Joan XXIII. Round table invited speaker: Astrid Crespo.
- Ástrid Crespo-Lessmann. "Consenso sobre Recomendaciones en el manejo de las Enfermedades Respiratorias con Inflamación tipo 2". Sep and Oct 2021. SANOFI.
- Ástrid Crespo-Lessmann. Jornada de neumología. 06 Oct 2021. Boehringer-Ingelheim. "Secuelas respiratorias post covid19: diagnóstico y manejo". Title: "Manejo del paciente post-covid en Hospital de día. Efectos y retirada de la corticoterapia".
- Ástrid Crespo-Lessmann. Advisory Board Catalunya. Dupilumab. 22. Sep 2021
- Ástrid Crespo-Lessmann. HOMEUSE. Sharing Experience. Compartiendo experiencias en gestión a distancia de pacientes UCE/AAG. Novartis. 23 Nov 2021. Webinar. Speaker.
- Ástrid Crespo-Lessmann. Curso Asma Grave H. Sant Pau (Barcelona). GSK-Argentina-Chile. 30-11-21 1 and 2-12-21. Speaker.
- Ástrid Crespo-Lessmann. Speaker at Proyecto Carabela, national meeting. Madrid. 28 Sep 2021.
- Ástrid Crespo-Lessmann. Speaker at 50º curso de neumología de Sant Pau. 22 Oct 2021. Mesa de actualización terapéutica en enfermedades respiratorias.
- Ástrid Crespo-Lessmann. Proyecto Consenso COMETA. July and November 2021.
- Ástrid Crespo-Lessmann. Jornadas de actualización "Secuelas respiratorias post-covid19: diagnóstico y manejo". Speaker. Title: "Manejo del paciente post-covid en Hospital de día. Efectos y retirada de la corticoterapia". 6 Oct 2021. Boehringer.
- Ástrid Crespo-Lessmann. Lecturer at I curso de Actualización en patología respiratoria en atención primaria. 2021.Asma. Universidad Internacional de Andalucía.
- Ástrid Crespo-Lessmann. Lecturer and coordinator of the Diplomatura de Post-grado "Neumología avanzada". Universidad

Autònoma de Barcelona. UAB. Dec 2020–July 2021. COD: 4375/1.

- Ástrid Crespo-Lessmann. Lecturer and coordinator of the Máster de “Neumología avanzada. Universidad Autònoma de Barcelona. UAB. Dec 2021–July 2022. COD: 4575/1
- Ástrid Crespo-Lessmann. Member of the Scientific Committee at Proyecto Carabela. Asma zero. Fundación Astrazéneca. 2019–2020, 2020–2021, 2021–2022.
- Ástrid Crespo-Lessmann. Member of the Governing Board at SEPAR at the Pneumology Working Group at Sociedad Española de Farmacia Hospitalaria. Since Jan 2020.
- Ástrid Crespo-Lessmann. Member of the scientific committee of SOCAP (Societat Catalana de Pneumologia). Vocal. Since Oct 2017.
- Ástrid Crespo Lessmann. Participation at Consenso de Asma Grave No Controlada de la Sociedad Española de Neumología y Cirugía Torácica (SEPAR), Área de Asma.
- Ástrid Crespo Lessmann. Participation at Consenso de Manejo del Asma en Personas Mayores de la Sociedad Española de Neumología y Cirugía Torácica (SEPAR), Área de Asma.
- Ástrid Crespo Lessmann. Participation at Consenso de Manejo del Asma y Enfermería de la Sociedad Española de Neumología y Cirugía Torácica (SEPAR), Área de Asma.
- Ástrid Crespo Lessmann. Coordinator of Diplomatura de Postgrado “Pneumología Avanzada”. Cátedra Inspira. Curso 2020–2021. Universitat Autònoma de Barcelona. COD: 4375/1
- Ástrid Crespo Lessmann. Member of the Governing Board at SEPAR at the working group of pneumology of the Sociedad Española de Farmacia Hospitalaria. Since Jan 2020.
- Ástrid Crespo Lessmann. Member of the Scientific Committee at SOCAP (Societat Catalana de Pneumologia). Vocal. Since Oct 2017.
- Vicente Plaza Moral. Lecturer at Màster, ‘Pneumologia Avançada’ (60 ECTS), UAB and Diploma, ‘Atenció al pacient amb Sistemes Respiratoris No Invasius’ (30 ECTS), UAB.
- Vicente Plaza Moral. Lecturer at Master Universidad Internacional Menéndez Pelayo “Enfermo respiratorio grave avanzado”.

- Vicente Plaza Moral. Lecturer at Càtedra INSPIRA-UAB ‘Hot Topics en Medicina Respiratoria. 1ª edición’ in collaboration with SEPAR (Sociedad Española de Neumología y Cirugía Torácica), Impacto cardiovascular en las Enfermedades Respiratorias, Impacto del Cáncer en las Enfermedades Respiratorias, Manejo de la COVID-19, 2º curso sobre Terapia inhalada para atención primaria, La SEPAR que viene 2021, Curso R3 Neumología, “Presente y Futuro en Neumología”.

- Vicente Plaza Moral. Participation in scientific meetings of: Curs criosondes endoscòpiques (April); 50º Curs Pneumologia Sant Pau (October); 5º Asma Meeting Point 2021 (November); IX Curs ventilació mecànica (November). Online webinars: Curs per especialistes Colombia, “Asma No Controlada” (June); Curs preceptorship “Tratamiento biológico del Asma” (December).

- Vicente Plaza Moral. Editor of “Tot Inspira”, newsletter in collaboration with the patients association “A Tot Pulmó” for respiratory patients. And INSPIRA-News, newsletter of our research group.

- Vicente Plaza Moral. Webinars en Salud Respiratoria. Pfizer, Chiesi, Viatrix, Oximesa. 11 January – 18 October 2021.

- David Ramos Barbón. Fenotipos/endotipos y biomarcadores de asma grave. Papel del eosinófilo. Curso Virtual en Asma Grave. (Preceptorship Colombia-Andes). 19/06/2021.

- David Ramos Barbón. Basophils and ILC-2: cross talk with Eos. Eos Master Club. AstraZeneca-Portugal, 6/03/2021.

- David Ramos Barbón. Eosinophil history in immune system. Eosinology, GSK. 15/04/2021.

- David Ramos Barbón. Inflamación, mediadores inflamatorios y remodelación bronquial del asma grave. Curso de Experto Universitario Internacional en Asma Grave. Luzán 5 / Universidad San Pablo (CEU). online. 2021.

- David Ramos Barbón. Asma grave. Definición y conceptos. Fenotipos/endotipos y biomarcadores de asma grave. Inmersión en el manejo del paciente con asma grave. Preceptorship virtual Argentina-Chile. 30/11/2021 al 1/12/2021.



Research Group in HIV and AIDS

Coordinator

Domingo Pedrol, Pere FGS
pdomingo@santpau.cat

Members

Cadafalch Arpa, Josep	FGS	Millan Revilla, Lucía	IR
Cereijo Tellez, Ruben	IR	Molas Morena, María Ema	IR
Gutierrez Macia, Maria Del Mar	IR	Muñoz Rodriguez, Jessica	IR
Herrera Bachs, Sílvia	IR	Mur Arizon, Isabel	IR
Malouf Sierra, Jorge	IR	Ramírez García, Ona	IR
Mateo Garcia, Gracia Maria	IR		

Main lines of research

- Medical care projects.
- Study of pathogenic mechanisms altering body fat distribution.
- Study of metabolic disorders associated with antiretroviral treatment.
- Body composition changes.
- New antiretroviral drugs.
- Cardiovascular risk associated with antiretroviral treatment.
- Comorbid conditions associated with HIV-1 infection.
- Pharmacogenetics (toxicokinetics).
- Bacterial meningitis.
- Coronavirus infectious disease-19 and complications thereof.

Scientific Challenges

Medical Care Projects

- Continuing with, expanding and, as appropriate, consolidating the care team for HIV-1 infected patients, consisting currently of 3 staff physicians, 4 granted research assistants (including a Río Hortega-funded research assistant) and 2 nurses).
- Continuing with participation in multicentre projects (especially the AIDS network, Gesida, VACH, EuroSIDA and ART collaboration).
- Exploration of possible participation in clinical trials of new antiretroviral drugs.
- Increasing the number of HIV-1 infected patients attended to in our hospital (given

current mortality rates, an estimated annual increase of 50 patients is required).

- Continuing with current clinical research and mixed basic research-clinical research lines.

Pathogenic mechanisms altering body fat distribution

- Study of metabolism in pyrimidines and derivatives in the genesis of lipodystrophy associated with HIV-1 and antiretroviral treatment.
- Development of an animal (mouse) model of lipodystrophy.
- Development of in vitro models (adipocyte cultures) to study the adipose toxicity of antiretroviral drugs.
- Study of new manifestations of the lipodystrophy syndrome.
- Development of measurements for antiretroviral drug concentrations in adipose tissue.
- Exploration of the role of inflammation in the pathogenesis of lipodystrophy associated with HIV-1 and antiretroviral treatment.
- Metabolism of uridine and its role in the pathogenesis of lipodystrophy.

Metabolic disorders associated with antiretroviral treatment

- In vivo assessment of metabolic toxicity associated with antiretroviral treatment.
- Development of in vitro models (adipocyte cultures) to study the adipose toxicity of antiretroviral drugs.
- Study of factors contributing to hepatic steatosis in patients receiving antiretroviral treatment.
- Study of the pathogenic role of FGF21 in insulin resistance in HIV-1- infected patients.
- Study of role of FABP4 in metabolic disorders associated with antiretroviral treatment.

Body composition

- Definition of normal fat distribution in the general population.
- Establishment of abnormal fat distribution patterns.
- Development of a definition of lipodystrophy associated with HIV-1 and antiretroviral treatment.

New antiretroviral drugs

- Clinical trials of new antiretroviral drugs (phases 2 and 3).
- Ritonavir and non-ritonavir pharmacokinetic potentiation of antiretroviral drugs.

Cardiovascular risk associated with antiretroviral treatment

- Establishment of a multicentre cardiovascular risk cohort.
- Study of antiretroviral treatment-dependent and non-treatment-dependent factors in multicentre cohorts.
- Development of in vitro models (adipose cultures) to study adipose toxicity for antiretroviral drugs.

Comorbid conditions associated with HIV-1 infection

- Study of ageing in different tissues associated with HIV-1 infection and antiretroviral treatment.
- Study of fragility in patients with HIV-1 infection and the role of HAART.
- Evaluation of the neurocognitive function in patients with HIV-1 infection with and without antiretroviral treatment.
- Participation in multicentre cohort studies to determine the incidence of specific comorbidities (cancer, HCV, cardiovascular disease, osteogenesis/osteoporosis): EuroSIDA, ART Collaboration, Gesida, VACH, etc.
- Treatment of HCV in patients with HIV-1 and its prognostic significance.

Pharmacogenetics (toxicogenetics)

- Role of enzyme polymorphism of the pyrimidine pathways in the pathogenesis of lipodystrophy.
- Role of enzyme polymorphism of the pyrimidine pathways in the pathogenesis of clinical toxicity (neuropathy, pancreatitis).
- Role of IL28B polymorphism in spontaneous HCV clearance in the response to antiviral treatment based on interferon and ribavirin.

Bacterial meningitis

- Identification of prognostic factors in adult bacterial meningitis.
- Continuation with a cohort study of adult bacterial meningitis.
- Identification of host-intrinsic factors in the pathogenesis and prognosis of adult bacterial meningitis and meningococcal disease.

Coronavirus infectious disease-19 and complications thereof

- Clinical trajectories of hospitalized and ambulatory patients.
- The epidemiological impact of comorbidities in COVID-19.
- The diagnostic values of proinflammatory cytokines, GDF15 and KL-6 in COVID-19.

- Assessment of immunomodulating therapies in the therapeutic approach to COVID-19.
- Small airway disease in the lung sequelae of long COVID-19 patients.
- Markers of neurological harm in acute COVID-19 as a path to neuropsychological sequelae.
- Neuropsychological sequelae in long COVID-19 patients.
- Post-viral fatigue syndrome in long COVID-19 patients, neuropsychiatric implications.

Collaborations

Collaborations with other IIB Sant Pau research groups

- Cardiovascular risk
- Endocrine and metabolic disease
- Radiology
- Pneumology

External collaborations

- Red de Investigación en Sida (RIS): 22 groups.
- EuroSida groups: 34 groups.
- ART- Collaboration: 40 groups.
- Unitat de Infeccioses- Sida. Hospital Joan XXIII Tarragona.
- CIBER Obesidad.
- Department de Bioquímica i Biologia Molecular -- Facultat de Biologia-- Universitat de Barcelona

Active grants

- ISABEL MUR ARIZON. Formación integral en VIH, evaluación de las comorbilidades y de las infecciones de transmisión sexual. CM18/00233. Instituto de Salud Carlos III. Duration 2019-2022. 64.926,17 €.
- PERE DOMINGO PEDROL. Prevalencia y progresión de la ateromatosis subclínica en pacientes con infección por VIH: correlación con marcadores de señalización inter-orgánica, disbiosis intestinal y estrés oxidativo. PI17/00498. Instituto de Salud Carlos III. Duration 2018-2021. 90.000,00 €.
- RUBEN CEREIJO TELLEZ. Papel de la plasticidad adiposa en las alteraciones metabólicas en pacientes con VIH-1. IJC2018-037142-I. Ministeri d'Economia i Competitivitat. Duration 2020-2022. 93.000,00 €.
- PERE DOMINGO PEDROL. Role of inter-organ signaling molecules in the fat-liver and gut-liver axes in non-alcoholic fatty liver disease in HIV-infected patients: contribution to the spectrum and progression of the disease. GILEAD 2019-2. Gilead Sciences, S.L.U. Duration 2019-2021. 45.450,00 €.

• NOEMI CORBACHO PEREZ. Beca per infeccions en VIH. SCMI 2019. Societat Catalana de Malalties Infeccioses i Microbiologia Clínica. Duration 2019-2021. 18.000,00 €.

• PERE DOMINGO PEDROL. Aproximación a los mecanismos de ganancia excesiva de peso asociada a INsTI y TAF en PVV: de la interferencia con la homeostasis ingreso-gasto energía a la alteración de la biología adipocitaria. PI20/00137. Instituto de Salud Carlos III. Duration 2021-2023. 125.000,00 €.

• PERE DOMINGO PEDROL. Ensayo clínico piloto, abierto, randomizado de uso combinado de Hidroxicloroquina, Azitromicina y Tocilizumab para el tratamiento de la infección por SARS-CoV-2 (COVID-19). COV20/00070. Instituto de Salud Carlos III. Duration 2020-2021. 807.360,00 €.

Note: Total amount granted to PI. It does not include indirect costs.

Scientific production

- Alserawan L, Penacoba P, Echevarria S, Castillo D, Ortiz E, Martinez L, Naranjo EM, Domingo P, Castellvi I, Juarez C, Mariscal A. Growth Differentiation Factor 15 (GDF-15): A Novel Biomarker Associated with Poorer Respiratory Function in COVID-19. *Diagnostics*. 2021; 11(11):1998. DOI:10.3390/diagnostics11111998. PMID:34829345. IF:3,706 (Q2/D3).
- Amele S, Peters L, Rodger A, Lundgren J, Rockstroh J, Matulionyte R, Leen C, Jablonowska E, Ostergaard L, Bhagani S, Sarcletti M, Clarke A, Falconer K, Wandeler G, Domingo P, Maltez F, Zaccarelli M, Chkhartsvili N, Szlavik J, Stephan C, Fonquernie L, Aho I, Mocroft A, Group ES. Effectiveness and Safety of Interferon-Free Direct-Acting Antiviral Hepatitis C Virus Therapy in HIV/Hepatitis C Virus Coinfected Individuals: Results From a Pan-European Study. *JAIDS-JOURNAL OF ACQUIRED IMMUNE DEFICIENCY SYNDROMES*. 2021; 86(2). DOI:10.1097/QAI.0000000000002541. PMID:33079903. IF:3,731 (Q2/D5).
- Arroyo JA, Julve J, Vlachos B, Corcoy R, Ponte P, Roman E, Navas E, Llauro G, Franch J, Domingo P, Mauricio D. Previous Vitamin D Supplementation and Morbidity and Mortality Outcomes in People Hospitalised for COVID19: A Cross-Sectional Study. *Frontiers in Public Health*. 2021; 9:758347. DOI:10.3389/fpubh.2021.758347. PMID:34631653. IF:3,709 (Q1/D2).
- Berenguer J, Borobia AM, Ryan P, Rodriguez J, Bellon JM, Jarrin I, Carratala J, Pachon J, Carcas AJ, Yllescas M, Arribas JR, López J, Pascual P, Pomar V, Rabella N, Benito N, Domingo P, Bonfill X, Mancebo J, MARTIN A. Development and validation of a prediction model for 30-day mortality in hospitalised patients with COVID-19: the COVID-19 SEIMC score. *THORAX*. 2021; 76(9). DOI:10.1136/thoraxjnl-2020-216001. PMID:33632764. IF:9,139 (Q1/D2).
- Brochado O, Martinez I, Berenguer J, Medrano L, Gonzalez J, Jimenez MA, Carrero A, Hontanon V, Navarro J, Guardiola JM, Fernandez A, Resino S, Domingo P, Esteban H. HCV eradication with IFN-based therapy does not completely restore gene expression in PBMCs from HIV/HCV-coinfected patients.

JOURNAL OF BIOMEDICAL SCIENCE. 2021; 28(1):23. DOI:10.1186/s12929-021-00718-6. PMID:33785040. IF:8,410 (Q1/D2).

• Camps A, Perez S, Subirana I, Teira R, Estrada V, Domingo P, Degano IR, Marrugat J. Standardized Comparison of Cardiovascular Risk Factors Prevalence in Spanish Women and Men Living with HIV and in the General Population. *Journal of Personalized Medicine*. 2021; 11(11):1085. DOI:10.3390/jpm11111085. PMID:34834438. IF:4,945 (Q1/D2).

• Cereijo R, Quesada T, Gavalda A, Tarasco J, Pellitero S, Reyes M, Puig M, Giralt M, Sanchez D, Villarroya F. The chemokine CXCL14 is negatively associated with obesity and concomitant type-2 diabetes in humans. *INTERNATIONAL JOURNAL OF OBESITY*. 2021; 45(3). DOI:10.1038/s41366-020-00732-y. PMID:33414488. IF:5,095 (Q2/D3).

• Corbacho N, Mur I, Molas ME, Vidal F, Domingo P. The pharmacological management of cardiovascular disease in people living with HIV (PLWH). *EXPERT OPINION ON PHARMACOTHERAPY*. 2021; 22(6). DOI:10.1080/14656566.2020.1856075. PMID:33283570. IF:3,889 (Q2/D5).

• Corominas H, Castellvi I, Diaz C, Matas L, de la Rosa D, Mangues MA, Moya P, Pomar V, Benito N, Moga E, Hernandez N, Casademont J, Domingo P. Sarilumab (IL-6R antagonist) in critically ill patients with cytokine release syndrome by SARS-CoV2. *MEDICINE*. 2021; 100(19):e25923. DOI:10.1097/MD.00000000000025923. PMID:34106658. IF:1,889 (Q3/D6).

• Corominas H, Castellvi I, Pomar V, Antonijoan R, Mur I, Matas L, Gich I, de Benito N, Laiz A, Castillo D, Villamarin L, Filella D, Mill AM, Quijada MA, Puig M, Casademont J, Domingo P. Effectiveness and safety of intravenous tocilizumab to treat COVID-19-associated hyperinflammatory syndrome: Covizumab-6 observational cohort. *CLINICAL IMMUNOLOGY*. 2021; 223:108631. DOI:10.1016/j.clim.2020.108631. PMID:33189888. IF:3,969 (Q3/D6).

• Domingo P, Pomar V, Mur I, Castellvi I, Corominas H, de Benito N. Not all COVID-19 pandemic waves are alike. *CLINICAL MICROBIOLOGY AND INFECTION*. 2021; 27(7). DOI:10.1016/j.cmi.2021.04.005. PMID:33887469. IF:8,067 (Q1/D1).

• Elias MJP, Alejos B, Gutierrez MM, Crespo M, Gil ID, Ribera E, Galindo MJ, Lozano F, Cifre AP, Boix V, Montero M, Sanz J, Lima JD, Palacios R, Moral SDF, Martinez E. Dynamics of creatinine estimated glomerular filtration rate using one or more antiretrovirals that inhibit creatinine tubular secretion. *JOURNAL OF ANTIMICROBIAL CHEMOTHERAPY*. 2021; 76(4). DOI:10.1093/jac/dkaa547. PMID:33501995. IF:5,790 (Q1/D2).

• Fernández I, de Lazzari E, Inciarte A, Diaz-Brito V, Milinkovic A, Arenas-Pinto A, Etcheverry F, García F, Leal L; HIV-PEP Group [Domingo P]. Network meta-analysis of post-exposure prophylaxis randomized clinical trials. *HIV Medicine*. 2021;22(3):218-224. DOI:10.1111/hiv.12964. PMID: 33108035. IF:3,180 (Q3/D6).

• Gonzalez A, Assoumou L, Moyle G, Waters L, Johnson M, Domingo P, Fox J, Stellbrink HJ, Guaraldi G, Masia M, Gompels M, De Wit S, Florence E, Esser S, Raffi F, Behrens G, Pozniak A, Gatell JM, Martinez E. Switching from boosted PIs to dolutegravir decreases soluble CD14 and adiponectin in high cardiovascular risk people living with HIV. *JOURNAL OF ANTIMICROBIAL CHEMOTHERAPY*. 2021; 76(9). DOI:10.1093/jac/dkab158. PMID:34120186. IF:5,790 (Q1/D2).

• Grau B, Camprubi D, Marti H, Fernandez M, Carreras C, Velasco M, Ferrer E, Muelas M, Jullien S, Barilaro G, Ajanovic S, Vera I, Moreno L, Gonzalez E, Cortes N, Roldan M, Artes A, Mur I, Domingo P, Garcia F, Guinovart C, Munoz J. Pre-exposure prophylaxis with hydroxychloroquine for COVID-19: a double-blind, placebo-controlled randomized clinical trial. *Trials*. 2021; 22(1):808. DOI:10.1186/s13063-021-05758-9. PMID:34781981. IF:2,279 (Q4/D8).

• Gutierrez B, del Toro MD, Borobia AM, Carcas A, Jarrin I, Yllescas M, Ryan P, Pachon J, Carratala J, Berenguer J, Arribas JR, Rodriguez J, López J, Pascual P, Pomar V, Rabella N, Benito N, Domingo P, Bonfill X, Puig M, Mancebo J, Martinez G. Identification and validation of clinical phenotypes with prognostic implications in patients admitted to hospital with COVID-19: a multicentre cohort study. *LANCET INFECTIOUS DISEASES*. 2021; 21(6). DOI:10.1016/S1473-3099(21)00019-0. PMID:33636145. IF:25,071 (Q1/D1).

• Gutierrez MD, Mur I, Mateo MG, Vidal F, Domingo P. Pharmacological considerations for the treatment of COVID-19 in people living with HIV (PLWH). *EXPERT OPINION ON PHARMACOTHERAPY*. 2021; 22(9). DOI:10.1080/14656566.2021.1887140. PMID:33634724. IF:3,889 (Q2/D5).

• Kowalska JD, Pelchen A, Ryom L, Losso MH, Trofimova T, Mitsura VM, Khromova I, Paduta D, Stephan C, Domingo P, Bakowska E, Monforte AD, Oestergaard L, Jablonowska E, Kuznetsova A, Moreno S, Vasylyev M, Pradier C, Battegay M, Vandekerckhove L, Castagna A, Raben D, Mocroft A, EuroSIDA GRP. Prevalence and outcomes of pregnancies in women with HIV over a 20-year period. *AIDS*. 2021; 35(12). DOI:10.1097/QAD.0000000000002954. PMID:34033590. IF:4,177 (Q2/D4).

• Nomah DK, Reyes J, Diaz Y, Moreno S, Aceiton J, Bruguera A, Vivanco RM, Llibre JM, Domingo P, Falco V, Imaz A, Cortes C, Force L, Letang E, Vilaro I, Casabona J, Miro JM, Mur I, Macorigh L. Sociodemographic, clinical, and immunological factors associated with SARS-CoV-2 diagnosis and severe COVID-19 outcomes in people living with HIV: a retrospective cohort study. *Lancet HIV*. 2021; 8(11). DOI:10.1016/S2352-3018(21)00240-X. PMID:34655549. IF:12,767 (Q1/D1).

• Ortega E, Corcoy R, Gratacos M, Claramunt FXC, Mata M, Puig R, Real J, Vlachos B, Castelblanco E, Domingo P, Khunti K, Franch J, Mauricio D. Risk factors for severe outcomes in people with diabetes hospitalised for COVID-19: a cross-sectional database study. *BMJ Open*. 2021; 11(7):e051237. DOI:10.1136/bmjopen-2021-051237. PMID:34301668. IF:2,692 (Q2/D4).

• Palacio J, Reyes JM, Imaz A, Bruguera A, Force L, Llaviera AO, Llibre JM, Vilaro I, Borrás FH, Falco V, Riera M, Domingo P, de Lazzari E, Miro JM, Casabona J, Gurgui M, Hernandez J. Strategies to reengage patients lost to follow up in HIV care in high income countries, a scoping review. *BMC PUBLIC HEALTH*. 2021; 21(1):1596. DOI:10.1186/s12889-021-11613-y. PMID:34454444. IF:3,295 (Q2/D4).

• Reyes M, Gonzalez L, Ibeas K, Cereijo R, Taxeras SD, Pellitero S, Martinez E, Tarasco J, Moreno P, Malagon P, Higuera C, Soria A, Puig M, Villarroya F, Serra D, Herrero L, Sanchez D. White adipose tissue-infiltrated CD11b+myeloid cells are a source of S100A4, a new potential marker of hepatic damage. *EUROPEAN JOURNAL OF ENDOCRINOLOGY*. 2021; 184(4). DOI:10.1530/EJE-20-1130. PMID:33524007. IF:6,664 (Q1/D2).

• Rivera A, Sanchez A, Luque S, Mur I, Puig L, Crusi X, Gonzalez JC, Sorli L, Gonzalez A, Horcajada JP, Navarro F, Benito N. Intraoperative Bacterial Contamination and Activity of Different Antimicrobial Prophylaxis Regimens in Primary Knee and Hip Replacement. *Antibiotics-Basel*. 2021; 10(1):18. DOI:10.3390/antibiotics10010018. PMID:33375415. IF:4,639 (Q2/D3).

• Rojas J, de Lazzari E, Negredo E, Domingo P, Tiraboschi J, Ribera E, Abdulghani N, Puig J, Mateo MG, Podzamczar D, Gutierrez MM, Paredes R, Clotet B, Gatell JM, Blanco JL, Martinez E, DOLAM GRP. Efficacy and safety of switching to dolutegravir plus lamivudine versus continuing triple antiretroviral therapy in virologically suppressed adults with HIV at 48 weeks (DOLAM): a randomised non-inferiority trial. *Lancet HIV*. 2021; 8(8). PMID:34358497. IF:12,767 (Q1/D1).

• Shankar M, Vale CL, Godolphin PJ, Fisher D, Higgins JPT, Spiga F, Savovic J, Tierney J, Baron G, Benbenishty JS, Berry LR, Broman N, Cavalcanti AB, Colman R, De Buyser SL, Derde LPG, Domingo P, Omar SF, Fernandez A, Feuth T, Garcia F, Garcia R, Gonzalez I, Gordon AC, Haynes R, Hermine O, Horby PW, Horick NK, Kumar K, Lambrecht BN, et al. [Pomar V, Benito N]. Association Between Administration of IL-6 Antagonists and Mortality Among Patients Hospitalized for COVID-19: A Meta-analysis. *JAMA-JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION*. 2021; 326(6). DOI:10.1001/jama.2021.11330. PMID:34228774. IF:56,272 (Q1/D1).

• Teira R, Diaz H, Aragao F, Marguet S, de la Fuente B, Munoz MJ, Abdulghani N, Ribera E, Domingo P, Deig E, Peraire J, Roca B, Montero M, Galindo MJ, Romero A, Espinosa N, Lozano F, Merino MD, Martinez E, Geijo P, Estrada V, Garcia J, Sepulveda MA, Berenguer J. Real world effectiveness of standard of care triple therapy versus two-drug combinations for treatment of people living with HIV. *PLoS One*. 2021; 16(4):e0249515. DOI:10.1371/journal.pone.0249515. PMID:33831047. IF:3,240 (Q2/D4).

• Teira R, Diaz H, Aragao F, Munoz J, Galindo P, Merino M, de la Fuente B, Sepulveda MA, Domingo P, Garcia J, Castano M, Ribera E, Geijo P, Romero A, Peraire J, Deig E, Roca B, Martinez E, Estrada V, Montero M, Berenguer J, Espinosa N. eGFR-EPI changes among HIV patients who switch from F/TDF to F/TAF

while maintaining the same third agent in the Spanish VACH cohort. *HIV Research & Clinical Practice*. 2021; 22(3). DOI:10.1080/025787489.2021.1955197. PMID:34410219. IF:1,200 (Q4/D10).

• Urraza AI, Giralto M, Gonzalez FF, Villarroya F, Perez A, Flores PR, Perez M, Domingo P, Lopez FC. FGF21 serum levels are related to insulin resistance, metabolic changes and obesity in Mexican people living with HIV (PLWH). *PLoS One*. 2021; 16(5):e0252144. DOI:10.1371/journal.pone.0252144. PMID:34019585. IF:3,240 (Q2/D4).

• Vilchez HH, Escudero R, Fernandez M, Murillo O, Aunon A, Rodriguez D, Jover A, del Toro MD, Rico A, Falgueras L, Praena J, Guio L, Iribarren JA, Lora J, Benito N, Morata L, Ramirez A, Riera M, Mur I, Coll P, Crusi X, Soriano A. Prosthetic Shoulder Joint Infection by Cutibacterium acnes: Does Rifampin Improve Prognosis? A Retrospective, Multicenter, Observational Study. *Antibiotics-Basel*. 2021; 10(5):475. DOI:10.3390/antibiotics10050475. PMID:33919103. IF:4,639 (Q2/D3).

Communication and dissemination activities

Courses and seminars

• Moving Fouth: hacia el cuarto 90, más allá de la carga viral. Madrid, Spain. Organiser: Janssen-Cilag España. 25/11/2021. Oral Communication.

• Evidencia con terapias antirretrovirales dobles en ensayos clínicos. Santiago de Compostela, Galicia, Spain. Organiser: Sociedad Galaico-Asturiana de Enfermedades Infecciosas. 19/11/2021

• COVID-19 in people living with HIV: colliding epidemics. Barcelona, Catalunya, Spain. Orgnaiser: Societat Catalana de Farmacologia Clínica. 17/11/2021. Keynote speaker.

• COVID-19 in people living with HIV: colliding epidemics. Maó, Illes Balears, Spain. Jornadas de Actualització en VIH – Farmacéuticos Unidades Pacientes Externos Illes Balears. 15/10/2021

• Concerns about SARS-CoV-2 variants of concern - Programa Formativo sobre COVID-19. Barcelona, Catalunya, Spain. Fundació de Lluita contra la Sida (FLS) 16/09/2021.

• 2º Congreso Nacional Multidisciplinar COVID-19. Spain. Organiser: Sociedades Científicas de España. 12/04/2021



Regenerative Medicine and Tissue Engineering

Coordinator

Casaroli Marano, Ricardo Pedro BST
rcasaroli@ub.edu

Members

Agustí Rovira, Elba	BST	Fariñas Barbera, Óscar	BST
Aloy Reverte, Caterina	ENTITAT EXTERNA	López Chicón, Patricia	BST
Baptista Piteira, A. Rita	BST	Martínez Conesa, Eva María	BST
Bermudo Gascón, Raquel	BST	Otero Areitio, Nausica	BST
Bofill Rodenas, Ana María	ENTITAT EXTERNA	Tabera, Jaime	BST

Main lines of research

- Tissue procurement, clinical application, ethics and regulation
- Preservation of live tissue
- Tissue decellularization
- Medial products from advanced therapies by recellularization of decellularized tissues.
- SoHO bioink for 3D bioimpression
- Improvement of consolidated processes and/or products
- Technological innovation of clinical processing.
- Ex-vivo cell expansion for regenerative purposes.
- Cell-based therapy for ocular diseases.

Scientific Challenges

- Optimization and improvement of technical procedures related to the donor and tissues.
- Advances in the elaboration of criteria, regulation and ethics for donor and tissues.
- Technical excellence related to the processing cells, tissues and advanced therapies medical products (ATMP).
- Development of new approaches and ATMPs for regenerative medicine.

Collaborations

Collaborations with other IIB Sant Pau research groups

- Ophthalmology (Dr Jose Antonio Buil, Dra Zoraida del Campo)
- Locomotor System Research (Dr Pablo Gelber)
- Women and Perinatal Health Research Group (Dr Marta Peró, Dra Elisa Llorba)
- Genomics and Bioinformatics for Genetically Complex Disease (Dr Jose Manuel Soria)
- Metabolic Bases of Cardiovascular Risk (Dr Josep Julve)

External collaborations

National

- University of Barcelona, Department of Surgery
- University of Barcelona, Biophysics and Bioengineering Unit
- Institute for Bioengineering of Catalonia (IBEC)
- Center of Regenerative Medicine (CMR)
- Center of Genomic Regulation (CRG)
- Image Diagnostic Institute (IDI)
- Vall d'Hebron Research Institute (VHIR)
- Advanced Therapies Committee – Hospital Clínic de Barcelona
- ICREC Group – Hospital Germans Trias i Pujol (IGTP)
- Department of Neurobiology (UAB)
- IQS School of Engineering, University of Ramon Llull (IQS)
- Universitat de Girona – Laboratori de Gràfics i Imatge (GILAB) (UdG)
- Mutua Terrassa – Departament de ginecologia i obstetrícia
- Hospital Germans Trias i Pujol – Departament de ginecologia i obstetrícia
- Hospital Arnau Vilanova de Lleida – Departament de ginecologia i obstetrícia
- Hospital Clínic de Barcelona – Cirurgia ortopèdica y traumatologia COT
- University of Girona, Gilab Group of Research

International

- National Health Service Blood and Tissue (Liverpool, UK)
- Veneto Eye and Multitissue Bank (Mestre-Treviso, Italy)
- Irish Blood and Tissue Bank (Dublin, Ireland)
- Croatia National Tissue Bank (Zagreb, Croatia)
- EFS-National Blood Service (Paris, France)
- European Homograft Bank (Brussel, Belgium)
- German Society for Tissue Transplantation (Hannover, Germany)
- Fondazione Banca dei Tessuti di Treviso (Treviso, Italy)

Active grants

- RICARDO PEDRO CASAROLI MARANO. Bioenginyeria de Teixits i Medicina Regenerativa. 2017 SGR 01113. Agència de Gestió d'Ajuts Universitaris i de Recerca. Duration 2017-2021. 0,00 €.
- RICARDO PEDRO CASAROLI MARANO. Células pluripotentes inducidas y reprogramación celular en las aproximaciones de terapia basada en células para la regeneración de la córnea.

PI18/00355. Instituto de Salud Carlos III. Duration 2019-2021. 92.000,00 €.

Note: Total amount granted to PI. It does not include indirect costs.

Other active grants

- Obtención de matriz nerviosa descelularizada para la regeneración de nervios periféricos. Banc de Sang i Teixits (BST), 20172020. Convocatoria de Proyectos Internos 2017 (Ref I.2017.056). 136.000,00€. PI: Nuria NIETO-NICOLAU
- Desenvolupament d'un esprai de queratinòcits per al tractament dels grans cremats. Banc de Sang i Teixits (BST), 01112019. Convocatoria de Proyectos Internos 2019 (Ref I.2017.057). 43.552,00€. PI: Caterina ALOY
- Desenvolupament d'un mètode de descelularització de vàlvules cardíques per a ser emprades en cirurgies de substitució valvular. Banc de Sang i Teixits (BST), 01062018 Convocatoria de Proyectos Internos 2018 (Ref I.2018.027). 233.112,00€. PI: Cristina CASTELLS
- Reducción de la lesión post-infarto mediante bioimplantes con capacidades reparadoras: hidrogeles biomiméticos y vesículas extracelulares para la medicina regenerativa cardíaca. Banc de Sang i Teixits (BST), 2019-2021 Convocatoria de Proyectos Internos (Ref I.2019.039.R). 76.683,36 €. PI: Anna VILARRODONA SERRAT
- New human decellularized and re-endothelialized tissue-engineered VASCular GRAFT for coronary artery bypass grafting. Banc de Sang i Teixits (BST), 2019-2020. CONVENI BST (Ref PEP BT0000000027). 11.780,00€. PI: Cristina CASTELLS-SALA
- Desenvolupament de biotintes per la seva aplicació a la bioimpresió 3D en l'àmbit osteocondral. Banc de Sang i Teixits (BST), 2019-2020. CONVENI BST (Ref PEP BT0000000025). 31.024,37€. PI: Oscar FARIÑAS / Patricia LOPEZ-CHICON

Scientific production

- Canut MI, Villa O, Kudsieh B, Mattlin H, Banchs I, Gonzalez JR, Armengol L, Casaroli RP. MLIP genotype as a predictor of pharmacological response in primary open-angle glaucoma and ocular hypertension. *Scientific Reports*. 2021; 11(1):1583. DOI:10.1038/s41598-020-80954-2. PMID:33452295. IF:4,379 (Q1/D3).
- Duarri A, Rodríguez E, Martínez G, Biarnés M, García M, Ferraro LL, Kuebler B, Aran B, Izquierdo E, Aguilera E, Casaroli RP, Trias E, Fernandez E, Raya Á, Veiga A, Monés J. Transplantation of Human Induced Pluripotent Stem Cell-Derived Retinal Pigment Epithelium in a Swine Model of Geographic Atrophy. *INTERNATIONAL JOURNAL OF MOLECULAR SCIENCES*. 2021;

22(19):10497. DOI:10.3390/ijms221910497. PMID:34638840. IF:5,923 (Q1/D3).

• Figueras-Roca M, Parrado-Carrillo A, Nguyen V, Casaroli-Marano RP, Moll-Udina A, Gillies MC, Barthelmes D, Zarranz-Ventura J. Treat-and-extend versus fixed bimonthly treatment regimens for treatment-naïve neovascular age-related macular degeneration: real world data from the Fight Retinal Blindness registry. *GRAEFES ARCHIVE FOR CLINICAL AND EXPERIMENTAL OPHTHALMOLOGY*. 2021;259(6):1463-1470. DOI:10.1007/s00417-020-05016-9. PMID: 33219442. IF:3,117 (Q2/D4).

• Garcia-Lopez J, Delgado J, Vilarrodona A, Querol S, Ovejo J, Coll R, Millan A, Madrigal A, Soria G, Vidal F, Vives J, Herrero MJ, Lopez I, Sauleda S, Contreras E, Grifols JR, Guasch R, Tahull E, Puig L, Masip A, Argelagués E, Muñoz-Diaz E. SARS-CoV-2/COVID-19 pandemic: first wave, impact, response and lessons learnt in a fully integrated Regional Blood and Tissue Bank. A narrative report. *Blood Transfusion*. 2021;19(2):158-167. DOI:10.2450/2021.0259-20. PMID: 33539280. IF:3,443 (Q2/D5).

• Gelber PE, Ramirez E, Grau A, Gonzalez A, Llauger J, Farinas O. A new computed tomography scoring system to assess osteochondral allograft transplantation for the knee: inter-observer and intra-observer agreement. *INTERNATIONAL ORTHOPAEDICS*. 2021; 45(5). DOI:10.1007/s00264-020-04927-w. PMID:33416905. IF:3,075 (Q2/D3).

• Nieto N, Lopez P, Farinas O, Bolivar S, Udina E, Navarro X, Casaroli RP, Vilarrodona A. Effective decellularization of human nerve matrix for regenerative medicine with a novel protocol. *CELL AND TISSUE RESEARCH*. 2021; 384(1). DOI:10.1007/s00441-020-03317-3. PMID:33471198. IF:5,249 (Q2/D4).

• Nieto N, Martinez EM, Fuentes S, Arnalich F, Garcia I, De Miguel MP, Casaroli RP. Priming human adipose-derived mesenchymal stem cells for corneal surface regeneration. *JOURNAL OF CELLULAR AND MOLECULAR MEDICINE*. 2021; 25(11). DOI:10.1111/jcmm.16501. PMID:33951289. IF:5,310 (Q2/D4).

• Perez ML, Castells C, Lopez P, Nieto N, Aiti A, Farinas O, Casaroli RP, Porta O, Vilarrodona A. Fast protocol for the processing of split-thickness skin into decellularized human dermal matrix. *TISSUE & CELL*. 2021; 72:101572. DOI:10.1016/j.tice.2021.101572. PMID:34119882. IF:2,466 (Q2/D4).

• Pero M, Casani L, Castells C, Perez ML, Naranjo EM, Juan O, De Lamo LA, Lopez P, Serrat AV, Badimon L, Roda OP. Rabbit as an animal model for the study of biological grafts in pelvic floor dysfunctions. *Scientific Reports*. 2021; 11(1):10545. DOI:10.1038/s41598-021-89698-z. PMID:34006889. IF:4,379 (Q1/D3).

• Piteira AR, Bofill AM, Farinas O, Tabera J, Vilarrodona A. Lessons Learned From SARS-CoV-2 Pandemic in Donation and Tissue Banking Activities: Key Takeaways. *TRANSPLANTATION*. 2021; 105(7). DOI:10.1097/TP.0000000000003716. PMID:34019361. IF:4,939 (Q1/D2).

• Sabater N, Figueras M, Ferran M, Agusti E, Martinez EM, Perez ML, Vilarrodona A, Casaroli RP. Amniotic membrane extract eye drops for ocular surface diseases: use and clinical outcome in real-world practice. *INTERNATIONAL OPHTHALMOLOGY*. 2021; 41(9). DOI:10.1007/s10792-021-01856-4. PMID:33864578. IF:2,031 (Q3/D7).

• Sabater N, Figueras M, Padro L, Tort J, Casaroli RP. Corneal transplantation activity in Catalonia, Spain, from 2011 to 2018: Evolution of indications and surgical techniques. *PLoS One*. 2021; 16(4):e0249946. DOI:10.1371/journal.pone.0249946. PMID:33831081. IF:3,240 (Q2/D4).

• Sabater N, Otero N, Dotti M, Rios J, Gris O, Guell JL, Vilarrodona A, Casaroli RP. Eye bank and theatre factors for positive microbiological culture of corneoscleral rim and cornea storage medium in the real-world. *EYE*. 2021; 35(11). DOI:10.1038/s41433-020-01342-8. PMID:33469128. IF:3,775 (Q1/D2).

• Samarkanova D, Cox S, Hernandez D, Rodriguez L, Perez ML, Madrigal A, Vilarrodona A, Querol S, Casaroli RP. Cord blood and amniotic membrane extract eye drop preparations display immune-suppressive and regenerative properties. *Scientific Reports*. 2021; 11(1):13754. DOI:10.1038/s41598-021-93150-7. PMID:34215804. IF:4,379 (Q1/D3).

• Samarkanova D, Martin S, Bisbe L, Puig J, Calatayud M, Rodriguez L, Azqueta C, Coll R, Casaroli R, Madrigal A, Rebullá P, Querol S, Barcelona Cbed Study GRP. Clinical evaluation of allogeneic eye drops from cord blood platelet lysate. *Blood Transfusion*. 2021; 19(4). DOI:10.2450/2020.0130-20. PMID:33085593. IF:3,443 (Q2/D5).

Communication and dissemination activities

Organised courses

• Course "Donación y trasplante de tejidos: Efectos y lecciones aprendidas de la pandemia por COVID-19", Anna Vilarrodona, Oscar Fariñas, Elba Agustí, Rita Piteira, BST y Organització Catalana de Trasplantament (OCATT), Funded by Organización Nacional de Trasplantes (ONT), 27, 28, 29 April 2021

Participation in Courses

• European Technical Education Course. eyeLearn. EEBA & EBAA. 2021-2022. Eva M Martínez Conesa

• European Technical Education Course. eyeLearn. EEBA & EBAA. 2021-2022. Nausica Otero Areitio.

• Assessing clinical data as part of Preparation Process Authorisation (PPA), Rita Piteira, Training Course GAPP Joint Action, GAPP Joint Action, 20th September 2021

Conferences and Meetings

- Facilitating the Authorisation of Preparation Processes for blood, tissues and cells, Rita Piteira, Jornada intercongresos 2021, Asociación Española de Bancos de Tejidos (AEBT), 11 Feb 2021
- Correlation between full-thickness acellular dermal matrix specifications and its clinical uses. Solé M.C., Pérez M.L, Tabera J., Fariñas O, Vilarrodona A, Póster, 29th Congress of the European Association of Tissue and Cell Banks (EATB), 22 Oct 2021
- Analysis of biofilm formation in anterior cruciate ligament plasties. Comparative in vitro study, Corcoll, F. ;Karbysheva, S. ;Pérez-Prieto, D. ;Margaryan, D. ;Fariñas, O. ;Trampuz, A. ;Monllau, J.C. Oral. 39th Annual Meeting of the European Bone and Joint Infection Society (EBJIS), 7 Oct 2021
- Impact and continuity of EuroGTP II Project, Rita Piteira, Good Practices for evaluating quality, safety and efficacy of novel tissue and cellular therapies and products - EuroGTP II Methodologies and Tools, EBMT (The European Group for Blood & Marrow Transplantation), 21st April 2021
- Impact and continuity of EuroGTP II Project, Rita Piteira, Good Practices for evaluating quality, safety and efficacy of novel tissue and cellular therapies and products - EuroGTP II Methodologies and Tools, ESHRE (European Society of Human Reproduction and Embryology), 11th June 2021
- MSK Tissue banking: Catalan experience, Oscar Fariñas, SOROT 2021 Virtual Congress (Romanian Society of Orthopedics and Traumatology), 22 Oct 2021
- Línies de recerca actuals en l'àmbit múscul-esquelètic al BST. Oscar Fariñas. XXXIII Congrés SCCOT (Societat Catalana de Cirurgia Ortopèdica i Traumatologia). 18 June 2021



General and Digestive Surgery

Coordinator

Moral Duarte, Antonio FGS
 amoral@santpau.cat

Members

Balague Ponz, Maria Carmen	FGS	Medrano Caviedes, Rodrigo Gustavo	FGS
Bollo Rodriguez, Jesus Manuel	FGS	Molina Santos, Víctor	FGS
Clos Enriquez, Montserrat	FGS	Perez Garcia, Jose Ignacio	FGS
Escobar Lezcano, Lilian Maria	FGS	Rodriguez Blanco, Manuel	FGS
Fernandez Ananin, Sonia	FGS	Rofin Serra, Silvia	FGS
Gonzalez Lopez, Jose Antonio	FGS	Sánchez Cabús, Santiago	FGS
Hernandez Casanovas, Maria Pilar	FGS	Sánchez López, Anna	FGS
Martín Arnau, Ana Belén	FGS	Targarona Soler, Eduardo Maria	FGS
Martinez Sanchez, Maria Del Carmen	FGS		

Main lines of research

• Gastrointestinal Surgery

- Application of laparoscopic surgery in diseases of the spleen.
- Application of laparoscopic surgery in disorders of the oesophagogastric junction.
- Advanced application of colorectal laparoscopy.
- New stratification and treatment options in colorectal cancer.

• Hepatobiliopancreatic Surgery

- Surgery for liver metastasis in colorectal cancer.
- Development of diagnostic and therapeutic

techniques in the global context of treatment for liver metastasis in colorectal carcinoma.

- Surgery for primary hepatic tumours: determination of efficient prognostic parameters for surgical resection of hepatocarcinoma and likelihood of tumour recurrence after resection.
- Introduction of the laparoscopic methodology to biliary lithiasis.

• Endocrine, Breast, abdominal wall, Soft tissue sarcomas and advanced gynecological Surgery

- Surgery of the thyroid gland. Research on thyroid cancer.

- Advanced surgery on parathyroid glands (primary and secondary hyperparathyroidism).
- Adrenal surgery.
- Surgery for sarcomas: participation in the development and results of surgery for retroperitoneal tumours.
- Surgery for sarcomas: participation in GIST research through the Spanish Sarcoma Research Group (GEIS) and other entities.
- Surgery of advanced gynecological tumors.
- Advanced surgery of abdominal wall. New techniques for ventral hernia repair.

• Emergency Care

- Collaborative project on clinical safety for the introduction of safe practices for polytraumatized patients.
- Collaborative project on clinical safety for the introduction of safe practices for polytraumatized patients in a Multicentric collaborative database through the Catalan Trauma Database - TraumaCAT.
- Collaborative project on clinical safety for fragile and elder patients in emergency surgery and care through an accredited Geriatric Emergency department by the American College of Physician at our Hospital.
- Collaborative project on clinical safety for Emergency surgical Treatment for aorta-enteric fistulae in collaboration with the Vascular Surgery Department.
- Collaborative project on clinical safety for ambulatory treatment on non-complicated Diverticulitis.
- Open Abdomen and Damage Control Surgery in non-traumatic Patients.
- Good practices in emergency surgery for prevention of burst abdomen and acquired abdominal hernia after surgery.
- Good practices in emergency surgery for small bowel occlusion syndrome.
- Collaborative project on tertiary peritonitis treatment with Infectious disease department.
- Collaborative project on Central Catheter infection with Infectious disease department.

Scientific Challenges

• Gastrointestinal Surgery

- Design, develop and manage a dry laboratory for endoscopic surgery, creating a multifunctional research and teaching space to conduct applied technological research in minimally invasive surgery.

• Hepatobiliopancreatic Surgery

- Development of techniques to study liver volume and function.
- Development of experimental studies on the function and healing of bilio-intestinal sutures.
- Studies of the value of nutrition in patients undergoing aggressive surgery for highly debilitating cancer.
- Suitable stratification of GIST tumours in accordance with an anatomopathological classification.
- Viability of surgical interventions considering the likelihood of disease recurrence.

• Emergency Surgery

- Consolidation of a multidisciplinary group for polytraumatized patient care.
- Technical innovations in wound Infection after emergency surgery.
- Technical innovations in prevention of wound hernia after emergency surgery in collaboration with the Abdominal Wall Hernia Unit.
- Possible role of laparoscopic hernia repair in emergency surgery.
- Guidelines development for best clinical practices in Ogilvie's Syndrome and Volvulus.

• Breast Surgery

- Technological innovations in surgery.
- Possible role of genetic studies in diagnosis and follow-up.

• Endocrinal and Cervical Surgery

- Technical innovations in surgery.

Collaborations

Collaborations with other IIB Sant Pau research groups

- Endocrinology, Diabetes and Nutrition Group, Institut de Recerca Hospital de la Santa Creu i Sant Pau - Universitat Autònoma de Barcelona (EDUAB - IRHSP). Dr Eugenia Mato (CIBER Bioingeniería, Biomateriales y Nanomedicina).

External collaborations

- Obtención de resecciones hepáticas para aislamiento de hepatocitos para uso en investigación básica". Código de estudio 49/2009. DTI.
- Retroperitoneal Sarcoma Registry (RESAR): prospective collection of primary retroperitoneal sarcoma patient's data, radiological and pathological material for the TransAtlantic Retroperitoneal Sarcoma Working Group.
- The Natural History of Ganglioneuroma: A study by the Trans-Atlantic Australasian Retroperitoneal Sarcoma Working Group (TARPSWG) (TARPSWG-2003).
- Anticipated organs resection and pathologic infiltration-RESAntiPath (TARPSWG-R2006)
- Response Evaluation after neo-adjuvant chemotherapy for retroperitoneal sarcoma. (TARPSWG-R2007)
- The natural history of primary, extra-visceral, perivascular epitheloid cel tumours (PEComa) of the Retroperitoneum: The combined experience of the Trans-Atlantic Australasian Retroperitoneal Sarcoma Working group (TARPSWG) (TARPSWG-2102)
- The Evaluation and Outcome of Mesenteric and Intra-Abdominal Desmoids: A study by the Trans-Atlantic Australasian Retroperitoneal Sarcoma Working Group (TARPSWG-R2001)

- Benchmarks in RPS Surgery – A study by TARPSWG (TARPSWG- R1906)
- Evaluating a Surgical Complexity Score to predict complications Post-Resection of a Retroperitoneal Sarcoma: A study by the Trans-Atlantic Australasian RPS Working Group (TARPSWG-R1901)
- ADK gástrico pt1a-pt1b y des: ¿son comparables las series asiáticas y occidentales para poder establecer la des en occidente según los criterios asiáticos? (Utilización base de registro EURECCA) (N Perez)
- Manejo y evolución de la diverticulitis aguda con gas libre pericólico: estudio observacional multicéntrico- ADISFAS.Promoter Hospital Central de la Defensa Gómez Ulla. Código 8/20 (J Bollo)
- Estudio retrospectivo multicéntrico sobre la epidemiología de la carcinomatosis peritoneal en el cáncer de colon localmente avanzado: incidencia, factores predictivos e impacto oncológico en nuestro medio. Promoter: Hospital Universitario La Princesa. Código 4398 CEim 04/21 (J Bollo)
- Minimally invasive right colectomy anastomosis study. Promoter Code: MIRCAST, Promoter IDIVAL. Investigador principal HSP (J Bollo)
- Ensayo clínico fase iii multicéntrico del cáncer de recto T2-T3S,N0,M0 quimiorradioterapia-escisión local versus escisión total mesorrecto (ESTUDIO TAUTEM). Hosp. P Tauli, X Serra Aracil
- Comparación de los resultados oncológicos y de morbimortalidad de los pacientes operados por neoplasia de colon con intención curativa antes y después de la pandemia SARS-COV-2 (Anna Sánchez)
- A randomized, multicentre, open –label controlled phase II trial of FOXI-5 AS neo-adjuvant therapy in subjects with wnt-5a low colon cancer. Código de promotor Foxy-5 PH2 SMS-0472B, Trial short code: Foxy-5 PH2 Sponsor: WntResearch AB EudraCT: 2018-003074-27, J Bollo
- Surgery for sarcomas: participation in GIST research through the Spanish Sarcoma Research Group (GEIS) and Trans-Atlantic Australasian Retroperitoneal Sarcoma Working Group (TARPSWG).
- Beca del Fondo de Investigación Sanitaria pi21/01075. Impacto de la atención médica en los resultados integrales de las mujeres recién diagnosticadas con cáncer de mama: un estudio controlado prospectivo multicéntrico Principal Investigator: Jaume Masià Ayala. Collaborator: Montserrat Clos Enríquez.
- Beca del Fondo de Investigación Sanitaria AdvanFIS P119/00362. Investigating the role of circulating mirnas and snornas as surrogate markers of lymph node metastases in early-stage breast cancer patients. Principal investigator: Daniel Escuin Borràs. Collaborator: J. I. Pérez
- AES 2021. Proyectos de Investigación en salud. P121/00852. PI: Mora hervas, Irene. Estudio multicentrico sobre fijacion a musculo elevador del ano en la colposacropexia laparoscopia (Estudio Multicéntrico FIMEA). EM Targarona
- Estudio observacional sobre los resultados clínicos a largo plazo y la implicación económica directa dentro del ensayo clínico aleatorizado que compara la anastomosis intra corpórea vs extra corpórea en la colectomía derecha laparoscópica. Promoter IIBSP-ANA-2021-16 (A Sanchez, J Bollo).
- Prosilma. Valoración de nueva técnica para rellenar el defecto generado tras la cirugía conservadora en el cáncer de mama: ensayo aleatorizado. Valoración de nueva técnica para rellenar el defecto generado tras la cirugía conservadora en el cáncer de mama: ensayo aleatorizado. Promoter: Institut de Recerca de l'Hospital de la Santa Creu i Sant Pau – IIB Sant Pau Principal Investigator: B. García-Valdecasas. Collaborators: J. I. Pérez García, M. Clos Enríquez.

Awards

- Special Mention PREMIO NACIONAL DE CIRUGIA 2021. Lucas-Guerrero V, Pascua-Solé M, Ramos Rodríguez JL, Trinidad Borrás A, González de Pedro C, Jover Navalón JM, Rebasa P, Targarona Soler EM, Serra-Aracil X; by Comisión Nacional de la Especialidad de Cirugía General y del Aparato Digestivo; de la Sección de Formación de la Asociación Española de Cirujanos. Burnout in general surgery residents. Survey from the Spanish Association of Surgeons. Cir Esp (Engl Ed). 2020 Oct;98(8): 442-449.

Doctoral theses

- Miriam abellan Lucas, Variación del tratamiento quirúrgico del cáncer de mama tras la introducción de la resonancia magnética en la estadificación preoperatoria, Universitat Autonoma de Barcelona, Dr. Antonio Moral Duarte, 04/06/2021

Other active grants

- Beca del Fondo de Investigación Sanitaria 2019 (P119/00136). Adiposidad, inflamación y la desregulación del colesterol en el carcinoma de tiroides. Evaluación de estrategias terapéuticas basadas en la reducción del colesterol y la activación de LXR. Principal Investigator: Juan Carlos Escolà Gil. CoPI: Antonio Moral Duarte.

Scientific production

- Arezzo A, Francis N, Mintz Y, Adamina M, Antoniou SA, Bouvy N, Copaescu C, de Manzini N, Di Lorenzo N, Morales-Conde S, Müller-Stich BP, Nickel F, Popa D, Tait D, Thomas C, Nimmo S, Paraskevis D, Pietrabissa A; EAES Group of Experts for Recovery Amid COVID-19 Pandemic [Balague MC]. EAES Recommendations for Recovery Plan in Minimally Invasive Surgery Amid COVID-19 Pandemic. *SURGICAL ENDOSCOPY AND OTHER INTERVENTIONAL TECHNIQUES*. 2021;35(1):1-17. DOI:10.1007/s00464-020-08131-0. PMID: 33170335. IF:4,584 (Q1/D2).
- Asbun HJ, Abu M, Kunzler F, Asbun D, Bonjer J, Conlon K, Demartines N, Feldman LS, Morales S, Pietrabissa A, Pryor AD, Schlachta CM, Sylla P, Targarona EM, Agra Y, Besselink MG, Callery M, Cleary SP, De la Cruz L, Eckert P, Evans C, Han HS, Jones DB, Gan TJ, Koch D, Lillemoe KD, Lomanto D, Marks J, Matthews B, Mellinger J, Melvin WS, Moreno E, et al. International Delphi Expert Consensus on Safe Return to Surgical and Endoscopic Practice From the Coronavirus Global Surgical Collaborative. *ANNALS OF SURGERY*. 2021; 274(1). DOI:10.1097/SLA.0000000000004674. PMID:33630471. IF:12,969 (Q1/D1).
- Ausania F, Sanchez S, Del Rio PS, Borin A, Ayuso JR, Bodenlle P, Espinoza S, Cuatrecasas M, Conill C, Sauri T, Ferrer J, Fuster J, Garcia JC, Melendez R, Fondevila C. Clinical impact of preoperative tumour contact with superior mesenteric-portal vein in patients with resectable pancreatic head cancer. *LANGENBECKS ARCHIVES OF SURGERY*. 2021; 406(5). DOI:10.1007/s00423-020-02065-w. PMID:33475833. IF:3,445 (Q2/D3).
- Balague C, de Adana JCR, Ibarzabal A, Del Castillo D, Puche JJ, Vilallonga R. Insights into the treatment of postsleeve gastrectomy leak: analysis of the results of 105 cases on a national register. *Surgery for Obesity and Related Diseases*. 2021; 17(1). DOI:10.1016/j.soard.2020.09.001. PMID:33097450. IF:4,734 (Q1/D2).
- Balduzzi A, van J, Korrel M, Lof S, Al B, Alseidi A, Berrevoet F, Bjornsson B, van den Boezem P, Boggi U, Busch OR, Butturini G, Casadei R, van R, Dokmak S, Edwin B, Sahakyan MA, Ercolani G, Fabre JM, Falconi M, Forgione A, Gayet B, Gomez D, Koerkamp BG, Hackert T, Keck T, Khatkov I, Krautz C, Marudanayagam R, Menon K, Pietrabissa A, et al. [Sanchez S]. Laparoscopic versus open extended radical left pancreatectomy for pancreatic ductal adenocarcinoma: an international propensity-score matched study. *SURGICAL ENDOSCOPY AND OTHER INTERVENTIONAL TECHNIQUES*. 2021; 35(12). DOI:10.1007/s00464-020-08206-y. PMID:33398565. IF:4,584 (Q1/D2).
- Cero MD, Rodríguez-Santiago J, Miró M, Castro S, Miranda C, Santamaría M, Gobbini Y, Garsot E, Pujadas M, Luna A, Momblán D, Balagué C, Aldeano A, Olona C, Molinas J, Pulido L, Sánchez-Cano JJ, Güell M, Salazar D, Gimeno M, Grande L, Pera M; Spanish EURECCA Esophagogastric Cancer Group. Evaluation of data quality in the Spanish EURECCA Esophagogastric Cancer Registry. *EJSO*. 2021;47(12):3081-3087. DOI:10.1016/j.ejso.2021.04.025. PMID: 33933340. IF:4,424 (Q1/D2).
- COVIDSurg Collaborative [Lopez AS, Ponz CB, Soler E, Cabus SS, Santos VM, Lopez J]. Machine learning risk prediction of mortality for patients undergoing surgery with perioperative SARS-CoV-2: the COVIDSurg mortality score. *BRITISH JOURNAL OF SURGERY*. 2021; 108(11). DOI:10.1093/bjs/znab183. PMID:34227657. IF:6,939 (Q1/D1).
- Eden C, Buonomo OC, Busch J, Gilabert J, Medrano R, Nosotti M, Renaud S, Walker I, Williams N, Carlini M. An international multidisciplinary peer-driven consensus on the optimal use of hemostatic powders in surgical practice. *Updates in Surgery*. 2021; 73(4). DOI:10.1007/s13304-021-01136-x. PMID:34322783. IF:2,797 (Q2/D4).
- Escuin D, Lopez L, Mora J, Bell O, Moral A, Perez I, Arqueros C, Garcia B, Cajal TRY, Lerma E, Barnadas A. Circulating microRNAs in Early Breast Cancer Patients and Its Association With Lymph Node Metastases. *Frontiers in Oncology*. 2021; 11:627811. DOI:10.3389/fonc.2021.627811. PMID:34513655. IF:6,244 (Q2/D3).
- Fajardo J, Nunez E, Szafranska J, Poca M, Lobo D, Martin B, Hernandez D, Roig C, Huerta A, Corominas H, Sanchez S, Soriano G. We report a patient who presented intrahepatic cholangitis and cholecystitis after SARS-CoV-2 infection. *JOURNAL OF GASTROENTEROLOGY AND HEPATOLOGY*. 2021; 36(8). DOI:10.1111/jgh.15537. PMID:34105805. IF:4,029 (Q2/D5).
- Ferrari C, Sanchez CM, Bollo J, Hernandez P, Cambeiro L, Codina C, Targarona E. Prone Versus Supine Position in Abdominoperineal Resection: Outcomes in the Laparoscopic Era. *Journal of Laparoendoscopic & Advanced Surgical Techniques*. 2021; 31(4). DOI:10.1089/lap.2020.0969. PMID:33646052. IF:1,878 (Q3/D7).
- García Botella A, Gómez Bravo MA, Di Martino M, Gastaca M, Martín-Pérez E, Sánchez Cabús S, Sánchez Pérez B, López Ben S, Rodríguez Sanjuán JC, López-Andújar R, Barrera M; Grupo colaborativo Cirugía-AEC-COVID-19; Grupo colaborativo Cirugía-AEC-COVID-19, Balibrea JM, Rubio-Pérez I, Badia JM, Martín-Antona E, Álvarez Peña E, García-Botella A, Martín-Pérez E, Álvarez Gallego M, Martínez Cortijo S, Pascual Migueláñez I, Pérez Díaz L, Ramos Rodríguez JL, Espín-Basany E, Sánchez Santos R, Guirao Garriga X, Aranda Narváez JM, Morales-Conde S. Recommendations on intervention for hepatobiliary oncological surgery during the COVID-19 pandemic. *Cirugía Española*. 2021;99(3):174-182. English, Spanish. DOI:10.1016/j.ciresp.2020.10.010. PMID: 33341242. IF:1,653 (Q3/D8).
- Genua I, Puig N, Minambres I, Benitez S, Gil P, Grau M, Rivas A, Balague C, Fernandez S, Garcia A, Perez A, Sanchez JL. Changes in the Composition and Function of Lipoproteins after Bariatric Surgery in Patients with Severe Obesity. *Journal of Clinical Medicine*. 2021; 10(8):1716. DOI:10.3390/jcm10081716. PMID:33923393. IF:4,241 (Q1/D3).

- Genua I, Tuneu L, Ramos A, Stantonyonge N, Caimari F, Balagué C, Fernández-Ananin S, Sánchez-Quesada JL, Pérez A, Miñambres I. Effectiveness of Bariatric Surgery in Patients with the Metabolically Healthy Obese Phenotype. *Obesity Surgery*. 2021;31(2):517-522. DOI:10.1007/s11695-020-04967-6. PMID: 32915359. IF:4,129 (Q1/D2).
- Germani P, Di F, Leonard D, Cuicchi D, Elmore U, Allaix ME, Barbieri VP, D'Allens L, Faes S, Milani M, Caputo D, Martinez C, Grosek J, Caracino V, Christou N, Roodbeen SX, Bracale U, Wildeboer A, Usai A, Benedetti M, Balani A, Piccinni G, Catarci M, Millo P, Bouvy N, Corcione F, Hompes R, Ris F, Basti M, Tomazic A, Targarona E, Coppola A, Pietrabissa A, et al. Contemporary snapshot of tumor regression grade (TRG) distribution in locally advanced rectal cancer: a cross sectional multicentric experience. *Updates in Surgery*. 2021; 73(5). DOI:10.1007/s13304-021-01044-0. PMID:33818750. IF:2,797 (Q2/D4).
- Glasbey JC, Ademuyiwa A, Adisa A, AlAmeer E, Bravo AM, Costas A, Harrison E, Gomes G, Mann H, McLean K, Modolo M, Morton D, Ramos A, Roslani AC, Seenivasagam RK, Simoes JFF, Smart N, Sullivan R, Taylor EH, Nepogodiev D, Bhangu AA, Siaw K, Bywater E, Chaudhry D, Dawson BE, Gujjuri RR, Heritage E, Jones CS, Khatri C, Khaw RA, Keatley JM, et al. [Balagué C, Moral A, Sánchez A, Targarona E] Effect of COVID-19 pandemic lockdowns on planned cancer surgery for 15 tumour types in 61 countries: an international, prospective, cohort study. *LANCET ONCOLOGY*. 2021; 22(11). DOI:10.1016/S1470-2045(21)00493-9. PMID:34624250. IF:41,316 (Q1/D1).
- Lugaresi M, Naftoux P, Nilsson M, Reynolds JV, Rosati R, Schoppmann SF, Targarona EM, Mattioli S. Exploring the concept of centralization of surgery for benign esophageal diseases: a Delphi based consensus from the European Society for Diseases of the Esophagus. *DISEASES OF THE ESOPHAGUS*. 2021; 34(9):doab013. DOI:10.1093/dote/doab013. PMID:33621318. IF:3,429 (Q3/D7).
- Nepogodiev D, Martin AB, Zwitter P. SARS-CoV-2 vaccination modelling for safe surgery to save lives: data from an international prospective cohort study. *BRITISH JOURNAL OF SURGERY*. 2021; 108(9). DOI:10.1093/bjs/znab101. PMID:33761533. IF:6,939 (Q1/D1).
- Nepogodiev D, Simoes JFF, Li E, AlAmeer E, El K, Wuraola F, Lule H, Kaafarani H, Khosravi M, Kronberger I, Leventoglu S, Mengistu GM, Modolo MM, Ntirenganya F, Pius R, Qureshi AU, Bhangu A, Omar OM, Ahmed W, Argus L, Ball A, Bywater EP, Blanco R, Chaudhry D, Dawson BE, Duran I, Glasbey JC, Gujjuri RR, Jones CS, Harrison EM, et al. [Sánchez A, Sánchez S]. Timing of surgery following SARS-CoV-2 infection: an international prospective cohort study. *ANAESTHESIA*. 2021; 76(6). DOI:10.1111/anae.15458. PMID:33690889. IF:6,955 (Q1/D2).
- Pasquier J, Villalta O, Lamoru SS, Balague C, Vilallonga R, Targarona EM. Are Smoke and Aerosols Generated During Laparoscopic Surgery a Biohazard? A Systematic Evidence-Based Review. *Surgical Innovation*. 2021; 28(4):1553350621992309. DOI:10.1177/1553350621992309. PMID:33573518. IF:2,058 (Q3/D7).
- Pellino G, Alos R, Biondo S, Codina A, Enriquez JM, Espin E, Roig JV, Cervantes A, Garcia E, Bollo J, Pascual VV. Trends and outcome of neoadjuvant treatment for rectal cancer: A retrospective analysis and critical assessment of a 10-year prospective national registry on behalf of the Spanish Rectal Cancer Project. *EJSO*. 2021; 47(2). DOI:10.1016/j.ejso.2020.04.056. PMID:32950316. IF:4,424 (Q1/D2).
- Planas G, Trujillo JC, Guarino M, Martinez E, Cladellas E, Perez JI, Moral A, Belda J. What to do when the parathyroid gland is not found during a transcervical exploration?. *Interactive Cardiovascular and Thoracic Surgery*. 2021; 33(1). DOI:10.1093/icvts/ivab043. PMID:33893507. IF:1,905 (Q3/D7).
- Revilla G, Cedo L, Tondo M, Moral A, Perez JI, Corcoy R, Lerma E, Fuste V, Reddy TS, Blanco F, Mato E, Escola JC. LDL, HDL and endocrine-related cancer: From pathogenic mechanisms to therapies. *SEMINARS IN CANCER BIOLOGY*. 2021; 73. DOI:10.1016/j.semcancer.2020.11.012. PMID:33249202. IF:15,707 (Q1/D1).
- Rodríguez-Luna MR, Balagué C, Fernández-Ananin S, Vilallonga R, Targarona Soler EM. Outcomes of Laparoscopic Splenectomy for Treatment of Splenomegaly: A Systematic Review and Meta-analysis. *WORLD JOURNAL OF SURGERY*. 2021;45(2):465-479. DOI:10.1007/s00268-020-05839-x. PMID: 33179126. IF:3,352 (Q2/D4).
- Rodriguez J, Luna A, Garsot E, Aldeano A, Balague C, Rada A. Extended intraoperative peritoneal lavage as prophylactic peritoneal recurrence for locally advanced gastric cancer: a prospective randomized trial. *Clinical & Translational Oncology*. 2021; 23(9). DOI:10.1007/s12094-021-02596-8. PMID:33792839. IF:3,405 (Q3/D7).
- Simoes J, Sánchez A, Sánchez S, Mutambanengwe PG.T. Effects of pre-operative isolation on postoperative pulmonary complications after elective surgery: an international prospective cohort study. *ANAESTHESIA*. 2021; 76(11). DOI:10.1111/anae.15560. PMID:34371522. IF:6,955 (Q1/D2).
- Tattersall HL, Hodson J, Cardona K, Lee RM, Nessim C, Gladly R, Van Der Hage J, Schrage Y, Tseng WW, van Houdt W, Novak M, Grignani G, Tolomeo F, Goel N, Ryon E, Gyorki D, Bagaria SP, Gonzalez JA, Martin AB, Sayyed R, Tirotta F, Evenden C, Desai A, Almond M, Glasbey J, Fiore M, Gronchi A, Ford SJ. Primary mesenteric sarcomas: Collaborative experience from the Trans-Atlantic Australasian Retroperitoneal Sarcoma Working Group (TARPSWG). *JOURNAL OF SURGICAL ONCOLOGY*. 2021;123(4):1057-1066. DOI:10.1002/jso.26353. Erratum in: *JOURNAL OF SURGICAL ONCOLOGY*. 2021;124(3):457. PMID: 33368277. IF:3,454 (Q2/D3).

Other scientific production

- Bonet I, Sanchez S, Gonzalez JA, Moral A. Non-functioning neuroendocrine tumor retrograde. *Gastroenterologia y Hepatologia*. 2021; 44(7). DOI:10.1016/j.gastrohep.2020.07.017. PMID:33172695. IF:2,102 (Q4/D10).

- González JA, Sebio A, Cerdà P. First-in-human administration of CEB-01, a novel drug delivery implant matrix, in patients with recurrent or locally advanced retroperitoneal soft tissue sarcoma (RPS) after surgery: Preliminary safety and pharmacokinetics report. *Journal of Clinical Oncology*. 2021; 39(15S):11554-11554 DOI: 10.1200/JCO.2021.39.15_suppl.11554. IF: 44,544 (Q1/D1).
- Molina V, Escobar L, Ballester E, Medrano R. Laparoscopic TAPP for strangulated right obturator hernia. *CIRUGIA ESPANOLA*. 2021; 99(10). DOI:10.1016/j.ciresp.2021.04.015. PMID:34053744. IF:1,653 (Q3/D8).
- Nieto EP, Zhou JHY, Blanco MR, Cabus SS, Szafransky J. Unclassifiable pancreatic tumour. A case report. *Gastroenterología y Hepatología*. 2021; 44(8). DOI:10.1016/j.gastrohep.2021.02.008. PMID:33746027. IF:2,102 (Q4/D10).
- Planas Cánovas G, Trujillo Reyes JC, Guarino M, Cladellas Gutiérrez E, Pérez García JI, Moral Duarte A, López L, Lerma E, Martínez Téllez E, Belda Sanchís, J. Resección de paratiroides ectópica mediastínica mediante timectomía por toracoscopia videoasistida (vats): a propósito de dos casos clínicos. *Cirugía Española*. 2021;99(Espec Congr 1):103. IF:1,653 (Q3/D8).
- Targarona EM, Balibrea JM, Ferrer J, Frasson M, Lopez M, Rios A. Cirugía Espanola: Adapting to the evolving world of publishing and times of crisis. *CIRUGIA ESPANOLA*. 2021; 99(5). DOI:10.1016/j.ciresp.2021.01.013. PMID:33546882. IF:1,653 (Q3/D8).
- Vitiello G, Ye Zhou JH, Fernandez-Ananin S, Balague-Ponz C. Laparoscopic resection of duodenal GIST. *Cirugía Española*. 2021;S0009-739X(21)00094-4. English, Spanish. DOI:10.1016/j.ciresp.2021.02.014. PMID: 33849708. IF:1,653 (Q3/D8).

Other publications

- Balagué C, Fdez S, Sacoto D, Targarona EM. Mesh placement for hiatal hernia repair: Can we solve the controversy?. *Laparoscopic Surgery*. 2021; 5:A8. DOI:10.21037/ls-20-89.
- Cambeiro Cabré L, Ballester Vázquez E, Solans Soler-del-coll M, Pérez García JI, Clos Enríquez M, González López JA. Chronic Expansive Retroperitoneal Hematoma. *Surgical Case Reports*. 2021; 4(5):2-2, DOI:10.31487/j.SCR.2021.05.06.
- Martín Arnau B, Rodríguez Blanco M, Molina Santos V, Gonzalo Prats B, Espinet Blasco M, Moral Duarte A, Sánchez Cabús S. Fibrin sealants, a tool to reduce biliary fistula after laparoscopic exploration of bile duct. *World Journal of Minimal Access Surgery*. 2021;9:1-10.
- Torrano L, Ignacio J, Fusté V, Moral A. Manejo quirúrgico de carcinoma de paratiroides: A propósito de un caso. *Revista De Cirugía*. 2021; 73(6). DOI:10.35687/s2452-454920210061074.

Books or chapters with ISBN

- Big data, inteligencia artificial, machine learning y cirugía. Targarona, EM, En Manual de Práctica Clínica e Innovación, E, Toledano, M, Morales, S, Aranzana, A, Aran Eds, Madrid 2021, ISBN: 978-84-18547-77-5.
- Laparoscopic heller myotomy and dor fundoplication for treatment of esophageal achalasia: surgical technique. Atlas of Minimally Invasive Techniques in Upper Gastrointestinal Surgery, pp 55-60. Eduardo M. Targarona, Sonia Fernández-Ananín, Carmen Balagué Ponz. Editorial Springer. Marzo 2021. ISBN 978-3-030-55175-9.
- Tratamiento multidisciplinar del càncer de mama. Hormonoterapia adyuvante. JI Pérez, M García Morillo. Módulo 6 Tema 3 del Máster en Cirugía de la Mama de la AEC Editorial Médica Panamericana; acreditado con 60 ECTS por Universidad Francisco de Vitoria (ISBN: 9788491106456).

Communication and dissemination activities

Courses

- I Curso de formación en tumores mesenquimales y sarcomes para residentes. Hospital de la Santa Creu i Sant Pau, Barcelona. 21-22 Oct 2021
- XIII curso de formación en patología de la mama curso básico en formación en patología mamaria para médicos residentes de CGAD y especialistas quirúrgicos. Chair and Coordinators: Drs Antonio Moral Duarte, José Ignacio Pérez García. Hospital de la Santa Creu i Sant Pau. Barcelona. 29/09 – 01/10/21.
- EM Targarona. President 17th IFSES World Congress of Endoscopic Surgery and XXX International EAES Congress. Barcelona 22-25 November 2021.
- S. Sánchez Cabus. Course Organiser. Virtual Medical Expert Training de Cirugía Laparoscópica del páncreas. 15 and 29 March 2021.
- Workshop Cirugía Laparoscópica Avanzada (GORE). 23 March 2021. Moderator: E.M Targarona. Speakers: C. Balague and S. Fernández-Ananín
- 54 Workshop Cirugía Laparoscópica Colorrectal (J&J). EM Targarona, MC Martinez, A J Bollo, MP Hernandez, A Sanchez. 23 June 2021. Hospital de la Santa Creu i Sant Pau. Barcelona
- Course lecturer. Molina V, Martín A, Sánchez Cabús S. XII Curso de formación básica en cirugía laparoscópica para residentes de cirugía general y del aparato digestivo. AEC.

Conferences and meetings

- First-in-human administration of CEB-01, a novel drug delivery implant matrix, in patients with recurrent or locally advanced retroperitoneal soft tissue sarcoma (RPS) after surgery. Preliminary safety and pharmacokinetics report.

José Antonio Gonzalez, Ana Sebio, Paula Cerdá, Francesc Cano, José Antonio Tornero, Luc Marti, Jaume Mora, Lucas Krauel, Antonio Lopez-Pousa. American Society Clinical Oncology Annual Meeting. 2021.

- Surgical implantation of CEB-01, novel drug delivery matrix, in patients with recurrent or locally advanced retroperitoneal soft tissue sarcoma (RPS). José Antonio Gonzalez , Ana Sebio , Paula Cerdá , Francesc Cano , José Antonio Tornero , Luc Marti , Imma Barber , Jaume Mora , Lucas Krauel , Antonio Lopez-Pousa. 40th Cogress of the European Society of Surgical Oncology. 8-10 November 2021

- Galan C, Ye Zhou Y, Rodríguez M, Martín B, Molina V, Moral A, Sánchez-Cabús S. Mirizzi syndrome with cholecystocholedocal fistula type ii. E-AHPBA congress. Bilbao.Sept 21.

- González-Abós S, Molina V, Homs R, Martín B, Rodríguez M, Moral A, Sánchez S. The rol oh hepatic surgery as treatment for sarcoma liver metastases. A retrospective survival analysis. E-AHPBA congress. Bilbao.Sept 21.

- M. Gallego Gotor, V. Molina Santos, M.V. Ortiz, S. González Abós, B. Martin Arnau, M. Rodriguez Blanco, A. Moral, S. Sánchez Cabús. Laparoscopic Segment VII Resection for Hepatocellular Carcinoma Guided by 3D. 17th IFSES World Congress of Endoscopic Surgery. Barcelona. Nov 21.

- Ye Zhou Y, Galan C, Rodríguez M, Martín B, Molina V, Moral A, Sánchez-Cabús S. Impacted, large and multiple choledochal stones: laparoscopic choledochotomy and choledochoscopy exploration. 17th IFSES World Congress of Endoscopic Surgery. Barcelona. Nov 21.

- Galan C, Ye Zhou Y, Rodríguez M, Martín B, Molina V, Moral A, Sánchez-Cabús S. Mirizzi syndrome with cholecystocholedocal fistula type ii. 17th IFSES World Congress of Endoscopic Surgery. Barcelona. Nov 21.

- Análisis de supervivència tres resecció quirúrgica de sarcomes inguinals. Experiencia de un centro. S. González-Abós, L. Sala, E. Ballester, M. Solans, I. Gracia, M. Fernández, A. Moral, J.A. González XXIII Reunión Nacional de Cirugía, A Coruña, 9-12 Nov 2021.



Nephrology

Coordinator

Guirado Perich, Lluís F. PUIGVERT
 lguirado@fundacio-puigvert.es

Members

Ars Criach, Elisabeth	F. PUIGVERT	Furlano, Mónica María	F. PUIGVERT
Ballart Roig, Judith	F. PUIGVERT	Gràcia Garcia, Sílvia	F. PUIGVERT
Bardaji De Quixano, Beatriz	F. PUIGVERT	Lloret Cora, María Jesús	F. PUIGVERT
Bover Sanjuan, Jordi	F. PUIGVERT	Lorente Grandoso, Laura	F. PUIGVERT
Canal Girol, Cristina	F. PUIGVERT	Mateu Escudero, Silvia	F. PUIGVERT
Coll Piera, Elisabet	F. PUIGVERT	Pybus Oliveras, Marc	F. PUIGVERT
De la Torre Montaña, Ainhoa	IR	Ruiz Del Prado, Patricia	F. PUIGVERT
Díaz Encarnación, Montserrat M.	F. PUIGVERT	Sanmiguel Amigo, Luz	F. PUIGVERT
Díaz Gomez, Joan Manel	F. PUIGVERT	Silva Torres, Irene	F. PUIGVERT
Domingo Gallego, Andrea	F. PUIGVERT	Torra Balcells, Roser	F. PUIGVERT
Fernandez De La Llama, Patricia	F. PUIGVERT	Vilardell Vila, Jordi	F. PUIGVERT

Main lines of research

Fundació Puigvert's Nephrology Research Group has been part of the IIB since its very beginning. The group carries out translational research within the field of renal diseases along different areas of research from hypertension, hereditary diseases, glomerular diseases and renal fibrosis, to transplants and dialysis.

Those different research areas are analysed in detail below:

- Dr Torra is the head researcher of the hereditary diseases research area – she and Dr Ars have led many research projects on these diseases, and both have supervised several doctoral theses.

- Dr Torra new line of research: Use of artificial intelligence in the field of inherited kidney Diseases. The hereditary renal diseases team is currently analysing phenotype variability of autosomal dominant diseases, both in its genomic and its clinical dimension. Recently

a new project on Artificial Intelligence for inherited kidney diseases has been awarded to the team. Dr Torra coordinates both the Catalan and the Spanish hereditary renal diseases teams, and is a member of the homonymous European board of the EDTA (European Dialysis and Transplant Association). Recent research of the group includes extensive analyses of Autosomal Dominant Alport syndrome.

- Dr Ars heads the molecular genetics laboratory; she has optimised the Next generation sequencing tools for hereditary renal diseases. Dr Ars coordinates the Sant Pau IIB's Fundació Puigvert's On-line Biobank node belonging to the National Biobanks Platform. She is also the person responsible for organising a European Molecular Quality Network (EMQN) outline for quality control of the genetic diagnoses of ADPKD by European laboratories. Currently she is leading a research project for applying this outline to early onset kidney diseases.
- Dr Fernández-Llama, as an expert in arterial hypertension, has participated in a collaborative trial to evaluate 24-hour central blood pressure and its relationship with organic damage. She is currently the leader of a collaborative project within the Catalan Hypertension Group on the variability of blood pressure and its relationship with organic damage in hypertensive elderly.
- Dr Lloret are currently performing a pilot study on the evaluation of bone quality with bone microindentation (in addition to bone quantity by DXA) in renal transplant patients.
- Dr Díaz leads several clinical trials, both national and international, on glomerular and systemic diseases affecting the kidneys. They also participate in registries at a Catalan, Spanish and European level.
- Dr Díaz leads the studies on renal inflammation and fibrosis. Renal grafts from cadaveric donors are an apt model for her study due to their less-good prognosis and to a high probability of inflammation and ensuing fibrosis as compared to living donor grafts. Dra. Díaz and Dra. Guillén (previously member of our group) have identified the activation of purinoma elements, both in cell cultures and in grafts from cadaver donors. This activation participates in inflammation and fibrosis, triggered by the phenotype change of macrophages into anti-inflammatory and pro-fibrotic, and interacting with other pro-fibrotic known pathways. They are also investigating the role of succinate in the changes of macrophage phenotype and fibrosis. The role of the purinergic and succinate pathways could be important for the detection of new markers and new therapeutic targets associated with renal graft dysfunction after transplant.
- Dr JM Díaz leads the dialysis research line. Currently the two major research areas concern the appropriateness of peritoneal dialysis, and extended hemodialysis in the critically ill patient with acute renal failure.
- Dr Coll, who belongs in the dialysis team, heads the research of genomic damage in patients on renal replacement therapy,

either transplant or dialysis. She analyses the differences of oxidative stress in transplanted vs. dialysis patients. She also analyses the effect of different antioxidants on genomic damage of dialysis patients. Moreover, in the last two years she has started to study the effects of BPA and plastics on genomic damage.

- The transplant team, headed by Dr Guirado, participates or heads over 20 studies, within them clinical trials with drugs against kidney rejection or for treating associated viral infections. Their active participation and his leadership in the investigation of biochemical, serologic and genomic biomarkers of both rejection and viral infections associated with renal transplant, are outstanding.
- Ms Luz San Miguel, Dr Cristina Canal, Ms Judith Ballart, Ms Irene Silva and Ms Beatriz Bardají are the coordinators of clinical studies and trials. Their work is essential and of the utmost importance for carrying out the high number of clinical trials performed by the group.

Scientific Challenges

- To strengthen our translational character and maintain our scientific production.
- To transfer research results to society as our main goal. To maintain and increase our relationship with patient associations in order to progressively incorporate the RRI approach into our translational research with the objective to better align the research process and its results with the values, the needs and the expectations of our patients.
- To potentiate Innovation: To continue with active collection of research samples from CKD and transplant patients. To collaborate with private and research groups in the detection of tissue, urine and blood biomarkers for the development of innovative tools for optimizing the diagnosis or follow up control of transplant, inherited diseases, chronic renal patients. To participate in innovative projects with Information and Communication Technologies (ICT) for educational purposes and empowerment of patients. To incorporate novel technologies such as artificial intelligence to daily practice in Nephrology.
- To strengthen collaborative research as the best way to obtain funds and results: To maintain participation in national working groups and increase international cooperation. To achieve to access to European projects funds in the field of rare inherited diseases.
- To consolidate our participation in the elaboration of national and international clinical nephrology guidelines.
- To increase our participation in relevant private pharmaceutical clinical studies, specially early-staged clinical trials.

Collaborations

Collaborations with other IIB Sant Pau research groups

There exists an active collaboration in basic and clinical research projects with other IIB Sant Pau groups and platforms:

- Inflammatory Diseases Group: renal fibrosis.
- Anaesthesiology Group (in collaboration with the Catalan ANESCARDIOCAT Group): risk of major adverse cardiovascular and cerebrovascular events in non-cardiac surgery associated with the preoperative estimated glomerular filtration rate.
- Paediatrics Group: nephrotic syndrome evolution, Ig A nephropathy and inherited kidney diseases.
- Andrology Group: infertility.
- Urology Group: genetic predisposition to congenital urological malformations and transplant.
- Gynecology Group: High risk pregnancies, prenatal diagnosis, preimplantation diagnosis.
- Reumatology Group: bone disease in Chronic Renal Failure. Multidisciplinary teams for inherited kidney diseases: collaboration with most specialities from Sant Pau Hospital for different inherited kidney diseases (data bases, articles, protocols...)
- Biobank platform: translational research in all specific lines

External collaborations

National academic collaborations

- Department of Biochemistry and Molecular Biology, Universitat de Barcelona, Institute of Biomedicine and Oncology Programme, National Biomedical Research Institute of Liver and Gastrointestinal Diseases (CIBER EHD): renal fibrosis. Laboratory of Proteomics CSIC/Universitat Autònoma de Barcelona: diabetic nephropathy.
- Mutagenesis Department of Universitat Autònoma de Barcelona: renal impairment in chronic kidney disease. Genomic Regulation Center (CRG): inherited kidney diseases. Universidad de Salamanca: acute kidney injury. Universitat de Lleida: chronic kidney disease. National Scientific Societies (such as Sociedad Española de Nefrología) and investigators of other centres: basic and clinical studies (including public grants, clinical trials, observational studies...) promoted by them.
- Universitat Politècnica de Catalunya. Application of artificial intelligence to inherited kidney diseases Fundació Jiménez-Díaz. Use of peptidomics and metabolomics for the prediction of autosomal dominant Alport syndrome outcomes Hospital Germans Trias i Pujol. Use of epigenomics for the prediction of autosomal dominant Alport syndrome outcomes.

International academic collaborations / International networks and consortia

- Biochemistry and Microbiology Institute UACH (Chile): renal fibrosis and diabetic nephropathy.
- Mayo Clinic (Rochester, USA): Autosomal Dominant Polycystic Kidney Disease (ADPKD). Hospital Tenon (Paris, France): Nephrotic syndrome. EURENomics Platform: membranous nephropathy and nephrotic syndrome. Toronto General Hospital (Canada): molecular genetics of idiopathic nephrotic syndrome. University of Melbourne (Australia): Alport syndrome. Wake forest University (USA): MUC1 studies Cyprus University (Cyprus): Alport modifiers studies. University Medicine Groningen (The Netherlands): ADPKD trials EDTA (multinational, Europe): inherited kidney diseases and chronic kidney disease-mineral and bone disorders. Addenbrooke's Hospital, Cambridge University Hospitals NHS (United Kingdom): vasculitis.
- EUVAS Group (multinational collaborative Group): vasculitis. CYS-tic consortium: Autosomal Dominant Polycystic Kidney Disease cohort studies NEOCYST: Early Onset Cystic Kidney Disease CPG Cystic liver diseases: international group for the development of guidelines European Molecular Quality Network: Autosomal Dominant Polycystic Kidney Disease (PKD1 and PKD2)

Patient Organisations

- Alianza VHL (Von Hippel Lindau disease) Asociación española de esclerosis tuberosa MPS España (mucopolisacaridosis) ASHUA (Sd hemolítico Urémico Atípico) AIRG (inherited diseases) ACLECA (lupus) ALCER (chronic kidney disease).

Private National and International Collaborations

Participation in clinical studies including clinical trials and postauthorisation studies promoted by national and international pharmaceutical companies. Research Joint-Venture with VU Medisch Centrum (Amsterdam, The Netherlands); Medizinische Klinik I (Aachen, Germany) and San Paolo Hospital (Milan, Italy) sponsored by Abbvie Co on effects of vitamina D derivatives in CKD/MBD.

Active grants

- ELISABETH ARS CRIACH. Estudio genómico de nefropatías de inicio temprano. PI16/01998. Instituto de Salud Carlos III. Duration 2017-2021. 107.500,00 €.
- MONTSERRAT MERCEDES DIAZ ENCARNACION. Impacto de las vías purinérgicas sobre la activación de macrófagos en el donante cadáver: pieza clave en el desarrollo de fibrosis y disfunción en el trasplante renal. PI17/01566. Instituto de Salud Carlos III. Duration 2018-2021. 44.000,00 €.
- ROSER TORRA BALCELLS. Modelos de predicción en las nefropatías hereditarias autosómicas dominantes. PI18/00362. Instituto de Salud Carlos III. Duration 2019-2021. 82.000,00 €.

- ELISABETH ARS CRIACH. Heterogeneidad clínica, genética y alélica de las enfermedades renales hereditarias de debut temprano: nuevas causas moleculares de anomalías congénitas del riñón y el tracto urinario. PI19/01633. Instituto de Salud Carlos III. Duration 2020-2022. 77.000,00 €.

- ROSER TORRA BALCELLS. Contractes per a la intensificació de l'activitat investigadora 2019. INT19/00073. Instituto de Salud Carlos III. Duration 2020-2022. 60.000,00 €.

- MONTSERRAT MERCEDES DIAZ ENCARNACION. Papel de la vía del succinato en la inflamación de los riñones procedentes de donantes cadáver. FMM 2019. Fundació Mutua Madrileña. Duration 2019-2022. 95.000,00 €.

- ROSER TORRA BALCELLS. Use of artificial intelligence and systems biology for diagnosis and personalized risk assessment for inherited kidney diseases, focusing on alport syndrome. MARATO 202036-30. Fundació La Marató de TV3. Duration 2021-2024. 90.000,00 €.

Note: Total amount granted to PI. It does not include indirect costs.

Other active grants

Other active competitive grants

- Patricia Fernández de la Llama. "Evolución de la variabilidad de la presión arterial posicional y temporal y su relación con el daño orgánico en ancianos hipertensos". Fundación Senefro. Ayudas 2019 a la investigación en Nefrología. Duration: 2019-2022. 24.000 €

- Roser Torra. Red de Investigación Renal. Instituto de Salud Carlos III. RD16/0009/0019. Duration: 2017-2022. 121.379,50 €.

- José Ballarín. Grup consolidat de Recerca: Grup d'Investigació en Nefrologia. 2017SGR676. Agència de Gestió d'Ajuts Universitaris i de Recerca. Duration: 2017-2021.

Clinical trials and other private or academic studies

- "Estudio fase III, aleatorizado, doble ciego, controlado con placebo, de grupos paralelos, multicéntrico, dirigido por eventos, para evaluar la eficacia y seguridad de finerenona, asociada al tratamiento estándar, en la reducción de la morbilidad y mortalidad cardiovascular en pacientes con Diabetes Mellitus Tipo 2 y diagnóstico clínico de nefropatía diabética (Estudio FIGARO-DKD / 17530)" EUDRACT: 2015-000950-39. Fernández-Llama, P. Sponsor: Bayer Healthcare AG

- "A phase 3 randomized, open-label (sponsor-blind), active-controlled, parallel-group, multi-center, event driven study in non-dialysis subjects with anemia associated with chronic kidney disease to evaluate the safety and efficacy of daprodustat compared to darbepoetin alfa (ASCEND-ND)" EUDRACT: 2016-000542-65. Bover, J. Sponsor: GlaxoSmithKline Research & Development Limited.

- "A phase 3 randomized, open-label (sponsor-blind), active - controlled, parallel-group, multi-center, event driven study in dialysis subjects with anemia associated with chronic kidney disease to evaluate the safety and efficacy of daprodustat compared to recombinant human erythropoietin, following a switch from erythropoietin-stimulating agents (ASCEND-D)" EUDRACT: 2016-000541-31. Díaz, JM. Sponsor: GlaxoSmithKline Research & Development Limited.

- "Estudio de fase 3, multicéntrico, aleatorizado, abierto y con control activo para evaluar la eficacia y la seguridad del tratamiento con maribavir en comparación con el tratamiento asignado por el investigador en receptores de un trasplante con infecciones por citomegalovirus (CMV) que son refractarios o resistentes al tratamiento con ganciclovir, valganciclovir, foscarnet o cidofovir" EUDRACT: 2015-004725-13. Guirado, LI. Sponsor: Shire Viropharma INC.

- "Anestésicos volátiles como protectores en el trasplante renal-2 (VAPOR-2-Trial)" EUDRACT: 2016-000992-26. Guirado, LI. Sponsor: Dpto. Anestesiología - H. U. Groningen, Holanda

- "Estudio multicéntrico, aleatorizado para evaluar la eficacia de la individualización del riesgo inmunológico basado en Biomarcadores selectivos (disparidad de epletos HLA y ELISPOT IFN- γ), para optimizar el tratamiento inmunosupresor en pacientes Trasplantados renales de donante vivo (BIOIMMUN)". EUDRACT: 2017-002293-39. Guirado, LI. Sponsor: H. U. Bellvitge

- "A Randomized, Double-blind, Placebo-controlled, Phase 3 Study of the Safety and Efficacy of OMS721 in Patients with Immunoglobulin A (IgA) Nephropathy (ARTEMIS - IGAN)" EUDRACT: 2018-000075-33. Díaz, M. Sponsor: Omeros Corporation.

- "Multicenter, randomized, double-blind, placebo-controlled two stage study to characterize the efficacy, safety, tolerability and pharmacokinetics of GZ/SAR402671 in patients at risk of rapidly progressive Autosomal Dominant Polycystic Kidney Disease (ADPKD)" EUDRACT: 2017-004084-12. Torra, R. Sponsor: Sanofi

- "Estudio aleatorizado, multicéntrico, doble ciego, de grupos paralelos y controlado con principio activo, de la eficacia y la seguridad de esparsentán para el tratamiento de la nefropatía por inmunoglobulina A" EUDRACT: 2017-004605-41. Díaz, M. Sponsor: Retrophin, INC.

- "Estudio controlado con principio activo, aleatorizado, multicéntrico, doble ciego y paralelo de los efectos de esparsentán, un receptor dual de endotelina y un bloqueador del receptor de angiotensina, sobre los resultados renales en pacientes con glomeruloesclerosis segmentaria y focal (GESF) primaria" EUDRACT: 2016-005141-23. Díaz, M. Sponsor: Retrophin INC.

- “Estudio de fase 2, aleatorizado, doble ciego y controlado con placebo de cemdisirán en pacientes adultos con nefropatía por IgA” EUDRACT: 2018-02716-27. Díaz, M. Sponsor: Alnylam Pharmaceuticals, Inc.
- “A Randomized, Double-Blind, Placebo-Controlled Phase 2 Study to Evaluate the Safety and Efficacy of Avacopan (CCX168) in Patients with C3 Glomerulopathy” EUDRACT: 2017-001821-42. Díaz, M. Sponsor: ChemoCentryx, Inc.
- “Estudio adaptativo de continuación, aleatorizado, doble ciego, controlado con placebo y de búsqueda de dosis para investigar la eficacia y seguridad de LNP023 en pacientes con nefropatía por IgA primaria” EUDRACT: 2017-000891-27. Díaz, M. Sponsor: Novartis Farmaceutica SA.
- “Ensayo en Fase III Sobre la Eficacia y Seguridad del metilbardoxolona en Pacientes con Enfermedad Poliquística Renal Autosómica Dominante (Estudio FALCON)” EUDRACT: 2018-04651-20. Torra, R. Sponsor: Reata Pharmaceuticals, Inc.
- “Estudio fase 3 multicéntrico, ciego, aleatorizado, de grupos paralelos, con aprocitentan en pacientes con hipertensión arterial resistente (HAR) (Estudio PRECISION)” EUDRACT: 2017-004393-33. Fernández-Llama, P. Sponsor: Idorsia Pharmaceuticals Ltd
- “Estudio multicéntrico, aleatorizado, con doble enmascaramiento, controlado con placebo y de dosis múltiples para evaluar la eficacia y la seguridad de VIS649 en participantes con nefropatía por inmunoglobulina A (IgA) (NIgA)” EUDRACT: 2019-002531-29. Díaz, M. Sponsor: VISTERRA INC.
- “Estudio multicéntrico, exploratorio, aleatorizado, doble ciego y controlado con placebo para evaluar la eficacia, la seguridad, la tolerabilidad y la farmacocinética de GLPG2737 administrado por vía oral durante 52 semanas, en sujetos con poliquistosis renal autosómica dominante (PQRAD)” EUDRACT: 2019-003521-21. Torra, R. Sponsor: Galapagos NV
- “A Phase 3, Randomized, Double-blind, Placebo-Controlled Study to Assess the Efficacy and Safety of SNF472 when added to background care for the treatment of calciphylaxis” EUDRACT: 2018-001301-90. Coll, E. Sponsor: SANIFIT THERAPEUTICS S.A.
- “Ensayo en fase 2, aleatorizado, doble ciego, controlado con placebo para evaluar la seguridad, eficacia, farmacodinámica y farmacocinética de SAR339375 administrado como inyección subcutánea semanalmente en pacientes con síndrome de Alport (Estudio HERA)” EUDRACT: 2019-004394-10. Torra, R. Sponsor: Sanofi Genzyme
- “Estudio de fase III, aleatorizado, doble ciego, controlado con placebo, de atrasentan en pacientes con nefropatía IgA en riesgo de pérdida progresiva de la función renal (Estudio ALIGN)” EUDRACT: 2020-003084-26. Díaz, M. Sponsor: Chinook Therapeutics U.S., Inc.
- “Estudio en fase IIb, multicéntrico, aleatorizado, doble ciego, controlado con placebo, de grupos paralelos y de medición de dosis para evaluar la eficacia, seguridad y tolerabilidad de zibotentán y dapagliflozina en pacientes con enfermedad renal crónica con una tasa de filtración glomerular estimada (TFGe) entre 20 y 60 ml/min/1,73 m² (Estudio ZENITH_CKD)” EUDRACT: 2020-004101-32. Fernández-Llama, P. Sponsor: AstraZeneca AB
- “Ensayo internacional, aleatorizado, doble ciego, controlado con placebo para evaluar el efecto del ciclosilicato de sodio y zirconio sobre los resultados cardiovasculares relacionados con arritmias en participantes en hemodiálisis crónica con hiperpotasemia recurrente (DIALIZE-Outcomes)” EUDRACT: 2020-005561-14. Díaz, JM. Sponsor: AstraZeneca AB
- “A Double Blind, Randomized, Placebo-Controlled, Multicenter Phase IIa, Clinical Trial to Assess Efficacy and Safety of the Human Anti-CD38 Antibody Felzartamab in IgA Nephropathy – IGNAZ”. EUDRACT: 2020-005054-19. Díaz, M. Sponsor: MorphoSys AG
- “Estudio multicéntrico, aleatorizado, doble ciego, de grupos paralelos y controlado con placebo para evaluar la eficacia y la seguridad de iptacopán (LNP023) en la glomerulopatía C3 (Estudio APPEAR)” EUDRACT: 2020-004589-21. Díaz, M. Sponsor: NOVARTIS FARMACEUTICA S.A.
- “Estudio multicéntrico de fase 3, aleatorizado, controlado con placebo, doble ciego, para evaluar la eficacia y la seguridad del pegcetacoplán en pacientes con glomerulopatía C3 primaria o glomerulonefritis membranoproliferativa mediada por inmunocomplejos”. EUDRACT: 2020-003767-25. Díaz, M. Sponsor: Apellis Pharmaceuticals, Inc
- “Estudio en fase III, aleatorizado, doble ciego, controlado con placebo y multicéntrico para evaluar la eficacia y la seguridad de KBP-5074, un antagonista del receptor de mineralocorticoides, en sujetos con hipertensión no controlada con nefropatía crónica moderada o grave (estadio IIIb/IV)”. Fernández-Llama, P. Sponsor: KBP BioSciences PTE. Ltd.
- “Registro de resultados clínicos de la enfermedad de Fabry (FOS)”. Torra, R. Sponsor: Shire Pharmaceuticals Ibérica, S.L.
- “Protocolo del Registro de Enfermedad de Fabry” (GEN-FAB-2013-01) (DIREGC07006). Torra, R. Sponsor: Genzyme Corporation.
- “Registro europeo multicéntrico de cambio de tratamiento a Advagraf después del trasplante renal. Estudio posautorización (EPA) no intervencional (Estudio CHORUS)” 506-MA-1002 (218415). Guirado, LI. Sponsor: Astellas Pharma Europe LTD.

- “Creación de un Consorcio de Biobanco de Patología Glomerular (Proyecto GLOSEN)”. Díaz, M. Sponsor: Grupo de Patología Glomerular- S.E.N.
- “Registro Español de pacientes con Poliquistosis Renal Autosómica Dominante (PQRAD)”. Torra, R. Sponsor: Sociedad Española de Nefrología (SEN)
- “Búsqueda de marcadores biológicos para el diagnóstico/ pronóstico, mediante Proteómica, en pacientes diagnosticados de Lupus Eritematoso Sistémico (LES), con afectación Renal”. Díaz, M. Sponsor: Hospital Universitario de Basurto - Dra. N. Rivera
- Prevalencia e Incidencia de la infección por el virus de la Hepatitis E en pacientes en diálisis y trasplante renal. Guirado, LL. Sponsor: Hospital Reina Sofia Cordoba.
- “Estudio posautorización de seguridad multicéntrico y no intervencionista de 6 años de duración realizado en pacientes a los que se ha recetado JINARC® debido a poliquistosis renal autosómica dominante (Estudio PASS)” OPE-TOL-2017-01 (156-12-299). Torra, R. Sponsor: Otsuka Pharmaceutical Europe Ltd
- “Estudio no intervencionista y prospectivo que mide la calidad de vida, la preferencia de tratamiento y la satisfacción con el tratamiento de pacientes con poliquistosis renal autosómica dominante en Europa (Estudio ACQUIRE)” OTS-MED-2017-01. Torra, R. Sponsor: Otsuka Pharmaceutical Europe LT.
- “EPIGENEFRO: estudio de cambios epigenéticos en el paciente con enfermedad renal crónica avanzada”. Guirado, LL. Sponsor: Fundació Puigvert/H. Manises.
- “Estudio multicéntrico de pacientes con displasia fibromuscular y/o disección espontánea de arteria coronaria: seguimiento clínico y estudio genético (Estudio BEL-FMD)”. Fernández-Llama, P. Sponsor: Prof. A. Persu, Clin. Universitaires St-Luc (Brux)
- “CYSTic: An international consortium to build a longitudinal observational cohort of patients with Autosomal Dominant Polycystic Kidney Disease (ADPKD)” STH20201. Torra, R. Sponsor: Sheffield Teaching Hospitals NHS Foundation Trust.
- “Registro prospectivo observacional de pacientes con enfermedad de Fabry (Estudio FollowME)” AT1001-030. Torra, R. Sponsor: Amicus Therapeutics UK Ltd
- “Impacto de los niveles de tacrólimus en la prevención del rechazo en pacientes de edad avanzada receptores de trasplante renal de novo: estudio observacional prospectivo en las condiciones de la práctica clínica habitual (Estudio BITACORA)” CHI-TAC-2018-01. Guirado, LL. Sponsor: Chiesi España S. A. U
- “Evaluación de la variabilidad de la presión arterial posicional y temporal y su relación con el daño orgánico en ancianos hipertensos (estudio VARIAN)”. Fernández-Llama, P. Sponsor: Fundació Puigvert
- “Oxihidróxido sucroférico como quelante de fósforo en pacientes trasplantados renales con hiperfosfatemia” UTR-OXI-2018-01. Guirado, LL. Sponsor: Dr. Torregrosa, U. TR, Sv. Nefro/TR, H. Clínic Bcn
- “Detection of Renal Allograft Rejection by NMR-based Urine Metabolomics (Study PARASOL)”. Guirado, LL. Sponsor: Numares AG
- “Marcadores inflamatorios y profibróticos en las ANCA-vasculitis con afectación renal” Díaz, M. Sponsor: Fundació Puigvert
- “Estudio observacional y prospectivo de cohortes de pacientes con lupus eritematoso sistémico (LES) de moderado a grave para determinar la actividad transversal y longitudinal de la enfermedad, las pautas y la eficacia del tratamiento, los resultados y las comorbilidades, la utilización de recursos sanitarios y el impacto del LES en la calidad de vida según la expresión génica del interferón de tipo I (Estudio SPOCS)” Díaz, M. Sponsor: Astrazeneca
- “Estudio multicéntrico, abierto, prospectivo, aleatorizado para explorar la morbimortalidad en pacientes dializados con hemodiálisis extendida en comparación con la hemodiafiltración en línea: (Estudio MoTHER HDx)” Coll, E. Sponsor: Senefro.
- “Estudio de la resistencia ósea medida in vivo por microindentación por impacto en el primer año post-trasplante renal”. Lloret, MJ. Sponsor: Fundació Puigvert.
- “Evaluación en condiciones reales del ADN libre de células derivado del donante (dd-cfDNA) en sangre periférica como biomarcador no invasivo para la predicción del rechazo del injerto en el trasplante de riñón (estudio BIO-PREDICTION)”. Guirado, LL. Sponsor: SV. NEFROL. - HOSPITAL DE BELLVITGE.
- “Estudio de la resistencia ósea medida por microindentación en las alteraciones severas del metabolismo mineral en diálisis”. Lloret, MJ. Sponsor: Fundació Puigvert
- “Estudio de los cambios que se producen en el metabolismo mineral óseo tras la donación renal”. Guirado, LL. Sponsor: Fundació Puigvert
- “ERA-EDTA COVID-19 KRT Database”. Guirado, LL. Sponsor: ERA-EDTA COVID-19 KRT Database Working Group
- “Estudio observacional retrospectivo para describir el fenotipo de mujeres con variantes genéticas asociadas a enfermedad de Fabry en España (Estudio MUJER FABRY)” Torra, R. Sponsor: Amicus Therapeutics, S.L.U.

- “¿Es la incompatibilidad en EPLETs un determinante en la exposición a tacrolimus?”. Guirado, LL. Sponsor: Fundació Puigvert.
- “Evaluación en condiciones reales de biomarcadores transcripcionales no invasivos en sangre periférica para la predicción del rechazo subclínico y la respuesta a la terapia en el trasplante de riñón (Estudio TRAC-PREDICTION)”. Guirado, LL. Sponsor: Eurofins Megalab
- “Estudio funcional de la respuesta inmunológica adaptativa B y T específica frente al virus SARS-CoV-2 en pacientes inmunocompetentes e inmunosuprimidos que desarrollan la infección por SARS-CoV-2 (Estudio COV-IMMUNITY)”. Guirado, LL. Sponsor: SV. NEFROL. - HOSPITAL DE BELLVITGE
- “Impacto clínico de la reducción intencionada de la inmunosupresión en pacientes trasplantados de riñón con COVID19”. Guirado, LL. Sponsor: SV. NEFROL. - HOSPITAL UNIV. LA PAZ (MADRID)
- “Combinación de biomarcadores renales, endoteliales y fenotipo hipertensivo para la identificación de pacientes con riesgo de complicaciones graves en la preeclampsia”. Fernández-Llama, P. Sponsor: Fundació Puigvert
- “Estudio de cribado para identificar pacientes con deficiencias del factor I del complemento (Screening study to identify patients with Complement Factor I deficiencies)”. Díaz, M. Sponsor: Catalist Biosciences, Inc.
- “Estudio español sobre pacientes con poliquistosis renal autosómica dominante en tratamiento con antagonistas de la vasopresina”. Torra, R. Sponsor: Grupo Enfermedades Renales Hereditarias de la SEN
- “Early covid-19 infection in kidney transplant recipients treated with lymphocyte-depleting agents”. Guirado, LL. Sponsor: DR. MORESO (Vall d’Hebron) / ONT
- “Estudio observacional longitudinal para determinar la asociación entre la respuesta farmacodinámica del paciente al tratamiento inmunosupresor medida in vitro con INMUNOBIOGRAMA y la presencia de signos de rechazo inmunológico en biopsias del injerto en pacientes con Trasplante Renal (Estudio BIOTRAIM)”. Guirado, LL. Sponsor: Biohope Scientific Solutions for Human Health SL.
- “Prevalencia de fragilidad en pacientes con enfermedad renal crónica en lista de espera de trasplante renal en España: un estudio multicéntrico (Estudio FRAILIST)”. Guirado, LL. Sponsor: Sociedad Española de Trasplante (SET)
- “Estudio prospectivo sobre la microangiopatía trombótica postrasplante renal”. Guirado, LL. Sponsor: Grupo SENTRA
- “Impacto clínico de iBox como herramienta de intervención precoz: un ensayo prospectivo, aleatorizado y controlado para evaluar el uso de un programa informático que predice la supervivencia del aloinjerto en el seguimiento de pacientes con trasplante renal (Estudio CIBIL)”. Guirado, LL. Sponsor: CIBILTECH
- “Consecuencias de la aplicación de criterios de filtrado glomerular ajustados por edad sobre la prevalencia de enfermedad renal crónica”. Gracia, S. Sponsor: Fundació Puigvert

Awards

- Health Outreach and Education Award “Jaume Aiguader” de l’Acadèmia de Ciències Mèdiques de Catalunya i Balears for the continuing education program for patients with Chronic Renal Disease: “Aula Docent” de la Fundació Puigvert: “Viure amb malaltia renal. VIII Edició de les trobades per a pacients nefrològics”. Award to Esther Martínez, (Nephrology Service, Directed by Lluís Guirado) June 2021.

Transfer products

- Guirado, L: Trasplante renal de donante vivo, Nefrología al día.
- Guirado, L: Evaluación, antecedentes y pruebas específicas (capítulo 5). Guías españolas de donante vivo.
- JM. Díaz: consensus document AQUAS. https://aquas.gencat.cat/web/.content/minisite/aquas/publicacions/2021/malaltia_renal_cronica_avancada_tractament_aquas2021.pdf

Scientific production

- Ammar S, Kanoun H, Kammoun K, Domingo A, Ruiz P, Lorente L, Pybus M, Maalej B, Boudawara T, Kamoun H, Ben M, Ars E, Jarraya F. Next-generation sequencing in patients with familial FSGS: first report of collagen gene mutations in Tunisian patients. *JOURNAL OF HUMAN GENETICS*. 2021; 66(8). DOI:10.1038/s10038-021-00912-2. PMID:33654185. IF:3,172 (Q3/D6).
- Arana C, Del Carpio J, Fayos L, Ars E, Ayasreh N, Guirado L, Bover J. Acute Renal Failure Secondary to an Unusual Familial Metabolic Myopathy. *NEPHRON*. 2021; 145(2). DOI:10.1159/000512666. PMID:33423032. IF:2,847 (Q3/D6).
- Bichet DG, Torra R, Wallace E, Hughes D, Giugliani R, Skuban N, Krusinska E, Feldt U, Schiffmann R, Nicholls K. Long-term follow-up of renal function in patients treated with migalastat for Fabry disease. *Molecular Genetics and Metabolism Reports*. 2021; 28:100786. DOI:10.1016/j.ymgmr.2021.100786. PMID:34401344. IF:2,797 (Q3/D6).

- Boenink R, Astley ME, Huijben JA, Stel VS, Kerschbaum J, Ots-Rosenberg M, Åsberg AA, Lopot F, Golan E, Castro de la Nuez P, Rodríguez Camblor M, Trujillo-Alemán S, Ruiz San Millan JC, Ucio Mingo P, Díaz JM, Bouzas-Caamaño ME, Artamendi M, Aparicio Madre MI, Santiuste de Pablos C, Slon Roblero MF, Zurriaga O, Stendahl ME, Bell S, Idrizi A, et al. The ERA Registry Annual Report 2019: summary and age comparisons. *Clinical Kidney Journal*. 2021;15(3):452–472. DOI:10.1093/ckj/sfab273. PMID: 35211303. IF:4,452 (Q1/D3).
- Boissier R, Hidalgo R, Faba OR, Territo A, Subiela JD, Huguet J, Sanchez A, Gallioli A, Vanacore D, Mercade A, Martinez C, Palou J, Guirado L, Breda A. History of urological malignancies before kidney transplantation, oncological outcome on the long term. *Actas Urológicas Españolas*. 2021; 45(10). DOI:10.1016/j.acuro.2020.10.015. PMID:34764048. IF:0,994 (Q4/D9).
- Bover J, Aguilar A, Arana C, Molina P, Lloret MJ, Ochoa J, Berna G, Gutierrez YG, Rodrigues N, D'Marco L, Gorriz JL. Clinical Approach to Vascular Calcification in Patients With Non-dialysis Dependent Chronic Kidney Disease: Mineral-Bone Disorder-Related Aspects. *Frontiers in Medicine*. 2021; 8:642718. DOI:10.3389/fmed.2021.642718. PMID:34095165. IF:5,091 (Q1/D2).
- Bover J, Gunnarsson J, Csomor P, Kaiser E, Cianciolo G, Lauppe R. Impact of nutritional vitamin D supplementation on parathyroid hormone and 25-hydroxyvitamin D levels in non-dialysis chronic kidney disease: a meta-analysis. *Clinical Kidney Journal*. 2021; 14(10). DOI:10.1093/ckj/sfab035. PMID:34603696. IF:4,452 (Q1/D3).
- Bover J, Urena P, Cozzolino M, Rodriguez M, Gomez C. The Non-invasive Diagnosis of Bone Disorders in CKD. *CALCIFIED TISSUE INTERNATIONAL*. 2021; 108(4). DOI:10.1007/s00223-020-00781-5. PMID:33398414. IF:4,333 (Q2/D4).
- Bushinsky DA, Raggi P, Bover J, Ketteler M, Bellasi A, Rodriguez M, Sinha S, Garg R, Perello J, Gold A, Chertow GM, CaLiPSO I. Effects of Myo-inositol Hexaphosphate (SNF472) on Bone Mineral Density in Patients Receiving Hemodialysis An Analysis of the Randomized, Placebo-Controlled CaLiPSO Study. *Clinical Journal of the American Society of Nephrology*. 2021; 16(5). DOI:10.2215/CJN.16931020. PMID:33835939. IF:8,237 (Q1/D1).
- Buxeda A, Arias C, Perez MJ, Cacho J, Pelegrin SC, Melilli E, Aladren MJ, Galeano C, Lorenzo I, Mazuecos A, Saura IM, Franco A, Ruiz MD, Sanchez LA, Siverio O, Martin ML, Gonzalez E, Lopez V, Martin PL, Moina I, Berrio EM, Moreso F, Portoles JM, Santana R, Zarraga S, Canal C, Sanchez E, Pascual J, Crespo M. Use and Safety of Remdesivir in Kidney Transplant Recipients With COVID-19. *Kidney International Reports*. 2021; 6(9). DOI:10.1016/j.ekir.2021.06.023. PMID:34250317. IF:4,164 (Q1/D3).
- Caravaca F, Trujillo H, Alonso M, Diaz M, Cabello V, Ariceta G, Quintana LF, Marco H, Barros X, Ramos N, Rodriguez N, Cruz S, Fernandez G, Rodriguez E, de la Cerda F, de Jose AP, Lopez I, Fernandez L, Gomez VP, Avila A, Bravo L, Lumbreras J, Allende N, de la Nieta MDS, Olea T, Melgosa M, Huerta A, Miquel R, Mon C, Fraga G, de Lorenzo A, Draibe J, et al. Validation of a Histologic Scoring Index for C3 Glomerulopathy. *AMERICAN JOURNAL OF KIDNEY DISEASES*. 2021; 77(5). DOI:10.1053/j.ajkd.2020.11.011. PMID:33359150. IF:8,860 (Q1/D1).
- Chertow GM, Appel GB, Andreoli S, Bangalore S, Block GA, Chapman AB, Chin MP, Gibson KL, Goldsberry A, Iijima K, Inker LA, Knebelmann B, Mariani LH, Meyer CJ, Nozu K, O'Grady M, Silva AL, Stenvinkel P, Torra R, Warady BA, Pergola PE. Study Design and Baseline Characteristics of the CARDINAL Trial: A Phase 3 Study of Bardoxolone Methyl in Patients with Alport Syndrome. *AMERICAN JOURNAL OF NEPHROLOGY*. 2021; 52(3). DOI:10.1159/000513777. PMID:33789284. IF:3,754 (Q2/D3).
- Coll E, Fernández-Ruiz M, Sánchez-Álvarez JE, Martínez-Fernández JR, Crespo M, Gayoso J, Bada-Bosch T, Oppenheimer F, Moreso F, López-Oliva MO, Melilli E, Rodríguez-Ferrero ML, Bravo C, Burgos E, Facundo C, Lorenzo I, Yañez Í, Galeano C, Roca A, Cabello M, Gómez-Bueno M, García-Cosío M, Graus J, Lladó L, de Pablo A, Loinaz C, Aguado B, et al.; Spanish Group for the Study of COVID-19 in Transplant Recipients. COVID-19 in transplant recipients: The Spanish experience. *AMERICAN JOURNAL OF TRANSPLANTATION*. 2021;21(5):1825–1837. DOI:10.1111/ajt.16369. PMID: 33098200. IF:8,086 (Q1/D1).
- Coll E, Fernandez M, Padilla M, Moreso F, Hernandez A, Yanez I, Molina M, Vazquez T, Crespo M, Facundo C, Rodriguez ML, Fuentes MCR, Loinaz C, Bernal G, Melilli E, Bravo C, Diekmann F, Llado L, Garcia TM, Salcedo M, Beneyto I, Castells L, Alonso R, Rodriguez A, Diaz C, Graus J, Ortiz C, Garcia MD, Hinojal R, Pena L, Dominguez B. COVID-19 in Solid Organ Transplant Recipients in Spain Throughout 2020: Catching the Wave?. *TRANSPLANTATION*. 2021; 105(10). DOI:10.1097/TP.0000000000003873. PMID:34241988. IF:4,939 (Q1/D2).
- Fernandez G, Rojas J, van de Logt AE, Justino J, Sevillano A, Caravaca F, Avila A, Rabasco C, Cabello V, Varela A, Diez M, Martin G, Diezhandino MG, Quintana LF, Agraz I, Gomez JR, Cao M, Rodriguez A, Rivas B, Galeano C, Bonet J, Romera A, Shabaka A, Plaisier E, Espinosa M, Egido J, Segarra A, Lambeau G, Ronco P, Wetzels J, Praga M, STARMEN I. The STARMEN trial indicates that alternating treatment with corticosteroids and cyclophosphamide is superior to sequential treatment with tacrolimus and rituximab in primary membranous nephropathy. *KIDNEY INTERNATIONAL*. 2021; 99(4). DOI:10.1016/j.kint.2020.10.014. PMID:33166580. IF:10,612 (Q1/D1).
- Franco A, Moreso F, Sancho A, Esforzado N, Paul J, Llorente S, Crespo M, Guirado L, Melilli E, Roncero FG. Protocol for Optimizing the Use of Kidneys From Donors With Seropositivity for Hepatitis C Virus in Seronegative Recipients. *TRANSPLANTATION PROCEEDINGS*. 2021; 53(9). DOI:10.1016/j.transproceed.2021.09.013. PMID:34657711. IF:1,066 (Q4/D9).
- Furlano M, Martinez V, Pybus M, Arce Y, Crespi J, Venegas MD, Bullich G, Domingo A, Ayasreh N, Benito S, Lorente L, Ruiz P, Gonzalez VL, Arlandis R, Cabello E, Torres F, Guirado L, Ars E, Torra R. Clinical and Genetic Features of Autosomal Dominant Alport Syndrome: A Cohort Study. *AMERICAN JOURNAL OF*

KIDNEY DISEASES. 2021; 78(4). DOI:10.1053/j.ajkd.2021.02.326. PMID:33838161. IF:8,860 (Q1/D1).

- Goffin E, Candellier A, Vart P, Noordzij M, Arnol M, Covic A, Lentini P, Malik S, Reichert LJ, Sever MS, Watschinger B, Jager KJ, Gansevoort RT, Canal C, Facundo C, ERACODA C. COVID-19-related mortality in kidney transplant and haemodialysis patients: a comparative, prospective registry-based study. *NEPHROLOGY DIALYSIS TRANSPLANTATION*. 2021; 36(11). DOI:10.1093/ndt/gfab200. PMID:34132811. IF:5,992 (Q1/D2).

- Gonzalez E, Bover J, Herrero J, Sanchez E, Molina P, Martin A, Rubio M, Lloret S, Navarro J, Arenas MD. Control of phosphorus and prevention of fractures in the kidney patient. *NEFROLOGIA*. 2021; 41(1). DOI:10.1016/j.nefro.2020.05.015. PMID:32981786. IF:2,033 (Q3/D8).

- Gorris JL, Arroyo D, D'Marco L, Torra R, Tomas P, Puchades MJ, Panizo N, Pantoja J, Montomoli M, Llisterri JL, Pallares V, Valdivielso JM. Cardiovascular risk factors and the impact on prognosis in patients with chronic kidney disease secondary to autosomal dominant polycystic kidney disease. *BMC Nephrology*. 2021; 22(1):110. DOI:10.1186/s12882-021-02313-1. PMID:33765945. IF:2,388 (Q3/D7).

- Millan O, Rovira J, Guirado L, Espinosa C, Budde K, Sommerer C, Pineiro GJ, Diekmann F, Brunet M. Advantages of plasmatic CXCL-10 as a prognostic and diagnostic biomarker for the risk of rejection and subclinical rejection in kidney transplantation. *CLINICAL IMMUNOLOGY*. 2021; 229:108792. DOI:10.1016/j.clim.2021.108792. PMID:34217849. IF:3,969 (Q3/D6).

- Mitra S, Jayanti A, Vart P, Coca A, Gallieni M, Ovrehus MA, Midtvedt K, Abd S, Gandolfini I, Buttner S, Franssen CFM, Hemmeler MH, Canal C, Facundo C, ERACODA C. Clinical triage of patients on kidney replacement therapy presenting with COVID-19: an ERACODA registry analysis. *NEPHROLOGY DIALYSIS TRANSPLANTATION*. 2021; 36(12). DOI:10.1093/ndt/gfab196. PMID:34129039. IF:5,992 (Q1/D2).

- Montero N, Toapanta N, Pallares N, Crespo M, Diekmann F, Guirado L, Esteban R, Codina S, Melilli E, Buxeda A, Velis G, Torres IB, Revuelta I, Andujar AM, Facundo C, Bardaji B, Riera L, Fiol M, Cruzado JM, Comas J, Giral M, Naesens M, Asberg A, Moreso F, Bestard O. Deciphering transplant outcomes of expanded kidney allografts donated after controlled circulatory death in the current transplant era. A call for caution. *TRANSPLANT INTERNATIONAL*. 2021; 34(12). DOI:10.1111/tri.14131. PMID:34626501. IF:3,782 (Q1/D3).

- Moreno R, Arenas MI, Velez E, Coll E, Quiroga B, Bover J, Bosch RJ. Bisphenol a Exposure and Kidney Diseases: Systematic Review, Meta-Analysis, and NHANES 03-16 Study. *Biomolecules*. 2021; 11(7):1046. DOI:10.3390/biom11071046. PMID:34356670. IF:4,879 (Q2/D4).

- Naranjo J, Furlano M, Torres F, Hernandez J, Pybus M, Ejarque L, Cordoba C, Guirado L, Ars E, Torra R. Comparative analysis of tools to predict rapid progression in autosomal dominant

polycystic kidney disease. *Clinical Kidney Journal*. 2021; 15(5). DOI:10.1093/ckj/sfab293. PMID:35498884. IF:4,452 (Q1/D3).

- Navarro JF, Arenas MD, Henriquez F, Lloret MJ, Molina P, Moreno FR, Macia MA, Espinel L, Sanchez E, Lago M, Crespo A, Bover J. Real-world management of hyperphosphataemia with sucroferic oxyhydroxide: the VELREAL multicentre study. *Clinical Kidney Journal*. 2021; 14(2). DOI:10.1093/ckj/sfaa226. PMID:33626111. IF:4,452 (Q1/D3).

- Oller NA, Gracia S, Cugat JB, Vicente IG, Exposito IM, Casafont JL. A urinary stone from the early medieval site of Riner, Catalonia. *International Journal of Paleopathology*. 2021; 34. DOI:10.1016/j.ijpp.2021.07.006. PMID:34315047. IF:1,393 (Q4/D8).

- Ortiz A, Cozzolino M, Duivenvoorden R, Fliser D, Fouque D, Franssen CFM, Goumenos D, Hemmeler MH, Hilbrands LB, Jager KJ, Massy ZA, Noordzij M, Rosenkranz AR, Rychlik I, Soler MJ, Stevens K, Torra R, Tuglular S, Vart P, Wanner C, Gansevoort RT, ERA C, Eracoda GRP. Chronic kidney disease is a key risk factor for severe COVID-19: a call to action by the ERA-EDTA. *NEPHROLOGY DIALYSIS TRANSPLANTATION*. 2021; 36(1). DOI:10.1093/ndt/gfaa314. PMID:33340043. IF:5,992 (Q1/D2).

- Paez A, Gutierrez B, Aguera ML, Facundo C, Redondo D, Suner M, Lopez MO, Yuste JR, Montejo M, Galeano C, Ruiz JC, Los I, Hernandez D, Fernandez M, Munoz P, Valle J, Cano A, Rodriguez A, Crespo M, Rodelo C, Lobo MA, Garrido JC, Vidal E, Guirado L, Cantisan S, Torre J. Immunoguided Discontinuation of Prophylaxis for Cytomegalovirus Disease in Kidney Transplant Recipients Treated With Antithymocyte Globulin: A Randomized Clinical Trial. *CLINICAL INFECTIOUS DISEASES*. 2022; 74(5). DOI:10.1093/cid/ciab574. PMID:34228099. IF:9,079 (Q1/D1).

- Pappaccogli M, Di S, Warchol E, Lorthioir A, Amar L, Aparicio LS, Beauloye C, Bruno RM, Chenu P, de Leeuw P, De Backer T, Delmotte P, Dika Z, Gordin D, Heuten H, Iwashima Y, Krzesinski JM, Kroon AA, Mazzolai L, Poch E, Sarafidis P, Seinturier C, Spiering W, Toubiana L, Van der Niepen P, van D, Visona A, Wautrecht JC, Witowicz H, et al.; European Int Registry Initiat FMD, European Soc Hypertension E [De La Llama PF, Barros AJ]. The European/International Fibromuscular Dysplasia Registry and Initiative (FEIRI)-clinical phenotypes and their predictors based on a cohort of 1000 patients. *CARDIOVASCULAR RESEARCH*. 2021; 117(3). DOI:10.1093/cvr/cvaa102. PMID:32282921. IF:10,787 (Q1/D1).

- Pimentel A, Bover J, Elder G, Cohen M, Urena PA. The Use of Imaging Techniques in Chronic Kidney Disease-Mineral and Bone Disorders (CKD-MBD)-A Systematic Review. *Diagnostics*. 2021; 11(5):772. DOI:10.3390/diagnostics11050772. PMID:33925796. IF:3,706 (Q2/D3).

- Pimentel A, Ureña-Torres P, Bover J, Luis Fernandez-Martín J, Cohen-Solal M. Bone Fragility Fractures in CKD Patients. *CALCIFIED TISSUE INTERNATIONAL*. 2021;108(4):539-550. DOI:10.1007/s00223-020-00779-z. PMID: 33219822. IF:4,333 (Q2/D4).

- Quintairos L, Colom H, Millan O, Fortuna V, Espinosa C, Guirado L, Budde K, Sommerer C, Lizana A, Lopez Y, Brunet M. Early prognostic performance of miR155-5p monitoring for the risk of rejection: Logistic regression with a population pharmacokinetic approach in adult kidney transplant patients. *PLoS One*. 2021; 16(1):e0245880. DOI:10.1371/journal.pone.0245880. PMID:33481955. IF:3,240 (Q2/D4).
- Savige J, Lipska BS, Watson E, Hertz JM, Deltas C, Mari F, Hilbert P, Plevova P, Byers P, Cerkauskaite A, Gregory M, Cerkauskiene R, Ljubanovic DG, Becherucci F, Errichiello C, Massella L, Aiello V, Lennon R, Hopkinson L, Koziell A, Lungu A, Rothe HM, Hoefele J, Zacchia M, Martic TN, Gupta A, van A, Gear S, Landini S, Palazzo V, al L, Claes K, et al. [Ars E]. Guidelines for Genetic Testing and Management of Alport Syndrome. *Clinical Journal of the American Society of Nephrology*. 2022; 17(1). DOI:10.2215/CJN.04230321. PMID:34930753. IF:8,237 (Q1/D1).
- Servais A, Thomas K, Dello L, Sayer JA, Bekri S, Bertholet A, Bultitude M, Capolongo G, Cerkauskiene R, Daudon M, Doizi S, Gillion V, Gracia S, Halbritter J, Heidet L, van den Heijkant M, Lemoine S, Knebelmann B, Emma F, Levtchenko E, European Reference Network Rare KI, E. Cystinuria: clinical practice recommendation. *KIDNEY INTERNATIONAL*. 2021; 99(1). DOI:10.1016/j.kint.2020.06.035. PMID:32918941. IF:10,612 (Q1/D1).
- Soldevila N, Acosta L, Martinez A, Godoy P, Torner N, Rius C, Jane M, Dominguez A, Torra R, Torrel J.M. Behavior of hospitalized severe influenza cases according to the outcome variable in Catalonia, Spain, during the 2017-2018 season. *Scientific Reports*. 2021; 11(1):13587. DOI:10.1038/s41598-021-92895-5. PMID:34193898. IF:4,379 (Q1/D3).
- Soler MJ, Noordzij M, Abramowicz D, de Arriba G, Basile C, van M, Covic A, Crespo M, Duivenvoorden R, Massy ZA, Ortiz A, Sanchez JE, Petridou E, Stevens K, White C, Vart P, Gansevoort RT, Canal C, Facundo C, ERACODA C. Renin-Angiotensin System Blockers and the Risk of COVID-19-Related Mortality in Patients with Kidney Failure. *Clinical Journal of the American Society of Nephrology*. 2021; 16(7). DOI:10.2215/CJN.18961220. PMID:34088718. IF:8,237 (Q1/D1).
- Sommerer C, Brunet M, Budde K, Millan O, Perich LG, Glander P, Meuer S, Zeier M, Giese T. Monitoring of gene expression in tacrolimus-treated de novo renal allograft recipients facilitates individualized immunosuppression: Results of the IMAGEN study. *BRITISH JOURNAL OF CLINICAL PHARMACOLOGY*. 2021; 87(10). DOI:10.1111/bcp.14794. PMID:33620734. IF:4,335 (Q2/D4).
- Territo A, Piana A, Fontana M, Diana P, Gallioli A, Gaya JM, Huguet J, Gavrilo P, Rodriguez O, Facundo C, Guirado L, Palou J, Mottrie A, Breda A. Step-by-step Development of a Cold Ischemia Device for Open and Robotic-assisted Renal Transplantation. *EUROPEAN UROLOGY*. 2021; 80(6). DOI:10.1016/j.eururo.2021.05.026. PMID:34059396. IF:20,096 (Q1/D1).
- Torra R, Furlano M, Ortiz A, Ars E. Genetic kidney diseases as an underrecognized cause of chronic kidney disease: the key role of international registry reports. *Clinical Kidney Journal*. 2021; 14(8). DOI:10.1093/ckj/sfab056. PMID:34345410. IF:4,452 (Q1/D3).
- Ullmo J, Cruz M, Sanchez O, Bos L, De la Llama PF, Calero F, Dominguez C, Garrido C, Trilla C, Carreras F, Sionis A, Mora J, Garcia A, Ordonez J, Llurba E. Cardiac dysfunction and remodeling regulated by anti-angiogenic environment in patients with preeclampsia: the ANGIOCOR prospective cohort study protocol. *BMC Pregnancy and Childbirth*. 2021; 21(1):816. DOI:10.1186/s12884-021-04263-w. PMID:34879854. IF:3,007 (Q2/D4).
- Ureña P, D'Marco L, Raggi P, García X, Brandenburg V, Mazzaferro S, Lieber A, Guirado L, Bover J. Valvular heart disease and calcification in CKD: More common than appreciated. *NEPHROLOGY DIALYSIS TRANSPLANTATION*. 2021; 35(12). DOI:10.1093/NDT/GFZ133. PMID:31326992. IF:5,992 (Q1/D2).
- Villanego F, Mazuecos A, Perez IM, Moreso F, Andres A, Jimenez C, Molina M, Canal C, Sanchez LA, Zarraga S, Ruiz MD, Aladren MJ, Melilli E, Lopez V, Sanchez E, Crespo M, Pascual J. Predictors of severe COVID-19 in kidney transplant recipients in the different epidemic waves: Analysis of the Spanish Registry. *AMERICAN JOURNAL OF TRANSPLANTATION*. 2021; 21(7). DOI:10.1111/ajt.16579. PMID:33756067. IF:8,086 (Q1/D1).

Other scientific production

- Bichet DG, Torra R, Wallace E, Hughes D, Giugliani R, Skuban N, Krusinska E, Feldt U, Schiffmann R, Nicholls K. Long-term follow-up of renal function in patients treated with migalastat for Fabry disease (vol 28, 100786, 2021). *Molecular Genetics and Metabolism Reports*. 2021; 29:100807. DOI:10.1016/j.ymgmr.2021.100807. PMID:34934630. IF:2,797 (Q3/D6).
- Bover J, Bosch R, Urena P, Trinidad P, Jara A, Gorriz JL, Furlano M, Garcia RA, Gelpi R, Ortiz A, Restrepo CA, Sanchez M, Arana C, Goicoechea M, Coll V, Segura J, Gutierrez O, Sanchez E, Ferreira A, Garcia R. Kidneys also speak Spanish. *NEFROLOGIA*. 2021; 41(2). DOI:10.1016/j.nefro.2020.11.002. PMID:33288346. IF:2,033 (Q3/D8).
- Savige J, Storey H, Watson E, Hertz JM, Deltas C, Renieri A, Mari F, Hilbert P, Plevova P, Byers P, Cerkauskaite A, Gregory M, Cerkauskiene R, Ljubanovic DG, Becherucci F, Errichiello C, Massella L, Aiello V, Lennon R, Hopkinson L, Koziell A, Lungu A, Rothe HM, Hoefele J, Zacchia M, Martic TN, Gupta A, van A, Gear S, Landini S, Palazzo V, et al. [Ars E]. Consensus statement on standards and guidelines for the molecular diagnostics of Alport syndrome: refining the ACMG criteria. *EUROPEAN JOURNAL OF HUMAN GENETICS*. 2021; 29(8). DOI:10.1038/s41431-021-00858-1. PMID:33854215. IF:4,246 (Q2/D4).
- Torra R, Perez MV, Furlano M. Autosomal dominant polycystic kidney disease: possibly the least silent cause of chronic kidney disease. *Clinical Kidney Journal*. 2021; 14(11). DOI:10.1093/ckj/sfab132. PMID:34754424. IF:4,452 (Q1/D3).

Other publications

- Coll V, Calero F, Arias P, Ayasreh N, Ochoa J, Ramos A, Guirado L, Fernandez P. Improved office blood pressure control by automatic delayed-reading oscillometric device. *Hipertension Y Riesgo Vascular*. 2021; 38(3). DOI:10.1016/j.hipert.2021.03.002. PMID:33893057.
- Fernandez P, Ayasreh N, Calero F. Hypertension in the elderly: What we need to know. *Hipertension Y Riesgo Vascular*. 2021; 38(2). DOI:10.1016/j.hipert.2020.10.001. PMID:33239263.
- Genua I, Sánchez-Hernandez J, Martínez MJ, Pujol I, Places J, González C, Martínez E, Díaz JM, Chico A. Accuracy of Flash Glucose Monitoring in Patients with Diabetes Mellitus on Hemodialysis and Its Relationship with Hydration Status. *J Diabetes Sci Technol*. 2021 Nov;15(6):1308-1312. DOI:10.1177/1932296820975057. PMID: 33251824.
- Salas-Gama K, Díaz JM, Coronado J, Pérez-Bracchiglione J, Requeijo C, Samsó L, Suclupe S, Bolívar I. Patient decision aids for adults with advanced chronic kidney disease with a medical recommendation to start dialysis: a scoping review protocol. *JBI Evid Synth*. 2021;19(12):3347-3354. DOI:10.11124/JBIES-20-00437. PMID: 34171892.
- Santos IDS, Araújo MJCLN, Jorgetti V, Elias RM, Bover J. Kidneys also “speak Portuguese”. *J Bras Nefrol*. 2021;43(4):608-609. English, Portuguese. DOI:10.1590/2175-8239-JBN-2020-0264. PMID: 33704349.
- Sastre L, García R, Gándara JG, Fernández-Llama P, Amor AJ, Sierra C, Escudé L, Ruiz P, Colmenero J, Ortega E, Navasa M, Crespo G. The Role of Arterial Stiffness in the Estimation of Cardiovascular Risk in Liver Transplant Recipients. *Transplant Direct*. 2021;8(1):e1272. DOI:10.1097/TXD.0000000000001272. PMID: 34966842.

Books or chapters with ISBN

- Angerri, O; Gràcia, S. Análisis de los cálculos renales asociados a acidosis tubular renal distal y su manejo terapéutico. En: *Acidosis tubular renal distal. Enfoque multidisciplinar*, editado/coordinado por Alberto Ortiz Arduan y Victor Manuel García Nieto, 59-68. Villanueva de la Cañada (España): Comunicación y Ediciones Sanitarias SL, 2021. ISBN 978-84-944977-9-7

Communication and dissemination activities

Outreach activities

- Open doors for schools: Fundació Puigvert together with the Hospital de Sant Pau offers sessions is to raise awareness among young people about organ transplantation and to make them aware of the views of doctors and transplant recipients. In groups of up to 30 students, a part of the Hospital de Sant Pau is visited first, with

a professional from that center. Later, they enter the Puigvert Foundation and go to the Library, where a nephrologist, with audiovisual support, talks to them about the transplant. Sometimes, a transplanted patient collaborates so that students can ask questions directly. Codirector of the program: Guirado L.

- Radio program: During 2021, 5 hour programs of scientific dissemination have been broadcast on “Radio Estel”, informing the audience of some kidney diseases and resolving doubts for listeners.
- February: Rare diseases I – II
- March: World Kidney Day
- April, 11 and 12: Alport syndrome
- In the news
- Catalunya Press. “El 40% dels trasplantaments renales realitzats per Fundació Puigvert procedeixen d’un donant viu” June 2021.
- COPE. “Fins a un 40% dels trasplantats renales de la Fundació Puigvert procedeix d’un donant viu” June 2021
- Betevé. “Els beneficis del Trasplantament renal amb òrgans de donant viu”. June 2021
- Ara. A Puigvert vam ser pioners en desenvolupar un programa de donant viu. June 2021
- TVE. Día Mundial del paciente Trasplantado. June 2021
- The new Barcelona post. “La Fundació Puigvert estrena una nova unitat per a Diàlisi de 1500 metres quadrats”. October 2021
- Planta Doce. La Fundació Puigvert pondrà en marcha un centro para salud renal de la mano de Fresenius. October 2021
- PM Farma. Fresenius Medical Care y la Fundació Puigvert a la vanguardia de la innovación en salud renal. October 2021
- La Vanguardia. “Organizan un curso para impulsar los trasplantes renales de donantes vivos”. November 2021
- La Vanguardia. “Un documental narra la historia de un trasplante renal en plena pandemia” December 2021

Scientific dissemination

Courses organized

- “Genética para Nefrólogos” – 4th edition– 26th – 27th January Directors of the Course: E. Ars and R. Torra
- “Preceptorship Enfermedad de Fabry” – 21st to 22nd April. Director of the Course: R. Torra
- “Hemodiálisis Crónica” – 7th edition- 26th to 28th April. Director of the Course: J.M. Díaz
- “Formación en Trasplante Renal de Donante Vivo” – XVIII edition– 22nd to 25th November. Director of the Course: Ll. Guirado and A. Breda

Conferences and Meetings

- JORNADA RenHerCaT. Online, 25th February. R. Torra. Group coordinator. Communication: "Assessorament genètic. Què cal saber?"
 - KIDNEY DISEASE: IMPROVING GLOBAL OUTCOMES (KDIGO). Online, 4th-7th March. E. Ars
 - Communication: Genetics in Chronic Kidney Disease: Conclusions from a Kidney Disease Improving Global Outcomes (KDIGO)
 - XXXVIII CONGRESO VIRTUAL DE LA SOCIEDAD VALENCIANA DE NEFROLOGÍA. On line, 1st March. M. Furlano. Communication: "Mujer en el Síndrome de Alport; ¿de qué estamos hablando?"
 - JORNADAS DE GENÉTICA Y ENFERMEDAD RENAL. On line, 10th-11th March.
 - E. Ars. Communication: "Secuenciación masiva (NGS) en el diagnóstico de las nefropatías hereditarias. Utilidad e interpretación de los resultados".
 - M. Furlano. Communication: "Estudio Genético en la Enfermedad de Alport".
 - R. Torra Communication: "Utilidad de la Consulta de Enfermedades Renales Hereditarias. Indicación del estudio genético en el paciente con Enfermedad Renal".
 - 16° CONGRESO DE LA SOCIETAT CATALANA DE TRASPLANTAMENT. Online, 11st-13th May
- ### Oral communications
- "Neurotoxicidad por tacrolimus medida por OCT". Facundo Molas, C1; Serra Cabañas, N1; Vila Santandreu, A1; Gelpi, R1; Fayos de Arizon, L1; Arana, C1; Bardaji, B1; Guirado, LI1; Mousavi, K2. 1Nefrologia Fundació Puigvert; 2Oftalmologia Consorci Hospitalari de Vic
 - "Long term immunity to SARS-COV-2 among solid organ transplant recipients". Favà, A1; Donadeu, L2; Pernin, V3; Meneghini, M1; Crespo, E2; Sabé, N4; Lladó, L5; González-Costello, J6; Moreso, F7; Lopez, M8; Facundo, C9; Revuelta, I10; Crespo, M11; Santana, C12, Cruzado, JM1; Thauat, O13; - Bestard, O1. 1Nefrologia, Hospital Universitari de Bellvitge; 2Laboratori Experimental de Nefrología, IDIBELL, Hospital Universitari de Bellvitge; 3Nefrologia, Hospital de Montpellier; 4Servei de malalties infeccioses, Hospital Universitari de Bellvitge; 5Unitat trasplantament hepàtic, Hospital Universitari de Bellvitge; 6Unitat trasplantament cardíac, Hospital Universitari de Bellvitge; 7Nefrologia, Hospital Universitari Vall d'Hebron; 8Unitat trasplantament pulmonar, Hospital Universitari Vall d'Hebron; 9Nefrologia, Fundació Puigvert; 10Nefrologia, Hospital Clínic de Barcelona; 11Nefrologia, Hospital del Mar; 12Centre Atenció Primària Baix Llobregat; 13Unitat de trasplantament, Hospital Edouard Herriot, Lyon.
 - 58th ERA-EDTA CONGRESS. Online, 5th-8th June
 - M. Furlano: Speaker: "Diagnosis, genetics, and pathophysiology of alport syndrome"
 - R. Torra: Session Moderator: MODERATED MINI-ORALS 1. Session Moderator: DIAGNOSIS AND TREATMENT OF RARE DISEASE IN CHILDREN AND ADULT CKD. Session Moderator: PLENARY LECTURE 2. Session Moderator: NEPHROLOGY PEARLS.
 - EUROPEAN SOCIETY OF HUMAN GENETICS ANNUAL MEETING. Online, 28th-31st August. Poster. Clinical utility of genetic testing in early-onset kidney disease: seven genes are the main players. Domingo Gallego, A1; Pybus, M1; Bullich, G2,1; Furlano, M1; Ejarque-Vila, L1; Lorente Grandoso, L1; Ruiz, P1; Fraga, G3; López González, M4; Piñero Fernández, JA5; Rodríguez Peña, L5; Llano Rivas, I6; Sáez, R7; Bujons-Tur, A1; Ariceta, G4; Guirado, LI1; Torra, R1; Ars, E1. 1Fundació Puigvert, Barcelona, Spain, 2Centre Nacional d'Anàlisi Genòmica (CNAG)-Centre for Genomic Regulation (CRG), Barcelona, Spain, 3Hospital de la Santa Creu i Sant Pau, Barcelona, Spain, 4Hospital Vall d'Hebron, Barcelona, Spain, 5Hospital Universitario Virgen de la Arrixaca, Murcia, Spain, 6Hospital Universitario Cruces, Barakaldo-Bizkaia, Spain, 7Hospital Donostia, San Sebastian, Spain.
 - 51 CONGRESO DE LA SOCIEDAD ESPAÑOLA DE NEFROLOGÍA. Online, 15th-18th October.
 - LI. Guirado. Communication: "Retrasplante de vivo anticipado".
 - R. Torra. Moderator of: "Simposio poliquistosis renal autosómica dominante" Communication: "Progresión de la PQRAD. ¿Qué hay de nuevo?"
 - "Análisis de la sensibilidad y especificidad en los métodos predictivos de rápida progresión en poliquistosis renal autosómica dominante" Naranjo, J1; Furlano, M2; Pybus, M3; Domingo, A3; Cordoba, C2; Ruiz, C2; Hernández, J4; Guirado, L2; Ars, E3; Torra, R2. 1Nefrología. Hospital Universitari Puerta del Mar (Cádiz). Servicios de 2Nefrología. 3Genética y Biología Molecular. 4Radiología. Fundacio Puigvert (Barcelona)
 - 44th WORLD HOSPITAL CONGRESS. Barcelona, 8th-11st November
 - LI. Guirado. Communication: International cooperation for kidney exchange success between Spain and Italy
 - R. Torra. Communication: "Setting of multidisciplinary teams for inherited kidney diseases" at Fundació Puigvert-Hospital Sant Pau



Women and Perinatal Health

Coordinator

Llurba Olivé, Elisa FGS
ellurba@santpau.cat

Members

Cruz Lemini, Mónica C.	FGS	Peró Garcia, Marta	FGS
Domínguez Gallardo, Carla	FGS	Polo Ramos, Ana Maria	FGS
Garrido Giménez, Carmen	FGS	Sánchez García, Olga	IR
López Vanegas, Santiago	IR	Trilla Sola, Cristina	FGS
Medina Mallen, Maria Del Carmen	FGS	Ullmo, Johana	FGS
Mora Hervás, Irene	FGS		

Main lines of research

- Prediction and prevention of complications arising from placental insufficiency, intrauterine growth restriction / preeclampsia (IUGR / PE)
- Placental insufficiency and maternal cardiovascular risk later in life.
- Development of predictive methods based on the integration of pre and postnatal factors for the detection of abnormal neurodevelopment in congenital hearts diseases.
- Toxics and air pollution effects con pregnancy and fetal programming.

- Management of pelvic floor dysfunction: chronic pelvic pain, urinary incontinence and pelvic organ prolapse.
- Marternal and fetal cardiovascular programing in assisted reproduction treatments (ART).
- Cardiovascular Health and ART outcomes.
- COVID-19 and gestation.
- Innovative methods in delivery care.

Scientific Challenges

- To study novel placental biomarkers in the diagnosis and prognosis of preeclampsia (PE) and intrauterine growth restriction (IUGR) in order to generate future hypothesis

for target prevention and therapeutic interventions in these pathologies.

- To determine the usefulness of novel placental biomarkers (sFlt-1/PIGF ratio) in the diagnosis and prognosis of preeclampsia (PE) in order to change policies and improve maternal and neonatal health.
- To study novel maternal cardiovascular risk biomarkers after placental insufficiency and to explore potential preventive strategies in order to identify mother at risk for cardiovascular disease later in life.
- To develop biomarkers in fetal and neonatal life that help to predict postnatal neurological risk in congenital heart diseases.
- To evaluate the impact of maternal exposure to traffic-related air pollution on fetal development in order to generate evidence base to support regulation, implementation of finely-targeted interventions, and in time, the inclusion of this impact in the next iteration of the global burden of diseases (GBD) attributable to ambient air pollution.
- To evaluate the impact of different interventions to improve cardiovascular health in an infertile population before in vitro fertilization (IVF), live birth rate, maternal and fetal cardiovascular programming and perinatal outcome.
- To evaluate the impact of SARS-Cov-2 infection on maternal health, placental function, and pregnancy and neonatal outcomes.
- To develop clinical research focused on improving obstetric care with the implementation of innovative solutions in the process of childbirth and the puerperium.

Collaborations

Collaborations with other IIB Sant Pau research groups

- Active collaboration with the Gynaecology and Obstetrics Service: Obdulia Alejos, Laura Gomilla, Anna Olivella, Juan Parra.
- Active collaboration with Puigvert Foundation: Carlos Dosouto, Susana Peon, M Jesús Saiz and Patricia Fernández-Llama.
- Molecular Pathology of Gynecologic Cancer: Dra. Bárbara García-Valdecasas
- Genome Instability and DNA Repair Syndromes: Dr. Jordi Surrallés
- Gynecologic and Peritoneal Oncology Group: Dra. M Virtudes Céspedes
- Anaesthesiology and DNA Repair Syndromes: Dra. M Victoria Moral, Astrid M Batalla González.
- General and Digestive Surgery: Dr. Antonio Moral
- Endocrinology, Diabetes and Nutrition: Dr. Didac Mauricio, Dra. Rosa Corcoy
- Paediatrics: Dr. Susana Boronat, Dra. M Gloria Fraga Rodríguez,

- Dra. Maria Josa Eritja, Dra. Elisenda Moliner Calderón.
- Clinical Epidemiology and Healthcare Services: Dr. Xavier Bonfill
- Metabolics Bases of Cardiovascular Risk: Dr. Francisco Blanco, Dr. Jordi Ordoñez, Dra. Josefina Mora, Dr. Álvaro García.
- Neuroradiology: Dra. Beatriz Gómez-Anson.

External collaborations

International Collaborations

- NCT04754594. Study to Evaluate the Safety, Tolerability, and Immunogenicity of SARS CoV-2 RNA Vaccine Candidate (BNT162b2) Against COVID-19 in Healthy Pregnant Women 18 Years of Age and Older. Pfizer and BioNTech SE. Duration: 2021 – 2022. Collaborators: Elisa Llurba, Mónica Cruz-Lemini, Santiago López, Olga Sánchez.
- PREDIGES. PATIA EUROPE, S.L. Duration: 2020-2022. Collaborator: Carmen Medina
- Role of Placental Insufficiency and Hypoxia in Congenital Heart Defects. PI: Steven A. Fisher, MD; Professor of Medicine and Physiology S-012a HSF II, 20 Penn St Univ of Maryland School of Medicine (Baltimore MD2012). Collaborator: Elisa Llurba.
- Accuracy of clinical characteristics, biochemical and ultrasound markers in the prediction of preeclampsia: an Individual Patient Data (IPD) Meta-analysis. PI: Shakila Thangaratnam, PhD; Professor in maternal and perinatal health at Queen Mary University of London, of Mile End Road, London E1 4NS with administrative offices at QM Innovation Centre, 5 Walden Street, Whitechapel, (London E1 2EF). Collaborator: Elisa Llurba.

National Collaborations

- Maternal and Child Health and Development Research Network (SAMID Network). RD16/0012. Objective: the main objective is to study the different pathological processes, nutritional and environmental conditions of perinatal and postnatal period, by addressing the study of factors of prematurity, prevention and patient safety, environmental and pathogenetic factors, nutrition and child development as well as promoting research into new products and therapeutic procedures. It is also their aim to study the long-term consequences and its relationship with certain disorders of high prevalence in later stages of life, such as neuropsychiatric diseases, obesity and its complications. Collaborators: Elisa Llurba, Carla Domínguez, Mónica Cruz-Lemini, Ana Polo and Olga Sánchez.
- Centro de Investigación Biomédica en Red en Enfermedades Raras (CIBERER). CBO6/07/0027(U719). PI: Dr. Eduard Gratacós.
- BCNatal – Centro de Medicina Maternofetal y Neonatal de Barcelona. Hospital Sant Joan de Déu – Hospital Clínic. PI: Dra. MD Gómez-Roig.

- Barcelona Institute for Global Health (ISGlobal). Program “Air pollution and urban environment” (Dr. Payam Dadvant) and program “Childhood and environment” (Dr. J Sunyer).
- Barcelona Insitute for Global Health (ISGlobal). Maternal, Child and Reproductive Health Iniciative. Campus Clínic.
- “Registro epidemiológico de COVID19 gestantes” (COV20_00021). Fundación Investigación Biomédica Hospital Puerta de Hierro. PI: Óscar Martínez. Start date: 30/04/2020. Collaborator: Carmen Medina.
- “Indicadors genòmics per a la predicció de la recurrència i la metastasi en càncer endometrial” (201911). PI: Dra. M Virtudes Céspedes; ColP: Dra. M José Macías. Funding: La Marató de TV3. Duration: 01/01/2020 – 31/12/2022. Collaborator: Dra. Olga Sánchez.
- “Cribado secuencial de preeclampsia mediante el uso de marcadores angiogénicos en el primer trimestre” (PI19/00692). PI: Dr. Daniel Oros López. Funding: Instituto de Salud Carlos III. Duration: 01/01/2020– 31/12/2022. Collaborator: Cristina Trilla.
- “Traffic-related air pollution and birth weight: the roles of noise, placental function, green space, physical activity, and socioeconomic status” (FRONTIER). PI: Dadvand Payam; Assistant Research Professor, Barcelona Insitute for Global Health (ISGlobal) (Former CREAL); ColP: Jordi Sunyer, Barcelona Institute of Global Health (ISGlobal). Funding: The Health Effects Institute (HEI), 17-1 Assessing Adverse Health Effects of Exposure to Traffic-Related Air Pollution, Noise, and Their Interactions With Socio-Economic Status. Duration: 01/05/2018 – 31/10/2022. Collaborators: Elisa Llorba, Carmen Garrido, Carla Domínguez and Olga Sánchez.
- “Pre-natal exposure to urban AIR pollution and pre- and post-Natal Brain development” (AIR-NB). PI: Jordi Sunyer, Barcelona Institute of Global Health (ISGlobal). Funding: European Research Council (ERC), Horizon 2020, ERC-2017-ADG. Duration: 01/01/2018 – 31/12/2022. Collaborators: Elisa Llorba, Carmen Garrido, Carla Domínguez and Olga Sánchez.
- The Banc de Sang i Teixits (Blood and Tissue Bank) is a públic agency of the Catalan Department of Health whose mission is to guarantee the supply and proper use of human blood and tissue in Catalonia. Collaborator: Elisa Llorba.
- Clinical Trial. NCT04766866. sFlt1/PIGF and Selective Labor Induction to Prevent Preeclampsia at Term (PE37). Eduard Gratacós (IP). Fundació Institut de Recerca de l’Hospital de la Santa Creu i Sant Pau (IIBSP-FIP-2019-37). Duration: 2020 – 2023. Collaborator: Elisa Llorba.
- Clinical Trial. NCT04163744. Effectiveness and Safety of Induction of Labour Using a Double Balloon Catheter (INDOBA). Fundació Institut de Recerca de l’Hospital de la Santa Creu i

Sant Pau (IIBSP-CRB_2019-70). Duration: 2019-2021. PI of the center: Elisa Llorba.

- HCB/2020/0434 “COVID19: clinical presentation during pregnancy. A population-based study”; PI: Eduard Gratacós. Hospital Clínic de Barcelona. Collaborator: Mónica Cruz-Lemini.

Collaborations with the industry

- Cook
- Roche
- Pfizer

Active grants

- ELISA LLURBA OLIVE. Incorporación del ratio sFlt1/PIGF en el diagnóstico y clasificación de preeclampsia: Ensayo clínico randomizado (EuroPE estudio). PI16/00375. Instituto de Salud Carlos III. Duration 2017-2021. 92.500,00 €.
- JOSEP ORIOL PORTA RODA. Estudio de las propiedades biológicas de una matriz dérmica de origen humano para su aplicación en cirugía de corrección del prolapso de órganos pélvicos e incontinencia urinaria femenina. CONVENI BST 2017-3. Banc de Sang i Teixits. Duration 2017-2021. 136.904,00 €.
- ELISA LLURBA OLIVE. Women and Perinatal Health Research Group. 2017 SGR 1267. Agència de Gestió d’Ajuts Universitaris i de Recerca. Duration 2017-2021. 10.000,00 €.
- ELISA LLURBA OLIVE. Red de salud materno-infantil y del desarrollo. RD16/0022/0015. Instituto de Salud Carlos III. Duration 2017-2021. 178.530,00 €.
- ELISA LLURBA OLIVE. Remodelado y disfunción cardíaca en pacientes con preeclampsia regulado por el ambiente anti-angiogénico: estudio clínico y experimental. PI19/00702. Instituto de Salud Carlos III. Duration 2020-2022. 121.000,00 €.
- MONICA CRISTINA CRUZ LEMINI. Contractes Juan Rodés 2019. JR19/00047. Instituto de Salud Carlos III. Duration 2020-2024. 180.000,00 €.
- MONICA CRISTINA CRUZ LEMINI. Impacto del Ejercicio y la Dieta Mediterránea vs Aspirina en la tasa de nacimientos vivos y programación cardiovascular en la Fertilización In Vitro: un Estudio Aleatorizado. PI20/01504. Instituto de Salud Carlos III. Duration 2021-2023. 152.000,00 €.

Note: Total amount granted to PI. It does not include indirect costs.

Other active grants

- “Estratègies de formació per professionals vinculats amb l’atenció al part: noves perspectives” PI Carmen Medina. Projectes d’innovació per a la millora de la qualitat docent en matèria de violència de gènere (INDOVIG 2020), Agència de

Gestió d'Ajuts Universitaris i de Recerca (AGAUR). Funding: 7.750,00 euros.

• “Salut amb perspectiva de gènere: programa pilot de sessions monogràfiques sobre gènere i salut a l'assignatura de Ginecologia i Obstetrícia del grau de Medicina – Campus Sant Pau”. PI: Carmen Medina. Projectes d'innovació docent Universitat Autònoma de Barcelona 2021. Funding: 600,00 euros. Collaborators: Carmen Garrido, Cristina Trilla and Marta Peró.

Doctoral theses

- Mireia Salvador Lluésma, Impacte del Diagnòstic d'una Cardiopatia Congènita en la Família, Universitat Ramón Llull, Elisa LLurba Olivé , 08/11/2021
- Irene Ribera Casellas, Estudi dels factors prenatals predictius d'anomalies del neurodesenvolupament en cardiopaties congènites, Universitat Autònoma de Barcelona, Elisa LLurba Olivé, 15/01/2021

Scientific production

- Balcells L, Fabra P, Polo A, Calaf J. Putting reproductive rights into practice. The profile of the demand in a publicly sponsored ART program for single or female partner women in Catalonia. *EUROPEAN JOURNAL OF CONTRACEPTION AND REPRODUCTIVE HEALTH CARE*. 2021; 26(4). DOI:10.1080/13625187.2021.1891410. PMID:33724129. IF:1,848 (Q3/D8).
- Cobo T, Aldecoa V, Bartha JL, Bugatto F, Carrillo MP, Comas C, Diago V, Ferrero S, Goya M, Herraiz I, Marti L, Olivella A, Paules C, Vives A, Figueras F, Palacio M, Gratacos E, Garrido C, Medina C. Assessment of an intervention to optimise antenatal management of women admitted with preterm labour and intact membranes using amniocentesis-based predictive risk models: study protocol for a randomised controlled trial (OPTIM-PTL Study). *BMJ Open*. 2021; 11(9):e054711. DOI:10.1136/bmjopen-2021-054711. PMID:34588268. IF:2,692 (Q2/D4).
- Crovetto F, Crispi F, Llorba E, Pascal R, Larroya M, Trilla C, Camacho M, Medina C, Dobano C, Gomez MD, Figueras F, Gratacos E, Garcia A, Mora J. Impact of Severe Acute Respiratory Syndrome Coronavirus 2 Infection on Pregnancy Outcomes: A Population-based Study. *CLINICAL INFECTIOUS DISEASES*. 2021; 73(10). DOI:10.1093/cid/ciab104. PMID:33556958. IF:9,079 (Q1/D1).
- Cruz M, Perez EF, Conty MLD, Aguilar AC, Pardilla M, Rodriguez PP, Hernando MM, Acebal LF, Recarte PP, Mallen MDM, Perez NP, Rodriguez JC, Yarza AV, Velasco ON, Fernandez PGD, Lago C, Puig BM, Abellana BM, Ricoy LF, Vicente AR, Freire MJJ, Alvarez MA, Pedraz CC, Mateu OA, Heredia CL, de Alva JCW, San Juan AP, Badia MM, Colomo CA, et al. Obstetric Outcomes of SARS-CoV-2 Infection in Asymptomatic Pregnant Women. *Viruses-Basel*. 2021; 13(1):112. DOI:10.3390/v13010112. PMID:33467629. IF:5,048 (Q2/D3).
- De La Calle M, Delgado JL, Verlohren S, Escudero AI, Bartha JL, Campillos JM, De La Cruz AA, Chantraine F, Hernandez J, Herraiz I, Llorba E, Kurka H, Guo G, Sillman J, Hund M, Marin AP. Gestational Age-Specific Reference Ranges for the sFlt-1/PlGF Immunoassay Ratio in Twin Pregnancies. *FETAL DIAGNOSIS AND THERAPY*. 2021; 48(4). DOI:10.1159/000514378. PMID:33784677. IF:2,587 (Q3/D6).
- Garcia-Manau P, Mendoza M, Bonacina E, Garrido-Gimenez C, Fernandez-Oliva A, Zanini J, Catalan M, Tur H, Serrano B, Carreras E. Soluble fms-like tyrosine kinase to placental growth factor ratio in different stages of early-onset fetal growth restriction and small for gestational age. *ACTA OBSTETRICIA ET GYNECOLOGICA SCANDINAVICA*. 2021;100(1):119-128. DOI:10.1111/aogs.13978. PMID: 32860218. IF:3,636 (Q1/D3).
- Gil R, Nika MC, Bustamante M, Villanueva CM, Foraster M, Cosin M, Alygizakis N, Gomez MD, Llorba E, Sunyer J, Thomaidis NS, Dadvand P, Gago P. The Potential of Sewage Sludge to Predict and Evaluate the Human Chemical Exposome. *Environmental Science & Technology Letters*. 2021; 8(12). DOI:10.1021/acs.estlett.1c00848. PMID:35647215. IF:7,653 (Q1/D1).
- Gomez MD, Pascal R, Cahuana MJ, Garcia O, Sebastiani G, Andreu V, Martinez L, Rodriguez G, Iglesia I, Ortiz O, Mesa MD, Cabero MJ, Guerra L, Llorba E, Dominguez C, Zanini MJ, Foraster M, Larque E, Cabanas F, Lopez M, Perez A, Loureiro B, Pallas CR, Escuder D, Vento M. Environmental Exposure during Pregnancy: Influence on Prenatal Development and Early Life: A Comprehensive Review. *FETAL DIAGNOSIS AND THERAPY*. 2021; 48(4). DOI:10.1159/000514884. PMID:33735860. IF:2,587 (Q3/D6).
- Pero M, Casani L, Castells C, Perez ML, Naranjo EM, Juan O, De Lamo LA, Lopez P, Serrat AV, Badimon L, Roda OP. Rabbit as an animal model for the study of biological grafts in pelvic floor dysfunctions. *Scientific Reports*. 2021; 11(1):10545. DOI:10.1038/s41598-021-89698-z. PMID:34006889. IF:4,379 (Q1/D3).
- Queiruga MB, Delgado A, Garcia MP, Girona SC, Saladich IG, Roda OP. What do female university students know about pelvic floor disorders? A cross-sectional survey. *INTERNATIONAL UROGYNECOLOGY JOURNAL*. 2022; 33(3). DOI:10.1007/s00192-021-04828-5. PMID:33991220. IF:2,894 (Q2/D5).
- Quiroz Y, Llorens E, Novoa R, Motta G, Llorba E, Porta O, Parra J, Ballarin J, Palou J, Bujons A. Pregnancy in Patients With Exstrophy-Epispadias Complex: Are Higher Rates of Complications and Spontaneous Abortion Inevitable?. *UROLOGY*. 2021; 154. DOI:10.1016/j.urology.2021.01.061. PMID:33662406. IF:2,649 (Q3/D6).
- Rial M, Velasco AR, Lubusky M, Hermanova K, Kajdy A, Modzelewski J, Krofta L, Vojtech J, Ferriols E, Rueda C, Parra M, Socias P, Zohav E, Cruz M, Gratacos E, Figueras F. Effect of Maternal and Fetal Characteristics in Feto-Placental Doppler and Impact of Using Adjusted Standards in the Definition of Fetal Growth Restriction at Term. *FETAL DIAGNOSIS AND THERAPY*. 2021; 48(8). DOI:10.1159/000518093. PMID:34515108. IF:2,587 (Q3/D6).

- Saura C, Sanchez O, Martinez S, Dominguez C, Dienstmann R, Ruiz F, Cespedes MC, Penueles A, Cortes J, Llorba E, Cordoba O. Evolution of Angiogenic Factors in Pregnant Patients with Breast Cancer Treated with Chemotherapy. *Cancers*. 2021; 13(4):923. DOI:10.3390/cancers13040923. PMID:33672114. IF:6,639 (Q1/D3).

- Ullmo J, Cruz M, Sanchez O, Bos L, De la Llama PF, Calero F, Dominguez C, Garrido C, Trilla C, Carreras F, Sionis A, Mora J, Garcia A, Ordonez J, Llorba E. Cardiac dysfunction and remodeling regulated by anti-angiogenic environment in patients with preeclampsia: the ANGIOCOR prospective cohort study protocol. *BMC Pregnancy and Childbirth*. 2021; 21(1):816. DOI:10.1186/s12884-021-04263-w. PMID:34879854. IF:3,007 (Q2/D4).

Other scientific production

- Alijotas J, Esteve E, Ferrer R, Saez L, Lefkou E, Mekinian A, Belizna C, Ruffatti A, Hoxha A, Tincani A, Nalli C, Marozio L, Maina A, Espinosa G, Rios R, Cervera R, De Carolis S, Monteleone G, Latino O, Udry S, Llorba E, Garrido C, Trespido L, Gerosa M, Chighizola CB, Rovere P, Canti V, Mayer K, Tabacco S, Arnau A, Trape J, Ruiz D, Sos L, Farran I. Comparative study of obstetric antiphospholipid syndrome (OAPS) and non-criteria obstetric APS (NC-OAPS): report of 1640 cases from EUROAPS registry (vol 59, pg 1306, 2020). *RHEUMATOLOGY*. 2021; 60(12). DOI:10.1093/rheumatology/keab659. PMID:34672326. IF:7,580 (Q1/D2).

- Luzarraga A, Mora I, Magret E, RAMON N. Laparoscopic Colposacropexy Mesh Excision Secondary to Severe Spondylodiscitis. *Journal of Minimally Invasive Gynecology*. 2021; 28(11). DOI:10.1016/j.jmig.2021.08.029. PMID:34500066. IF:4,137 (Q1/D2).

Books or chapters with ISBN

- Marta Baquero, E. Llorba. Estrategias para el ahorro transfusional en ginecología y obstetricia. ISBN: 978-84-123392-0-8 (2021)
- Ana Polo. "II5. El estudio de la reserva funcional ovàrica en el diagnóstico de la función reproductiva de la mujer" chapter in "Lo esencial en medicina reproductiva" 3a ed. IMC (2021)

Communication and dissemination activities

Outreach activities

- Radio Interview at Catalunya Ràdio. <https://www.ccma.cat/catradio/alcarta/les-dones-i-els-dies/vacuna-de-la-covid-perque-ningu-sen-va-recordar-de-la-dones/audio/1109109/>
- Radio interview at Catalunya Ràdio "Estat de Gràcia" <http://www.ccma.cat/catradio/alcarta/estat-de-gracia/esther-vivas-algunes-dones-viuen-el-part-com-una-violacio/audio/1108724/>

- News article. <https://www.ccma.cat/324/una-noia-de-25-anys-dona-a-llum-9-nadons-en-una-clinica-del-marroc/noticia/3095629/>

- Social media: <https://twitter.com/hospitalsantpau/status/1365261673360207872?s=21>

- <https://www.instagram.com/tv/CLZG0cwBVNE/?igshid=1ivck6l0u2h3c>

- <https://twitter.com/totesmoutv3/status/1361733652305104899?s=08>

- News article at El País. <https://elpais.com/sociedad/2021-07-12/la-controversia-de-vacunar-a-embarazadas-la-evidencia-es-limitada-pero-favorable-al-pinchazo.html>

- News article at Ara: https://criatures.ara.cat/embaras-crianca/sant-pau-organitza-2a-edicio-jornada-mares_1_3967228.html

- Open doors for Schools: "Salut Reproductiva". Fundació Puivert. 29/04/2021. Ana Polo, speaker.

- ENTRE MARES "Maternitat i COVID" Research collaboration day at Recinto Modernista Sant Pau. 02/05/2021. Organizing committee: Elisa Llorba and Ana Polo.

Scientific Dissemination

National meetings and conferences

- Sospita de Shua: diagnòstic diferencial de la MAT a l'embaràs. Taller de SHUA a la gestació. 8 de juny de 2021. Virtual, a través de l'Acadèmia de Ciències Mèdiques de Catalunya i Balears. Elisa Llorba, speaker and coordinator.

- Inducción parto con métodos mecánicos. SEGO webinar 27 Abril 2021. Elisa Llorba, speaker and coordinator.

Internationals meetings and conferences

- Early prophylactic Enoxaparin for the prevention of preeclampsia and intrauterine growth restriction. Meta-analysis. Hypertension symposium 18 September 2021. ISUOG. Elisa Llorba, speaker.

- Endothelial dysfunction and activation in Preeclampsia and kidney in 2021. NEP Special 58th ERA-EDTA Congress Edition-6-8 June 2021. Elisa Llorba, speaker.

- VP07.07: First experiences with hysterosalpingo-foam-sonography in women to undergo assisted reproduction technology without a male partner. P. Muro Blanc, A. Polo Ramos, M. Pero, N. Rams Llop. 31st World Congress on Ultrasound in Obstetrics and Gynecology. 15-17 October 2021. Ultrasound in Obstetrics & Gynecology 2021; 58 (Suppl. 1): 89 – 312.

- VP31.07. Fetal neurosonographic assessment after maternal COVID-19 infection during pregnancy. A.M. Hawkins-Villarreal, A.Goncé ,L.Ribera, M. Valdés-Bango Curell, N.Masoller, R. Rodriguez, B. Herrero, E.Antolin, M.Cruz-Lemini, O. Alejos, E.

Llurba, C. Paules, D. Lerma Puertas, L.Guirado, M. Perez-Cruz, F. Crovetto, M.Gomez-Roig, F. Figueras, E.Eixarch, F.Crispi, E.Gratacós, M. Lopez. 31st World Congress on Ultrasound in Obstetrics and Gynecology. 15-17 October 2021. *Ultrasound in Obstetrics & Gynecology 2021*; 58 (Suppl. 1): 89 – 312

- VP 31.15. Clinical relapse of SARS-CoV-2 infection during pregnancy: report of 3 cases. Mónica Cruz-Lemini, Johana Ullmo, Carmen Medina, Abdulia Alejos, Cristina Trilla, Elisa Llurba. 31st World Congress on Ultrasound in Obstetrics and Gynecology. 15-17 October 2021. *Ultrasound in Obstetrics & Gynecology 2021*; 58 (Suppl. 1): 89 – 312
- VP34.01. Customised Doppler standards for the definition of late fetal growth restriction. M. Rial-Crestelo, M. Lubusky, K. Hermanova, A.Kajdy, J. Modzelewski, L.Krofta, J.Vojtech, , E.Ferriols, C. Rueda, M. Parra-Cordero, P. Socias, E.Zohav, M. Cruz-Lemini, E.Gratacós, F.Figueras. 31st World Congress on Ultrasound in Obstetrics and Gynecology. 15-17 October 2021. *Ultrasound in Obstetrics & Gynecology 2021*; 58 (Suppl. 1): 89 – 312
- VP38.08. Usefulness of fetal Doppler as a predictor of Language development in the first 30 months of life. R. Cruz-Martinez, A.Soberón-García, M.Cruz-Lemini, D. Saldivar-Rodríguez, R. Villalobos-Gómez. 31st World Congress on Ultrasound in Obstetrics and Gynecology. 15-17 October 2021. *Ultrasound in Obstetrics & Gynecology 2021*; 58 (Suppl. 1): 89 – 312
- VP 42.05. Low-molecular-weight heparin for prevention of preeclampsia and other placental-mediated complications: a systematic review and meta-analysis. Mónica Cruz-Lemini, Juan Carlos Vazquez, Johana Ullmo, Elisa Llurba. 31st World Congress on Ultrasound in Obstetrics and Gynecology. 15-17 October 2021. *Ultrasound in Obstetrics & Gynecology 2021*; 58 (Suppl. 1): 89 – 312

Teaching

- I curso Medicina Reproductiva en entorno virtual 3D. Ana Polo, director of de reproductive medicine programm, and Carmen medina, organization. Hospital de Sant Pau and Fundació Puigvert, 6/13-05-2021.
- I Jornada de Atención Integral al parto de nalgas, accredited by Consell Català de Formació Continuada. Hospital de la Santa Creu i Sant Pau, 18/06/2021. Organizing committee: Elisa Llurba, Carmen Garrido and Carmen Medina. “Historia del Parto de nalgas”, Carmen Garrido, speaker. “Alternativa al parto vaginal de nalgas: la versión cefálica externa”, Carmen Medina, speaker.
- Workshop “Versión Cefálica Externa” I Jornada de Atención Integral al parto de nalgas, Hospital de la Santa Creu i Sant Pau, 18/06/2021. Carmen Medina, speaker.
- Controvèrsies en Inseminació Artificial en el segle XXI en la Sanitat Pública. Fundació Puigvert, 01/10/2021. Ana Polo, director.
- “Taller Phillips. Función cardiaca fetal: tips & tricks (taller con escaneo en vivo).” Elisa Llurba and Mónica Cruz-Lemini. 36 Edición Nacional Formación SEGO. 19-22/10/2021.

A.G. Associated Groups



Emerging Processes in Prevalent Diseases

Coordinator

Puig Campmany, Mireia FGS
mpuigc@santpau.cat

Members

Agra Montava, Ivan	FGS	López Matas, Mara	FGS
Alquezar Arbe, Aitor	FGS	Lozano Polo, Laura	FGS
Alvarez Albarran, Maria Teresa	FGS	Mateo Roca, Miriam	FGS
Barcons Pujol, Miquel	FGS	Mauri Plana, Albert	FGS
Blazquez Andion, Marta	FGS	Moliné Pareja, Antoni	FGS
Caballero Flores, Francisco	FGS	Montiel Dacosta, Josep Antoni	FGS
Ceresuela Lobera, Andrés	FGS	Moreno Pinillos, Rosa	FGS
Diez Diez, Veronica	FGS	Pérez Baena, Sergio	FGS
Donniacono, Domenico	FGS	Pérez Méndez, M. Carmenza	FGS
Fernandez Castaño, Irene	FGS	Piera Salmeron, Aina	FGS
Gil Olivas, Eva	FGS	Ris Romeu, Josep	FGS
Guardiola Tey, Jose Maria	FGS	Rizzi , Miguel Alberto	FGS
Hernandez Ontiveros, Hector	FGS	Rossi, Amelia	FGS
Herrera Mateo, Sergio Antonio	FGS	Santaló Bel, Miguel	FGS
Higa Sansone, Jorge Leopoldo	FGS	Seres Roig, Montserrat	FGS
Jodar Manzanera, Victoria	FGS	Torres Tornos, Andreu	FGS
Jordan Lucas, Sara	FGS	Trejo Gutierrez, Olga Maria	FGS
Lazzari, Roberto	FGS		

Main lines of research

- Study and analysis of processes frequently observed in emergency departments so as to transfer the results to clinical practice and provide better care to patients.
- Clinical Organization and Management (Mireia Puig and Josep Ris)
- Patient safety and emergency service quality. PI: Maite Álvarez.
- Nosocomial infection. PI: Albert Mauri.
- Short-stay unit. PI: J.M. Guardiola.
- Undergraduate teaching. PI: J.A. Montiel.
- Organ Donation and Coordination (Francisco Caballero and Jesús Leal)
- Respiratory System Disorders (Antoni Moliné)
- Acute Respiratory Failure. PI: A. Moliné.
- Ventilatory pattern analysis in heart failure. PI: Sergio Herrera.
- Pneumonia in the emergency department. PI: Míriam Mateo.
- Noninvasive ventilation. PI: A. Moline.
- Pulmonary embolism. PI: Laura Lozano.
- Cardiovascular System (Miquel Santaló)
- Acute coronary syndrome PI: Roberto Lazzari.
- Acute coronary syndrome in women. PI: Marta Blázquez.
- Ultrasensitive markers in acute coronary syndrome. PI: Aitor Alquézar.
- Cardiac failure. PI: Miguel Rizzi.
- Supraventricular arrhythmias. PI: Olga Trejo.
- Community Disorders
- Diabetes care in emergency departments. PI: Iván Agra.
- Infection in emergency departments. PI: J.M. Guardiola.
- Sepsis syndrome. PI: Mara López.
- Elderly patients. PI: Leopoldo Higa.
- Sexually transmitted disease. PI: Montse Seres.
- Haematology disease. PI: Marta Blázquez.

Scientific production

- Alquezar A, Miro O, Pinera P, Jacob J, Martin A, Montava IA, Llorens P, Jimenez S, Burillo G, Garcia EJ, Martin FJ, del Castillo JG. Analysis of the evolution of patients attended in Spanish emergency departments during the first wave of the pandemic. *Anales del Sistema Sanitario De Navarra*. 2021; 44(2). DOI:10.23938/ASSN.0957. PMID:34142985. IF:0,829 (Q4/D10).
- Brochado O, Martinez I, Berenguer J, Medrano L, Gonzalez J, Jimenez MA, Carrero A, Hontanon V, Navarro J, Guardiola JM, Fernandez A, Resino S, Domingo P, Esteban H. HCV eradication with IFN-based therapy does not completely restore gene expression in PBMCs from HIV/HCV-coinfected patients. *JOURNAL OF BIOMEDICAL SCIENCE*. 2021; 28(1):23. DOI:10.1186/s12929-021-00718-6. PMID:33785040. IF:8,410 (Q1/D2).
- Canyelles M, Garcia A, Junza A, Yanes O, Puig N, Ordonez J, Sionis A, Sans J, Alquezar A, Santos D, Rotllan N, Julve J, Tondo M, Escola JC, Blanco F. The Capacity of APOB-Depleted Plasma in Inducing ATP-Binding Cassette A1/G1-Mediated Macrophage

Cholesterol Efflux-But Not Gut Microbial-Derived Metabolites-Is Independently Associated with Mortality in Patients with ST-Segment Elevation Myocardial Infarction. *Biomedicines*. 2021; 9(10):1336. DOI:10.3390/biomedicines9101336. PMID:34680453. IF:6,081 (Q1/D2).

- Carrero A, Berenguer J, Hontanon V, Guardiola JM, Navarro J, von MA, Tellez MJ, Quereda C, Santos I, Sanz J, Galindo MJ, Hernandez J, Jimenez MA, Perez L, Bellon JM, Resino S, Esteban H, Martinez E, Gonzalez J. Effects of Hepatitis C Virus (HCV) Eradication on Bone Mineral Density in Human Immunodeficiency Virus/HCV-Coinfected Patients. *CLINICAL INFECTIOUS DISEASES*. 2021; 73(7). DOI:10.1093/cid/ciaa1396. PMID:32930720. IF:9,079 (Q1/D1).
- Chaib FB, Hernandez SJ, Navas JMP, Mancilla JC, Arias LC, Loranca MM, Gomez AP, Marquez AA, Polo LP, Garrido AS, Lecumberri R, Artacho PR. Characteristics of isolated superficial vein thrombosis and diagnostic-therapeutic management in Spanish hospital emergency departments: the ALTAMIRA study. *Emergencias*. 2021; 33(6). PMID:34813190. IF:3,881 (Q1/D2).
- Congost GB, Brugaletta S, Bernal JV, Lopez AM, Gabalda JR, Garcia J, Campmany MP, Momblan M. The importance of organizational variables in treatment time for patients with ST-elevation acute myocardial infarction improve delays in STEMI. *Australasian Emergency Care*. 2021; 24(2). DOI:10.1016/j.auec.2020.10.001. PMID:33199195. IF:1,283 (Q3/D8).
- Corominas H, Castellvi I, Pomar V, Antonijuan R, Mur I, Matas L, Gich I, de Benito N, Laiz A, Castillo D, Villamarin L, Filella D, Mill AM, Quijada MA, Puig M, Casademont J, Domingo P. Effectiveness and safety of intravenous tocilizumab to treat COVID-19-associated hyperinflammatory syndrome: Covizumab-6 observational cohort. *CLINICAL IMMUNOLOGY*. 2021; 223:108631. DOI:10.1016/j.clim.2020.108631. PMID:33189888. IF:3,969 (Q3/D6).

• Fernandez MD, Prieto B, Vazquez J, Jacob J, Gil V, Miro O, Llorens P, Martin FJ, Alquezar A, Rodriguez E, Romero R, Lopez P, Herrero P. Prognostic implications of Anemia in patients with acute heart failure in emergency departments. ANEM-AHF Study. *INTERNATIONAL JOURNAL OF CLINICAL PRACTICE*. 2021; 75(4):e13712. DOI:10.1111/ijcp.13712. PMID:32955782. IF:2,503 (Q2/D5).

• Fragiell M, Miró Ò, Llorens P, Jiménez S, Piñera P, Burillo G, Martín A, Martín-Sánchez FJ, García-Lamberechts EJ, Jacob J, Alquézar-Arbé A, Juárez R, Jiménez B, Del Río R, Mateo Roca M, García AH, López Laguna N, Lopez Diez MP, Pedraza García J, Fernández de Simón Almela A, Lopez Diaz JJ, Eiroa Hernández P, Ruiz de Lobera N, Porta-Etessam J, et al.; SIESTA (Spanish Investigators in Emergency Situations Team) network. Incidence, clinical, risk factors and outcomes of Guillain-Barré in Covid-19. *Annals of Neurology*. 2021;89(3):598-603. DOI:10.1002/ana.25987. PMID: 33295021. IF:10,422 (Q1/D1).

• Fragiell M, Miro O, Llorens P, Jimenez S, Salmeron PP, Burillo G, Martin A, Martin FJ, Lamberechts E, Jacob J, Alquezar A,

Llopis F, Garcia JP, Lopez RC, Vera MTM, Lucas FJ, Martinez FG, Juarez R, Rodriguez ME, Bautista BMM, Valdes A, Nicolas J, Amez JMF, Porta J, Calvo E, del Castillo JG. Incidence, clinical characteristics, risk factors and outcomes of meningoencephalitis in patients with COVID-19. *EUROPEAN JOURNAL OF CLINICAL MICROBIOLOGY & INFECTIOUS DISEASES*. 2021; 40(8). DOI:10.1007/s10096-021-04206-5. PMID:33686558. IF:3,267 (Q3/D6).

- Freund Y, Chauvin A, Jimenez S, Philippon AL, Curac S, Femy F, Gorlicki J, Chouihed T, Goulet H, Montassier E, Dumont M, Polo LL, Le P, Khellaf M, Bouzid D, Raynal PA, Abdessaied N, Laribi S, Guenezan J, Ganansia O, Bloom B, Miro O, Cachanado M, Simon T. Effect of a Diagnostic Strategy Using an Elevated and Age-Adjusted D-Dimer Threshold on Thromboembolic Events in Emergency Department Patients With Suspected Pulmonary Embolism A Randomized Clinical Trial. *JAMA-JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION*. 2021; 326(21). DOI:10.1001/jama.2021.20750. PMID:34874418. IF:56,272 (Q1/D1).

- Garcia EJ, Miro O, Fragiell M, Llorens P, Jimenez S, Pinera P, Burillo G, Martin A, Martin FJ, Jacob J, Alquezar A, Martinez LE, Miranda BR, Grinspan MR, Dominguez MJ, Munoz FJT, Martin SG, Garcia AG, Vela MI, Carbajosa V, Mota MS, Gonzalez MJM, Urbano CA, Porta J, Calvo E, del Castillo JG. A case-control analysis of stroke in COVID-19 patients: Results of unusual manifestations of COVID-19-study 11. *ACADEMIC EMERGENCY MEDICINE*. 2021; 28(11). DOI:10.1111/acem.14389. PMID:34490961. IF:3,451 (Q1/D3).

- Godoy H, Duroux R, Jacobson KA, Soler C, Colino H, Jimenez V, Montiel J, Hove L, Ciruela F. Adenosine A(2A) Receptors Are Upregulated in Peripheral Blood Mononuclear Cells from Atrial Fibrillation Patients. *INTERNATIONAL JOURNAL OF MOLECULAR SCIENCES*. 2021; 22(7):3467. DOI:10.3390/ijms22073467. PMID:33801676. IF:5,923 (Q1/D3).

- Gutierrez B, del Toro MD, Borobia AM, Carcas A, Jarrin I, Yllescas M, Ryan P, Pachon J, Carratala J, Berenguer J, Arribas JR, Rodriguez J, López J, Pascual P, Pomar V, Rabella N, Benito N, Domingo P, Bonfill X, Puig M, Mancebo J, Martinez G. Identification and validation of clinical phenotypes with prognostic implications in patients admitted to hospital with COVID-19: a multicentre cohort study. *LANCET INFECTIOUS DISEASES*. 2021; 21(6). DOI:10.1016/S1473-3099(21)00019-0. PMID:33636145. IF:25,071 (Q1/D1).

- Jimenez S, Miro O, Llorens P, Martin FJ, Burillo G, Pinera P, Martin A, Alquezar A, Garcia EJ, Jacob J, Grima MLL, Millan J, Molina F, Albero PB, Cardozo C, Modol JM, Aguirre A, Gaya R, Adroher M, Llauger L, Diaz JJJ, Gonzalez NC, Aragues PL, Gomez AP, del Castillo JG, Behalf Spanish Investigators E. Incidence, risk factors, clinical characteristics and outcomes of deep venous thrombosis in patients with COVID-19 attending the Emergency Department: results of the UMC-19-S-8. *European Journal of Emergency Medicine*. 2021; 28(3). DOI:10.1097/MEJ.0000000000000783. PMID:33904528. IF:2,799 (Q2/D4).

- Lozano MB, Miro O, Llorens P, Traveria L, Monzo JMP, de la Torre AN, Rodriguez AD, Jacob J, Tost J, Alquezar A, Gil V, Martin FJ, Herrero P, Burillo G. Acute heart failure in subtropical climates: clinical characteristics, management, and outcomes in the Canary Islands versus continental Spain - the CANAR-ICA study results. *Emergencias*. 2021; 33(6). PMID:34813187. IF:3,881 (Q1/D2).

- Martin FJ, Carbo AV, Miro O, Llorens P, Jimenez S, Piñera P, Burillo G, Martin A, Garcia JE, Jacob J, Alquezar A, Martinez C, Miranda JD, Picado AL, Arrebola JP, Lopez ME, Parviainen A, del Castillo JG, Miro O, Jimenez S, Amez JMF, Diaz RR, del Rio JGG, Alonso H, Herrero P, de Lobera NR, Ibero C, Mayan P, Peinado R, Bustos CN, Manzanares JA, Roman F, et al. Socio-Demographic Health Determinants Are Associated with Poor Prognosis in Spanish Patients Hospitalized with COVID-19. *JOURNAL OF GENERAL INTERNAL MEDICINE*. 2021; 36(12). DOI:10.1007/s11606-020-06584-6. PMID:34240284. IF:5,128 (Q1/D2).

- Martin FJ, Esquivel PP, Garcia GL, del Castillo JG, Adrada ER, Espinosa B, Diez MPL, Pareja RR, Bordigoni M, Perez MJ, Bibiano C, Ferrer C, Aguilo S, Mojarro EM, Aguirre A, Pinera P, Lopez A, Llorens P, Jacob J, Gil V, Herrero P, Perez CF, Gil P, Calvo E, Rossello X, Bueno H, Burillo G, Miro O. Thirty-day outcomes in frail older patients discharged home from the emergency department with acute heart failure: effects of high-risk criteria identified by the DEED FRAIL-AHF trial. *Emergencias*. 2021; 33(3). PMID:33978329. IF:3,881 (Q1/D2).

- Miro O, Alquezar A, Llorens P, Martin FJ, Jimenez S, Martin A, Burillo G, Jacob J, Garcia EJ, Pinera P, del Castillo JG. Comparison of the demographic characteristics and comorbidities of patients with COVID-19 who died in Spanish hospitals based on whether they were or were not admitted to an intensive care unit. *Medicina Intensiva*. 2021; 45(1). DOI:10.1016/j.medin.2020.09.002. PMID:33158594. IF:2,491 (Q3/D8).

- Miro O, Alquezar A, Pinera P, Jacob J, Martin A, Llorens P, Jimenez S, del Castillo JG, Garcia EJ, Martin FJ, Burillo G. ENCOVUR-2 study: Analysis of the protocols of action, management and availability of intensive care resources for patients with severe COVID-19 attended in Spanish Emergency Departments during the first peak of the pandemic. *Revista Espanola de Salud Publica*. 2021; 95:e202108103. PMID:34376632. IF:0,756 (Q4/D10).

- Miro O, Harjola P, Rossello X, Gil V, Jacob J, Llorens P, Martin FJ, Herrero P, Martinez G, Aguilo S, Lopez ML, Fuentes M, Perez J, Rodriguez E, Mir M, Tost J, Llauger L, Ruschitzka F, Harjola VP, Mullens W, Masip J, Chioncel O, Peacock WF, Muller C, Mebazaa A, Alquezar A, Rizzi MA, Herrera S, ICA GRP. The FAST-FURO study: effect of very early administration of intravenous furosemide in the prehospital setting to patients with acute heart failure attending the emergency department. *European Heart Journal-Acute Cardiovascular Care*. 2021; 10(5). DOI:10.1093/ehjacc/zuaa042. PMID:33580790. IF:4,696 (Q2/D4).

- Miro O, Jimenez S, Mebazaa A, Freund Y, Burillo G, Martin A, Martin FJ, Garcia EJ, Alquezar A, Jacob J, Llorens P, Pinera P, Gil V, Guardiola J, Cardozo C, Deltell JMM, Tost J, Tejedo AA, Palau A, Garcia LL, Munoz MA, Galan CD, Villa TA, Lopez N, Diez MPL, Chaib FB, Motto EQ, Tejera MG, Ponce MC, del Castillo JG. Pulmonary embolism in patients with COVID-19: incidence, risk factors, clinical characteristics, and outcome. *EUROPEAN HEART JOURNAL*. 2021; 42(33). DOI:10.1093/eurheartj/ehab314. PMID:34164664. IF:29,983 (Q1/D1).
 - Miro O, Llorens P, Freund Y, Davison B, Takagi K, Herrero P, Jacob J, Martin FJ, Gil V, Rossello X, Alquezar A, Jimenez FX, Masip J, Mebazaa A, Cotter G. Early intravenous nitroglycerin use in prehospital setting and in the emergency department to treat patients with acute heart failure: Insights from the EAHFE Spanish registry. *INTERNATIONAL JOURNAL OF CARDIOLOGY*. 2021; 344. DOI:10.1016/j.ijcard.2021.09.031. PMID:34543690. IF:4,164 (Q2/D4).
 - Miro O, Llorens P, Jimenez S, Pinera P, Burillo G, Martin A, Martin FJ, Lamberechts J, Alquezar A, Jacob J, Noceda J, Cano MJC, Bayarri MJF, Porrino JMM, Melendez N, Garcia CP, Aznar JVB, Ponce MC, Fernandez ED, Martinez LE, Gomez AP, Tost J, Dominguez MJ, Munoz FJT, del Castillo JG. A case-control emergency department-based analysis of acute pancreatitis in Covid-19: Results of the UMC-19-S-6. *Journal of Hepato-Biliary-Pancreatic Sciences*. 2021; 28(11). DOI:10.1002/jhbp.873. PMID:33259695. IF:7,027 (Q1/D1).
 - Miro O, Llorens P, Jimenez S, Pinera P, Burillo G, Martin A, Martin FJ, del Castillo JG, Salmeron PP, Chaib FB, Pelaez ED, Miranda BR, Arias AS, de Lobera NR, Vela MI, Lopez LH, Galan CD, Jimenez GF, Lamberechts E, Fragiell M, Dominguez MJ, Ramos M, Amez JMF, Entrala BA, Garcia AG, de Frutos MF, Lopez RC, Jacob J, Llopis F, Ponce MC, et al. [Guardiola J]. Frequency of five cardiovascular/hemostatic entities as primary manifestations of SARS-CoV-2 infection: Results of the UMC-19-S-2. *INTERNATIONAL JOURNAL OF CARDIOLOGY*. 2021; 330. DOI:10.1016/j.ijcard.2021.01.051. PMID:33529670. IF:4,164 (Q2/D4).
 - Miro O, Llorens P, Jimenez S, Pinera P, Burillo G, Martin A, Martin FJ, Garcia EJ, Jacob J, Alquezar A, Modol JM, Lopez MP, Guardiola JM, Cardozo C, Imbernon FJL, Tejedo AA, Garcia AG, Grinspan MR, Roca FL, del Castillo JG. Frequency, Risk Factors, Clinical Characteristics, and Outcomes of Spontaneous Pneumothorax in Patients With Coronavirus Disease 2019 A Case-Control, Emergency Medicine-Based Multicenter Study. *CHEST*. 2021; 159(3). DOI:10.1016/j.chest.2020.11.013. PMID:33227276. IF:9,410 (Q1/D1).
 - Miró Ò, López-Díez MP, Rossello X, Gil V, Herrero P, Jacob J, Llorens P, Escoda R, Aguiló S, Alquézar A, Tost J, Valero A, Gil C, Garrido JM, Alonso H, Lucas-Invernón FJ, Torres-Murillo J, Raquel-Torres-Gárate, Mecina AB, Traveria L, Agüera C, Takagi K, Möckel M, Pang PS, Collins SP, Mueller CE, Martín-Sánchez FJ; ICA-SEMES Research Group. Analysis of standards of quality for outcomes in acute heart failure patients directly discharged home from emergency departments and their relationship with the emergency department direct discharge rate. *Journal of Cardiology*. 2021;77(3):245-253. DOI:10.1016/j.jcc.2020.09.002. PMID: 33054989. IF:3,159 (Q2/D5).
 - Rizzi MA, Sarasola AG, Arbé AA, Mateo SH, Gil V, Llorens P, Jacob J, Martín-Sánchez FJ, Puente PH, Escoda R, Espinosa B, Roset À, Torres-Gárate R, Torres-Murillo J, Mecina AB, López-Díez MP, Pérez JMÁ, Tost J, Salvo E, López-Grima ML, Gil C, Mir M, Rutzinska F, Chioncel O, Miró Ò; ICA-SEMES Research Group. Factors associated with in-hospital mortality and adverse outcomes during the vulnerable post-discharge phase after the first episode of acute heart failure: results of the NOVICA-2 study. *Clinical Research in Cardiology*. 2021;110(7):993-1005. DOI:10.1007/s00392-020-01710-0. Erratum in: *Clinical Research in Cardiology*. 2020. PMID: 32959081.
 - Rossello X, Bueno H, Gil V, Jacob J, Javier Martín-Sánchez F, Llorens P, Herrero Puente P, Alquézar-Arbé A, Raposeiras-Roubín S, López-Díez MP, Pocock S, Miró Ò. MEESI-AHF risk score performance to predict multiple post-index event and post-discharge short-term outcomes. *European Heart Journal-Acute Cardiovascular Care*. 2021;10(2):142-152. DOI:10.1177/2048872620934318. PMID: 33609116. IF:4,696 (Q2/D4).
 - Rossello X, Bueno H, Gil V, Jacob J, Martin FJ, Llorens P, Puente PH, Alquezar A, Espinosa B, Raposeiras S, Muller CE, Mebazaa A, Maggioni AP, Pocock S, Chioncel O, Miro O, ICA GRP. Synergistic Impact of Systolic Blood Pressure and Perfusion Status on Mortality in Acute Heart Failure. *Circulation-Heart Failure*. 2021; 14(3):e007347. DOI:10.1161/CIRCHEARTFAILURE.120.007347. PMID:33677977. IF:8,790 (Q1/D2).
 - Ruiz J, Alcon EV, Ramos FM, Santolaya R, Tey JMG. Antimicrobial stewardship programs in emergency departments: how do we measure antimicrobial use? A systematic review. *Revista Espanola de Quimioterapia*. 2021; 34(6). DOI:10.37201/req/028.2021. PMID:34523327. IF:1,553 (Q4/D9).
 - Tost J, Llorens P, Cotter G, Davison B, Jacob J, Gil V, Herrero P, Martin FJ, Donea R, Rodriguez B, Lucas FJ, Andueza JA, Mecina AB, Torres R, Pinera P, Alquezar A, Espinosa B, Mebazaa A, Chioncel O, Miro O. Outcomes of patients with heart failure with preserved ejection fraction discharged on treatment with neurohormonal antagonists after an episode of decompensation. *European Journal of Internal Medicine*. 2021; 94. DOI:10.1016/j.ejim.2021.07.013. PMID:34446316. IF:4,487 (Q1/D3).
- ## Other scientific production
- Alquezar A, Pinera P, Jacob J, del Castillo JG, Miro O. ENCOVUR-3 study: Spanish emergency departments' participation in hospital decision-making committees during the first peak of the coronavirus disease 2019 pandemic. *European Journal of Emergency Medicine*. 2021; 28(4). DOI:10.1097/MEJ.0000000000000794. PMID:34187996. IF:2,799 (Q2/D4).



Radiophysics and Radioprotection

Coordinator

Carrasco de Fez, Pablo
pcarrasco@santpau.cat FGS

Members

Adrià Mora, Mar	FGS	Latorre Musoll, Arthur	FGS
Ansón Marcos, Cristina	FGS	Mejias Miñarro, Mónica	FGS
Barceló Pagès, Marta	FGS	Pallerol Pinzano, Rosa M.	FGS
Gallego Franco, Pedro	FGS	Pérez-Alija Fernández, Jaime	FGS
Jornet Sala, Nuria	FGS	Ruiz Martinez, Agustin	FGS

Main lines of research

External beam radiotherapy

- Characterization of various in vivo dose measurement detectors for radiation therapy treatments with intensity modulation (IMRT, VMAT).

- Validation of dose calculation algorithms for external beam radiotherapy planning systems.

- Automation of radiotherapy Quality Assurance.

- Optimization of QA procedures for IMRT, VMAT, stereotactic body radiation therapy (SBRT) and gating respiratory treatments.
- Quantitative imaging analytics for predictive modelling of cardiac and skin toxicity after breast radiotherapy.

- Artificial Intelligence in Radiotherapy.
- In vivo dosimetry in radiotherapy.
- Dose management systems in radiology.

Collaborations

Collaborations with other IIB Sant Pau research groups

External collaborations

- Estudio del daño genético inicial inducido por las radiaciones ionizantes. Evaluación de su aplicabilidad como biomarcador de radiosensibilidad. Funding entity: Consejo de Seguridad Nuclear (CSN). Participant entities: UAB i servei RFRP (HSCSP). Participation: Pablo Carrasco (CI), Principal Investigator J.F. Barquinero, UAB. Duration: 3 years (2019-2021). Financed amount: 215926 €.

Other active grants

- Conveni Servei RFRP (HSCSP) i empresa Sun Nuclear (EEUU). Duration: 3 years (01/07/2019–01/07/2022). Title: Centre de referència de la plataforma de gestió de qualitat SunCHECK.. Founding entity: Sun Nuclear (EEUU). Participant entities: Sun Nuclear i servei RFRP (HSCSP). Participation: Nuria Jornet (Project director), assistant and resident doctors of the Radiophysics and radioprotection service.

Scientific production

- Ambroa EM, Perez J, Gallego P. Convolutional neural network and transfer learning for dose volume histogram prediction for prostate cancer radiotherapy. *Medical Dosimetry*. 2021; 46(4). DOI:10.1016/j.meddos.2021.03.005. PMID:33896700. IF:1,482 (Q4/D9).
- Cusumano D, Boldrini L, Dhont J, Fiorino C, Green O, Gungor G, Jornet N, Kluter S, Landry G, Mattiucci GC, Placidi L, Reynaert N, Ruggieri R, Tanadini S, Thorwarth D, Yadav P, Yang YL, Valentini V, Verellen D, Indovina L. Artificial Intelligence in magnetic Resonance guided Radiotherapy: Medical and physical considerations on state of art and future perspectives. *Physica Medica-European Journal of Medical Physics*. 2021; 85. DOI:10.1016/j.ejmp.2021.05.010. PMID:34022660. IF:2,685 (Q3/D6).
- Garibaldi C, Essers M, Heijmen B, Bertholet J, Koutsouveli E, Maas A, Moore M, Petrovic B, Koniarova I, Lisbona A, Piotrowski T, Moeckli R, Medina AL, Markidou ES, Clark CH, Jornet N. Towards an updated ESTRO-EFOMP core curriculum for education and training of medical physics experts in radiotherapy - A survey of current education and training practice in Europe. *Physica Medica-European Journal of Medical Physics*. 2021; 84. DOI:10.1016/j.ejmp.2021.03.030. PMID:33862451. IF:2,685 (Q3/D6).

Communication and dissemination activities

Conferences and meetings

- 28/8/2021. Title: Independent dose calculation and pre-treatment patient specific QA. Congress: ESTRO 2021 Madrid. Author: Pablo Carrasco. Journal: Radiotherapy and Oncology. Vol. 161. Supplement S2. Type of presentation: Teaching lecture.
- 27/8/2021–31/8/2021. Title: Breast IMRT or 3D-CRT planning? A decision-making framework using convolutional neural networks. Congress: ESTRO 2021 Madrid. Author: P. Gallego Franco (Spain), J. Pérez-Alija, J. Chimeno, M. Lizondo, N. Jornet, C. Ansón, A. Latorre, M. Barceló, N. García, H. Vivancos, M. Adrià, A. Ruiz, P. Carrasco, E. Ambroa. Journal: Radiotherapy and Oncology. Vol. 161. Supplement S2. Type of presentation: Oral.

- 27/8/2021–31/8/2021. Title: Influence of the pandemic COVID-19 on medical physics practice: A flash survey in Spain. Congress: ESTRO 2021 Madrid. Author: M. Adrià-Mora (Spain), J. Pérez-Alija, P. Gallego, C. Ansón, P. Carrasco, J. Chimeno, M. Barceló, N. García-Apellaniz, N. Jornet, A. Latorre, A. Ruiz, H. Vivancos. Journal: Radiotherapy and Oncology. Vol. 161. Supplement S2. Type of presentation: Poster.

- 27/8/2021–31/8/2021. Title: Analysis of transit in vivo dosimetry for VMAT H&N treatments: weight loss and shoulders position. Congress: ESTRO 2021 Madrid. Author: C. Anson Marcos (Spain), N. Jornet, A. Latorre-Mussoll, J. Chimeno, P. Gallego, J. Pérez-Alija, M. Barceló, N. García Apellaniz, M. Adrià, A. Ruiz, H. Vivancos, P. Carrasco de Fez. Journal: Radiotherapy and Oncology. Vol. 161. Supplement S2. Type of presentation: Poster.

- 27/8/2021–31/8/2021. Title: Near misses reporting: effective tool for safety culture shift in a Radiation Oncology Department. Congress: ESTRO 2021 Madrid. Author: N. Jornet (Spain), J. Perez Alija, S. Bermejo, N. Ventosa, A. Pedro, G. Gomez de Segura, P. Guerra, G. Sancho. Journal: Radiotherapy and Oncology. Vol. 161. Supplement S2. Type of presentation: Poster.

- 27/8/2021–31/8/2021. Title: Dosimetric impact of the introduction of biological optimization objectives gEUD and RapidPlan. Congress: ESTRO 2021 Madrid. Author: J. Perez-Alija (Spain), P. Gallego, M. Barceló, C. Ansón, J. Chimeno, A. Latorre, N. Jornet, N. García, H. Vivancos, A. Ruiz, M. Adrià, P. Carrasco. Journal: Radiotherapy and Oncology. Vol. 161. Supplement S2. Type of presentation: Poster.

- 27/8/2021–31/8/2021. Title: Predicting factors for differences between dose algorithms in SBRT lung patients. Congress: ESTRO 2021 Madrid. Author: M. Barceló-Pagès (Spain), J.M. Chimeno Hernández, A. Latorre-Musoll, P. Gallego Franco, C. Ansón Marcos, N. García Apellaniz, N. Jornet Sala, J. Perez-Alija, M. Adrià Mora, H. Vivancos Bargalló, A. Ruiz Martínez, P. Carrasco de Fez. Journal: Radiotherapy and Oncology. Vol. 161. Supplement S2. Type of presentation: Poster.

- 17/8/2021– 20/8/2021. Title: Establishing ground truth training data for deep learning in radiotherapy. Congress: Dublin, Ireland. Author: J. Pérez-Alija, P. Gallego, E. Ambroa. Type of presentation: Oral.

- 31/5/2021–4/6/2021. Title: Impacto dosimétrico de la introducción de objetivos de optimización biológicos gEUD y planificación automática. Congress: 7º Congreso Conjunto 23SEFM/18SEPR On-line. Author: Pedro Gallego ; Jaime Pérez-Alija ; Artur Latorre-Musoll; Nuria Jornet Sala ; Cristina Ansón Marcos ; Nagore García Apellaniz ; Pablo Carrasco de Fez; Jose María Chimeno Hernández ; Mar Adrià Mora; Helena Vivancos Bargalló ; Agustín Ruiz Martínez; Montserrat Ribas. Journal: <https://plataforma.congresosefmsepr.es/event/4/contributions/2229/> Type of presentation: Oral.

- 31/5/2021–4/6/2021. Title: Implementación de un control estadístico de procesos sobre verificaciones pretratamiento.

Congress: 7º Congreso Conjunto 23SEFM/18SEPR On-line. Author: Nagore Garcia Apellaniz, Artur Latorre-Musoll; Jose María Chimeno Hernández; Jaime Pérez-Alija; Pedro Gallego; Nuria Jornet Sala; Cristina Ansón Marcos; Pablo Carrasco de Fez; Marta Barceló-Pagès; Agustín Ruiz Martínez; Mar Adrià Mora; Helena Vivancos Bargalló; Montserrat Ribas. Journal: <https://plataforma.congresosefmsepr.es/event/4/contributions/2126/>. Type of presentation: Oral.

- 31/5/2021-4/6/2021. Title: Primera fase de implementació de un procediment de dosimetria in-vivo usando un sistema comercial de dosimetria de tránsito. Congress: 7º Congreso Conjunto 23SEFM/18SEPR On-line. Author: Cristina Ansón Marcos ; Nuria Jornet Sala ; Artur Latorre-Musoll ; Pablo Carrasco de Fez ; Jaime Pérez-Alija ; Pedro Gallego ; Jose María Chimeno Hernández ; Marta Barceló-Pagès ; Nagore Garcia Apellaniz ; Mar Adrià Mora ; Agustín Ruiz Martínez ; Helena Vivancos Bargalló; Montserrat Ribas. Journal: <https://plataforma.congresosefmsepr.es/event/4/contributions/2130/>. Type of presentation: Oral.

- 2/6/2021. Title: Simposio A2. AUDITORIAS en RT: IAEA end to end using SHANE phantom. Congress: 7º Congreso Conjunto 23SEFM/18SEPR On-line. Author: N. Jornet. Type of presentation: Invited Speaker.

- 31/5/2021-4/6/2021. Title: Impacto del Coronavirus en los Servicios de Radiofísica Hospitalaria. Congress: 7º Congreso Conjunto 23SEFM/18SEPR On-line. Author: Pedro Gallego Franco; Jaime Pérez-Alija; Mar Adrià Mora; Agustín Ruiz Martínez; Montserrat Ribas; Cristina Ansón Marcos; Jose María Chimeno Hernández; Pablo Carrasco de Fez; Nuria Jornet Sala; Artur Latorre-Musoll; Marta Barceló-Pagès; Nagore Garcia Apellaniz; Helena Vivancos Bargalló. Journal: <https://plataforma.congresosefmsepr.es/event/4/contributions/2048/>. Type of presentation: Oral.

Courses

- 26-29/04/2021. Course: 2021 EC301EU - Eclipse Scripting API Basics Course. Delivered hours: 4. Place: On-line. Lecturer: Artur Latorre Musoll.

- 10-12/11/2021. Course: XIII Curso Instrumentación y Control de Calidad en Medicina Nuclear. Delivered hours: 2. Place: Centre Esther Koplowitz (Barnaclínic). Lecturer: Agustín Ruiz.

Working groups

- Comisión Científica de la SEFM (since 2016). Scientific advice to SEFM, congress organisation, etc. Participation: Pablo Carrasco, President since Dec 2020.

- ESTRO Advisory Committee on Radiation Oncology Practice (ACROP) guideline on the implementation of DIBH (since 2017). Participation: Pablo Carrasco, Membre.

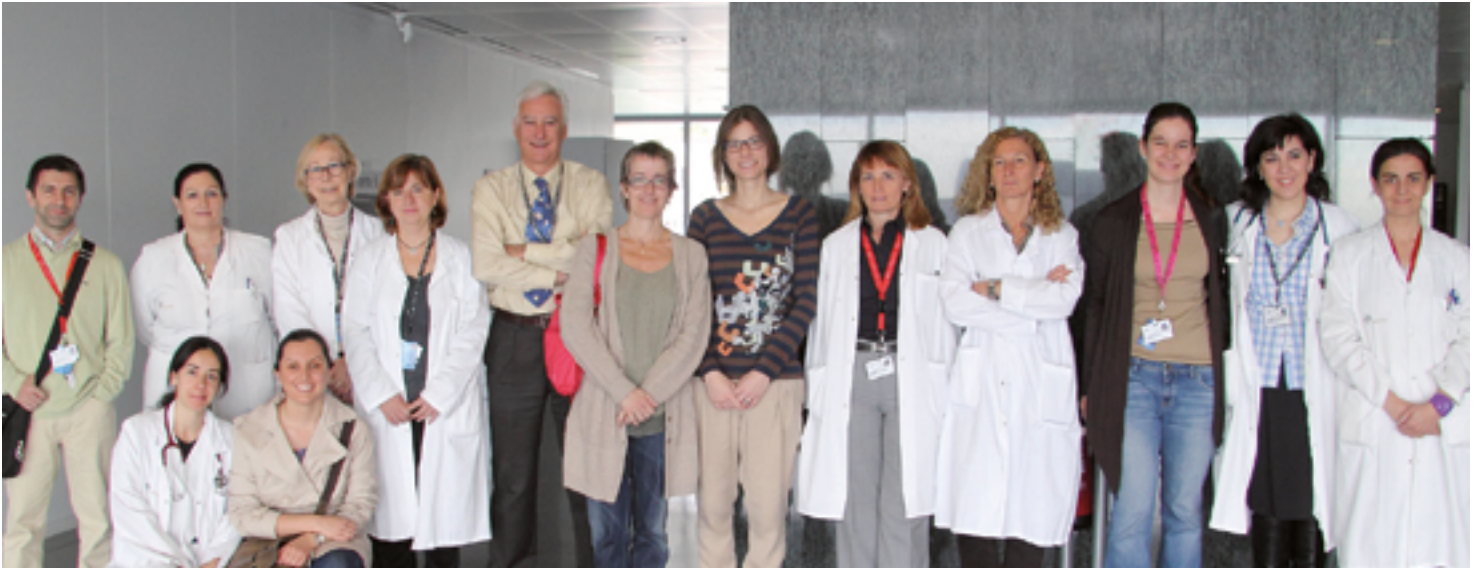
- Working group "Prevenió de radiacions ionitzants en edat pediàtrica" Departament de Salut, Generalitat de Catalunya (Since June 2011). To minimize exposure to ionizing radiation in the paediatric population ensuring the necessary diagnostic information. Participation: Agustín Ruiz, Member of the Grup en qualitat de Radiofísica Hospitalaris.

- Comissió de Garantia de Qualitat en Radiodiagnòstic, Hospital Santa Creu i Sant Pau. Participation: Pablo Carrasco, Vocal (since Feb 2021); Agustín Ruiz Martínez, Secretary (since Feb 2010).

- Comissió de Garantia de Qualitat en Radioteràpia, Hospital Santa Creu i Sant Pau (HSCSP). Participation: Núria Jornet, secretary (since 2017); Pablo Carrasco, vocal (since 2021)

- Plataforma Nacional de I+D en Protección Radiológica (PEPRI). To promote R+D+I in Radiologic protection (since 2014). Participation: Núria Jornet, Pablo Carrasco, Agustín Ruiz, Marta Barceló.

- Referent de seguretat del treballador i del Pacient, Hospital Santa Creu i Sant Pau (since 2015). To analyse incidents associated with inappropriate use of ionizing radiation. Participation: Nuria Jornet.



Paediatrics

Coordinator

Boronat Guerrero, Susana
sboronat@santpau.cat FGS

Members

Armendariz Lacasa, Laura	FGS	González Rioja, Xoan	FGS
Badell Serra, Isabel	FGS	Goruppi, Ilaria	FGS
Balcells Moliné, M. Reyes	FGS	Josa Eritja, María	FGS
Betancourt Castellanos, Jocelyn Cristina	FGS	Lopez Bernal, Ester	FGS
Bianchi, Federica	FGS	Moliner Calderon, Elisenda	FGS
Brio Sanagustín, Sonia	FGS	Morón Cazalilla, Georgina	FGS
Carreras Gonzalez, Gemma	FGS	Ramón Jiménez, Miquel	FGS
Castillo Gómez, Fátima	FGS	Tirado Capistros, Mireia	FGS
Coca Fernandez, Elisabet	FGS	Tobajas Torrubiano, Eva	FGS
Esmel Vilomara, Roger	FGS	Torrent Español, Montserrat	FGS
Fraga Rodriguez, Gloria Maria	FGS	Trabazo del Castillo, María	FGS
Garcia Borau, Maria Jose	FGS	Turon Viñas, Eulalia	FGS
García del Cerro, Gemma	FGS	Valle T-Figueras, José María	FGS

Main lines of research

- Paediatric Bone marrow transplantation. Centro de referencia del Sistema Nacional de Salud (CSUR).
- Hereditary erythropathology. Centro de referencia del Sistema Nacional de Salud (CSUR).
- Fanconi anaemia.
- Sarcomas. Centro de referencia del Sistema Nacional de Salud (CSUR).

- Refractory epilepsy in children, mainly Dravet syndrome.
- Paediatric migraine.
- Neonatal diseases.

Scientific Challenges

- Paediatric haematopoietic progenitor cell transplantation from alternative donors.
- Paediatric haematopoietic progenitor cell transplantation

- in congenital immunodeficiencies.
- Paediatric haematopoietic progenitor cell transplantation in congenital metabolic pathologies.
- Genic therapy in development epileptic encephalopathy.

Collaborations

Collaborations with other IIB Sant Pau research groups

- E. Turon Viñas (PI). PedRACE Scale Validation in a paediatric population. Multicenter study. IIB Sant Pau.

- E. Turon Viñas (PI). Necesidades terapéuticas no farmacológicas en pacientes con síndrome de Dravet. IIB Sant Pau. Code: IIBSP-DRA-2021-84.

- E. Turón Viñas, C. Leganés Villanueva (collaborators). A Double-Blind, Placebo-Controlled, Multi-Center Study With an Open-Label Extension to Evaluate the Efficacy and Safety of SRP-4045 and SRP-4053 in Patients With Duchenne Muscular Dystrophy. Multicenter Clinical Trial. Sponsor: Sarepta Therapeutics, Inc. IIB Sant Pau. J. Diaz Manera (Co-PI).

- F. Bianchi (collaborator). Ensayo Clínico de Fast Track en Apendicitis Agudas Complicadas. Fundació Institut de Recerca de l'Hospital de la Santa Creu i Sant Pau. Code: IIBSP-FAS-2020-120. C. Leganés Villanueva (PI). Duration: 2021-2023.

- G.M. Fraga Rodríguez (collaborator). Red de Salud Materno Infantil y del Desarrollo (SAMID). Redes Temáticas de Investigación Cooperativa en Salud (RETICS). Financing institution: ISCIII. RD 16/0022/0015. Duration: 2017-2021. E. Llubra Olivé (PI).

- E. Moliner Calderón (collaborator). Posible transmisión vertical en gestantes con SARS-CoV-2 positivo. Fundació Institut de Recerca de l'Hospital de la Santa Creu i Sant Pau. Code: IIBSP-COV-2020-59. O. Alejos Abad (PI).

- I. Badell Serra (collaborator). La ruta anemia de fanconi/BRCA: investigación genética y terapéutica. Convocatoria 2018 de proyectos I+D+I «retos investigación» del programa estatal de I+D+I orientada a los retos de la sociedad. Grant number: RTI2018-098419-B-I00. IIB Sant Pau. Jordi Surrallés Calonge (PI).

- M. Torrent Español (collaborator). GEIS 33 (ISG-GEIS-OS-2): Prospective observational study of ABCB1 / P-glycoprotein expression as biological stratification factor for patients with non-metastatic Osteosarcoma. Multicenter study. Sponsor: Grupo Español de Investigación en Sarcomas (GEIS). IIB Sant Pau. O. Gallego (PI). Hospital Universitari Vall d'Hebron, Barcelona. Ll. Gros (PI)

- M. Torrent Español (PI Hospital Sant Pau). GEIS 34 (EE2012): International Randomised Controlled Trial for the Treatment of Newly Diagnosed Ewing's Sarcoma Family of Tumours. Euro

Ewing 2012. Multicenter study. IIB Sant Pau. Sponsor: University of Birmingham. B. Brennan (PI).

- M. Torrent Español (PI Hospital Sant Pau). GEIS 35 (RECCUR): International randomised controlled trial of chemotherapy for the treatment of recurrent and primary refractory Ewing sarcoma. Multicenter study. IIB Sant Pau. Sponsor: University of Birmingham. M. McCabe.

- M. Torrent Español (PI Hospital Sant Pau). GEIS 39 (ABRADES): Phase II trial of nab-paclitaxel for the treatment of desmoid tumors and multiply relapsed/refractory desmoplastic small round cell tumors and Ewing's sarcoma. Multicenter study. IIB Sant Pau. Sponsor: Grupo Español de Investigación en Sarcomas (GEIS). Hospital Universitario Virgen del Rocío, Sevilla. J. Martín (PI). Hospital Sant Joan de Déu, Barcelona. J. Mora.

- M. Torrent Español (collaborator). GEIS 52 (IMMUNOSARC2): Phase I-II trial of sunitinib plus nivolumab after standard treatment in advanced soft tissue and bone sarcomes. Multicenter study. IIB Sant Pau. Sponsor: Grupo Español de Investigación en Sarcomas (GEIS). Hospital Universitario Virgen del Rocío, Sevilla. J. Martín.

- M. Torrent Español (collaborator). J1S-MC-JV01: A Randomized, Open-Label Phase 2 Study Evaluating Ramucirumab in Pediatric Patients and Young Adults with Relapsed, Recurrent, or Refractory Desmoplastic Small Round Cell Tumor. Multicenter study. IIB Sant Pau. Sponsor: Eli Lilly and Company.

- M. Torrent Español (collaborator). J1S-MC-JV02: A Randomized, Open-Label Phase I/II Study Evaluating Ramucirumab in Pediatric Patients and Young Adults with relapsed, Recurrent, or Refractory Synovial Sarcoma. Multicenter study. IIB Sant Pau. Sponsor: Eli Lilly and Company.

- S. Brió Sanagustín (PI). Características epidemiológicas y clínicas de las intoxicaciones en urgencias. Nuestra experiencia de 2011 a 2018. IIB Sant Pau. Code: IIBSP-TOX-2020-106.

External collaborations

- E. Moliner Calderón, M.J. García Borau, M. Ramón (collaborators). Multicenter study. Uso de la variabilidad de la frecuencia cardiaca como medida de nocicepción/estrés en UCI neonatal. PROYECTO 153-C. Servicio de Pediatría del H. G. La Mancha Centro. David Lozano Díaz (PI).

- E. Turón Viñas (collaborator). GAL-PER-2020-002: Sleep disturbances and quality of sleep in pediatric patients with focal epilepsy treated with peramppanel as adjunctive therapy. IMIM-H. Mar. Gemma Aznar (PI).

- J.M. Valle T-Figueras (IP Hospital Sant Pau). Red para el estudio de las Infecciones osteoarticulares en Pediatría (RIOped). Multicenter study. Hospital Materno-Infantil de

Málaga, Esmeralda Núñez Cuadros (PI). Hospital Universitario Severo Ochoa, Cristina Calvo Rey (PI). Hospital Universitario Gregorio Marañón, Jesús Saavedra Lozano (PI).

- J.M. Valle T-Figueras (IP Hospital Sant Pau). Registro de pacientes pediátricos con infección por coronavirus SARS-CoV-2 diagnosticados en los servicios de urgencias españoles: estudio multicéntrico. Institut de Recerca Hospital Sant Joan de Déu de Barcelona, Susanna Hernández Bou (PI).

- M. Torrent Español (PI Hospital Sant Pau). LINES (Protocol Clinical Trial): European Low and Intermediate Risk Neuroblastoma Protocol. Phase III study. SIOPEN (International Society of Paediatric Oncology European Neuroblastoma). Sponsor: Fundacion para la investigacion Hospital Universitario La Fe. Low Risk (LR) Study: Curie Institute, Paris. Gudrun Schleiermacher (PI). Intermediate Risk (IR) Study: University of Catania. Andrea di Cataldo (PI). Neonatal Suprarenal Mass Study (NSM): Hospital La Fe, Valencia. Adela Cañete (PI).

- M. Torrent Español (PI Hospital Sant Pau). Inter-B-NHL ritux 2010: Intergroup Trial for children or adolescents with B-cell NHL or B-ALL: evaluation of rituximab efficacy and safety in high risk patients. Phase III trial. European Intergroup for Children No Hodgkin's Lymphoma (EICNHL) and Children Oncology Group (COG). V. Minard-Colin (PI). T. Gross (PI).

- M. Torrent Español (PI Hospital Sant Pau). LCH-IV Trial: International collaborative treatment protocol for children and adolescents with Langerhans cell histiocytosis. Phase II-III trial. Histiocytosis Association. Anna Kinderspital (PI).

- M. Torrent Español (PI Hospital Sant Pau). UKM17_0023 (LBL 2018) Trial: International cooperative treatment protocol for children and adolescents with lymphoblastic lymphoma. Sponsor: Münster University Hospital. B. Burkhardt (PI).

- M. Torrent Español (PI Hospital Sant Pau). I-CML-Ped Study: International Registry for Chronic Myeloid Leukemia (CML) in Children and Adolescents. Sponsor: Poitiers University Hospital. F. Millot (PI).

- M. Torrent Español (collaborator). Multicenter study BACT-SPRING (Sickle cell disease Pediatric Research about INfections Group): Invasive Bacterial Infections in children with Sickle Cell Disease: a multinational epidemiological study. Sponsor: Assistance-Publique. Hôpitaux de Paris. Jean Gaschignard (PI) and Bérengère Koehl (PI).

- M. Torrent Español (collaborator). A Multicenter, Randomized, Phase III Registration Trial of Transplantation of NiCord®, Ex Vivo Expanded, Umbilical Cord Blood-derived, Stem and Progenitor Cells, versus Unmanipulated Umbilical Cord Blood for Patients with Hematological Malignancies. Sponsor: Gamida Cell Ltd.

- M. Torrent Español (collaborator). NOPHO-DBH AML 2012: Research study for treatment of children and adolescents with acute myeloid leukaemia 0-18 years. Children's Cancer Centre, Queen Silvias Childrens and Adolescents Hospital, Gothenburg, Sweden. J. Abrahamsson (PI).

- M. Torrent Español (collaborator). Protocol: 20120215 - A Randomized, Open-Label, Controlled Phase 3 Adaptive Trial to Investigate the Efficacy, Safety, and Tolerability of the BiTE® Antibody Blinatumomab as Consolidation Therapy Versus Conventional Consolidation Chemotherapy in Pediatric Subjects with High-Risk First Relapse of B-precursor Acute Lymphoblastic Leukemia (ALL). Sponsor: Amgen.

- M. Torrent Español (collaborator). Clinical Trial CINC424F12201: A Phase I/II open-label, single-arm, multi-center study of ruxolitinib added to corticosteroids in pediatric patients with grade II-IV acute graft vs. host disease after allogeneic hematopoietic stem cell transplantation. Sponsor: Novartis Pharmaceuticals.

- S. Boronat Guerrero. Collaboration in paediatric migraine clinical trials: PIONEER-PEDS1 and PIONEER-PEDS2 (Lasmiditan); REBUILD-1 and REBUILD-2 (Galcanezumab). Robert Belvis (PI).

- S. Brió Sanagustin (Co-PI). Estudio Nacional de Vigilancia de Infección nosocomial en UCI (ENVIN- HELICS) 2021. Promotor: Sociedad española de medicina intensiva, crítica y unidades coronarias (Grupo de trabajo de enfermedades infecciosas y sepsis).

- S. Brió Sanagustin (Co-PI). Estudio LUS-PICO 2020/2021. Lung ultrasound score and paediatric intensive care outcomes (LUS-PICO). Multicenter study. Hospital Universitario Central de Asturias, Oviedo. Juan Mayordomo Colunga (PI). Promotor: Socetat Espanyola d'Intensius Pediàtrics.

- X. González Rioja (collaborator). Risc i factors predictors de COVID-19 persistent en menors de 18 anys a Catalunya. Equip de recerca COPEDI-CAT. Anna Gatell Carbó (PI).

- X. González Rioja, M. Marínez Rodríguez, J. Becerra (collaborators). QI-PedNeoT: Quality Indicators in PEDIatric and NEOnatal Transport, Hospital Universitario Puerta del Mar, Cádiz and Hospital Universitario Gregorio Marañón, Madrid. Sociedad Española de Cuidados Intensivos Pediátricos (SECIP). Lorena Estepa Pedregosa and Maria Itziar Marsinyach Ros (PI).

Other collaborations

- GETMON (Grupo Español de Trasplante de Médula Ósea en niños).

- SEHOP (Sociedad Española de Hematología y Oncología Pediátrica).

- GETH (Grupo Español de Trasplante Hematopoyético).
- Spanish Registry of Hemoglobinopathies and Other Rare Anemias-SEHOP (Sociedad Española de Hematología y Oncología Pediátrica).
- RETI-SEHOP (National Registry of childhood tumors).
- Linked Clinical group 16 (GCV16) of CIBERER ISC III (Center for Biomedical Research in Network for Rare Diseases).
- Sociedad Española de Infectología Pediátrica (SEIP).
- Sociedad Española de Urgencias de Pediatría (SEUP).
- Societat Catalana de Pediatria (SCP), Paediatric subspecialty working groups.
- I. Badell Serra (collaborator). Infusión de células Natural Killer aloreactivas o estimuladas con IL-16 ex vivo tras trasplante haploidéntico de progenitores hematopoyéticos en pacientes pediátricos con neoplasias hematológicas (PHINK). Financing institution: ISCIII. PI18/01301. Antonio Perez Martínez (PI). Duration: 2019-2021. 214.170 €.
- S. Boronat Guerrero (collaborator). Catalan Interhospital Network of genetic variants to improve genetic diagnosis in rare diseases. Financing institution: Fundació La Marató de TV3. Code 590/C/2020. Sant Joan de Déu Institut de Recerca. Dèlia Yubero Siles (PI). Duration: 2021 – 2024. 399.932,70 €.
- S. Boronat Guerrero (collaborator). Precision Medicine Infrastructure associated with Science and Technology (IMPACT) Project. Program of Genomic Medicine. IMP/00009. Financing institution: ISCIII. Centro de Investigación Biomédica en Red (CIBER). Ángel Carracedo Álvarez (PI).
- S. Brió Sanagustin (collaborator). Implicación de la microbiota bacteriana de la nasofaringe en el desarrollo de neumonía asociada a la ventilación mecánica en la unidad de cuidados intensivos pediátricos. Estudio MiNoRep. Iolanda Jordán García (PI). Hospital Sant Joan de Déu. Financing institution: ISCIII. Código. PI19/00106. Duration: 2020 – 2022. 112.530,00 €.

Other active grants

Competitive grants:

- E. Moliner Calderón (collaborator). Evaluación de una intervención basada en la evidencia para reducir la bacteriemia asociada a catéter vascular central en recién nacidos de muy bajo peso. INBERBAC-Neo. Financing institution: ISCIII. PI17/00565. José Ignacio Pijoán Zubizarreta (PI). Duration: 2018-2021. 146.107,50 €.
- E. Moliner Calderón, J.M. Valle T-Figueras (collaborators). Virus Respiratorio Sincitial. Estudio de las características del virus, del huésped, y los factores ambientales como determinantes de la epidemia y su gravedad clínica. Financing institution: ISCIII. PI18/00685. Tomás Pumarola Suñé (PI). Duration: 2019-2021. 93.170 €.
- E. Moliner Calderón, E. Turón Viñas (collaborators). Investigación de las infecciones neurológicas graves en niños causadas por enterovirus emergentes en España: EV-A71 y EV-D68 (PI18CIII/00017). Financing institution: ISCIII. PI18CIII/00017. María Cabrerizo (PI). Núria Rabella García (Co-PI). Duration: 2019-2021. 42.500 €.
- G.M. Fraga Rodríguez (collaborator). Heterogeneidad clínica, genética y alélica de las enfermedades renales hereditarias de debut temprano: nuevas causas moleculares de anomalías congénitas del riñón y el tracto urinario. Financing institution: ISCIII. FIS (PI19/01633). Duration: 2020-2022. 93.170,00 €.
- G.M. Fraga Rodríguez (collaborator). Uso de la inteligencia artificial y la biología de sistemas para el diagnóstico y evaluación del riesgo personalizado de enfermedades renales hereditarias, centrado en el síndrome de Alport. IIB Sant Pau. Fundació Puigvert. Financing institution: Fundació La Marató de TV3. 399.312,50 €.

Non-competitive grants:

- E. Moliner Calderón, E. López (collaborators). Study to evaluate the safety, tolerability, and immunogenicity of sars cov-2 rna vaccine candidate (BNT162b2) against covid-19 in healthy pregnant women 18 years of age and older. Sponsor: BioNTech SE. Code: C4591015.
- E. Turon Viñas (Co-PI). S. Boronat Guerrero (collaborator). Multicentric study of quality and alterations of sleep in paediatric patients with focal epilepsy after onset of perampanel as add-on. Hospital del Mar. Gemma Aznar (PI).
- G. Garcia del Cerro (PI). Efectivitat d'una plataforma web interactiva per a millor l'adherència al tractament amb nens i adolescents amb asma de difícil control: assaig clínic aleatoritzat controlat multicèntric. Multicenter study. Sponsor: Fundació Iovexair. Financing institution: Beca SEPAR. Duration: 2021-2022.
- R. Esmel i Vilomara (collaborator). Multicenter, Open-label Study to Evaluate Safety, Tolerability, Pharmacokinetics, and Pharmacodynamics of LCZ696 Followed by a 52-week Randomized, Double-blind, Parallel Group, Active-controlled Study to Evaluate the Efficacy and Safety of LCZ696 Compared With Enalapril in Pediatric Patients From 1 Month to < 18 Years of Age With Heart Failure Due to Systemic Left Ventricle Systolic Dysfunction. PANORAMA-HF. Sponsor: Novartis Pharmaceuticals.

- R. Esmel i Vilomara (collaborator). A phase 3, multicenter, randomized, double-blind, placebo-controlled study to evaluate the safety and efficacy of PF 06939926 for the treatment of Duchenne Muscular Dystrophy. Sponsor: Pfizer.
- S. Boronat Guerrero (Co-PI). E. Turón Viñas (collaborator). ENVISION: Natural History Study of Infants and Children with SCN1A-positive Dravet Syndrome. Multicenter prospective clinical trial. Sponsor: Encoded Therapeutics.
- S. Boronat Guerrero (Co-PI). E. Turón Viñas (collaborator). Kayak Study. A Phase 2 Randomized, Double-Blind, Placebo-Controlled Study to Evaluate the Efficacy, Safety, Tolerability, and Pharmacokinetics of NBI-921352 as Adjunctive Therapy in Subjects with SCN8A Developmental and Epileptic Encephalopathy Syndrome (SCN8A-DEE). Multicenter clinical trial. Sponsor: Neurocrine Biosciences, Inc. Sponsor's protocol code number: NBI-921352-DEE2012.
- S. Boronat Guerrero (Co-PI). A Phase 3, Randomized, Open-Label Study to Evaluate the Efficacy and Safety of AMZ002, Compared to Vigabatrin, in the Treatment of Infantile Spasms. Multicenter clinical trial. Sponsor: Amzell.
- S. Boronat (Co-PI). LG-Registry: a prospective registry of patients with Lennox-Gastaut syndrome. Multicenter study. Sponsor: Instituto de Investigación Sanitaria Fundación Jiménez Díaz. José Serratosa Fernández (PI).
- S. Boronat (Co-PI), Elisenda Moliner Calderón (collaborator). Role of monitoring of regional cerebral oxygen saturation using NIR spectroscopy in hypoxic-ischemic encephalopathy. Multicenter study. Sponsor: Sociedad Iberoamericana de Neonatología (SIBEN) and NÉNÉ Foundation. Alfredo García-Alix (PI).
- S. Boronat (Co-PI). Charlotte Project: Consensus for Management of PROs (patient related outcomes) in Dravet Syndrome. Multicenter study. Sponsor: Zogenix.
- S. Brió Sanagustín, G.M. Fraga Rodríguez (collaborators). A Phase 3, Open-label, Single Arm, Multicenter Study of Ravulizumab in Addition to Best Supportive Care in Pediatric Participants (from 1 month to < 18 years of age) with Thrombotic Microangiopathy (TMA) after Hematopoietic Stem Cell Transplantation (HSCT). Sponsor: Alexion Pharmaceuticals Inc. Duration 2020-2024. Georgina Moron (PI).
- Sonia Brió Sanagustín, Variables que inciden en la morbimortalidad de los pacientes trasplantados de progenitores hematopoyéticos que ingresan en la unidad de curas intensivas pediátricas, Universitat Autònoma de Barcelona, Isabel Badell Serra, 28/05/2021

Scientific production

- Alonso S, Vidal M, Ruiz-Olalla G, González R, Jairoce C, Manaca MN, Vázquez-Santiago M, Balcells R, Vala A, Rupérez M, Cisteró P, Fuente-Soro L, Angov E, Coppel RL, Gamain B, Cavanagh D, Beeson JG, Nhalo A, Sevene E, Aponte JJ, Macete E, Aguilar R, Mayor A, Menéndez C, Dobaño C, Moncunill G. HIV infection and placental malaria reduce maternal transfer of multiple antimalarial antibodies in Mozambican women. *Journal of Infection*. 2021;82(4):45-57. DOI: 10.1016/j.jinf.2021.02.024. PMID: 33636218. IF:6,072 (Q1/D2).
- Alonso S, Vidal M, Ruiz-Olalla G, González R, Manaca MN, Jairoce C, Vázquez-Santiago M, Balcells R, Vala A, Rupérez M, Cisteró P, Fuente-Soro L, Cova M, Angov E, Nhalo A, Sevene E, Aponte JJ, Macete E, Aguilar R, Mayor A, Menéndez C, Dobaño C, Moncunill G. Reduced Placental Transfer of Antibodies Against a Wide Range of Microbial and Vaccine Antigens in HIV-Infected Women in Mozambique. *Frontiers in Immunology*. 2021;12:614246. DOI:10.3389/fimmu.2021.614246. PMID: 33746958. IF:7,561 (Q1/D2).
- Ariceta G, Dixon BP, Kim SH, Kapur G, Mauch T, Ortiz S, Vallee M, Denker AE, Kang HG, Greenbaum LA, Fraga G, Study 312GRP. The long-acting C5 inhibitor, ravulizumab, is effective and safe in pediatric patients with atypical hemolytic uremic syndrome naive to complement inhibitor treatment. *KIDNEY INTERNATIONAL*. 2021; 100(1). DOI:10.1016/j.kint.2020.10.046. PMID:33307104. IF:10,612 (Q1/D1).
- Bakhtiar S, Salzman E, Blok HJ, Eikema DJ, Hazelaar S, Ayas M, Toren A, Goldstein G, Moshous D, Locatelli F, Merli P, Michel G, Ozturk G, Schulz A, Heilmann C, Ifversen M, Wynn RF, Aleinikova O, Bertrand Y, Tbakhi A, Veys P, Karakukcu M, Kupesiz A, Ghavamzadeh A, Handgretinger R, Unal E, Perez A, Gokce M, Porta F, Aksu T, Karasu G, Badell I, et al.; Pediat Dis Working P, Inborn Errors Working Party E. Allogeneic hematopoietic stem cell transplantation in leukocyte adhesion deficiency type I and III. *Blood Advances*. 2021; 5(1). DOI:10.1182/bloodadvances.2020002185. PMID:33570653. IF:6,686 (Q1/D2).
- Benitez MI, Belendez C, Gonzalez M, Alonso L, Uria ML, Torrent M, Perez JM, Fuster JL, Cela E, Diaz C. Matched sibling donor stem cell transplantation for sickle cell disease: Results from the Spanish group for bone marrow transplantation in children. *EUROPEAN JOURNAL OF HAEMATOLOGY*. 2021; 106(3). DOI:10.1111/ejh.13566. PMID:33296531. IF:2,997 (Q3/D7).
- Boronat S. Neurologic Care of COVID-19 in Children. *Frontiers in Neurology*. 2021; 11:613832. DOI:10.3389/fneur.2020.613832. PMID:33679571. IF:4,003 (Q2/D4).

Doctoral theses

- Bárbara Torres Guerola, Tratamiento de la leucemia mieloide aguda (LMA) en niños con el protocolo SHOP 2007, Universitat de València, Isabel Badell Serra, 25/11/2021
- Elisenda Moliner Calderón, Importancia de los enterovirus en la sepsis neonatal, Universitat Autònoma de Barcelona, Gemma Ginovart, Núria Rabella, 02/07/2021

- Caravaca F, Trujillo H, Alonso M, Diaz M, Cabello V, Ariceta G, Quintana LF, Marco H, Barros X, Ramos N, Rodriguez N, Cruz S, Fernandez G, Rodriguez E, de la Cerda F, de Jose AP, Lopez I, Fernandez L, Gomez VP, Avila A, Bravo L, Lumbreras J, Allende N, de la Nieta MDS, Olea T, Melgosa M, Huerta A, Miquel R, Mon C, Fraga G, de Lorenzo A, Draibe J, et al. Validation of a Histologic Scoring Index for C3 Glomerulopathy. *AMERICAN JOURNAL OF KIDNEY DISEASES*. 2021; 77(5). DOI:10.1053/j.ajkd.2020.11.011. PMID:33359150. IF:8,860 (Q1/D1).
- Delgado IG, Gutierrez J, Rodriguez GMF, Cavero T, Arjona E, Sanchez P. Low factor H-related 5 levels contribute to infection-triggered haemolytic uraemic syndrome and membranoproliferative glomerulonephritis. *Clinical Kidney Journal*. 2021; 14(2). DOI:10.1093/ckj/sfaa004. PMID:35355886. IF:4,452 (Q1/D3).
- Esmel-Vilomara R, Ferrer Q, Giral G. Cor triatriatum sinister: out of the Lucas-Schmidt classification. *REVISTA ESPANOLA DE CARDIOLOGIA*. 2021;74(11):983. English, Spanish. DOI:10.1016/j.rec.2021.04.001. PMID: 33958313. IF:4,753 (Q2/D4).
- Fernandez J, Azqueta C, Valdivia E, Martorell L, Medina L, Martinez N, Torrents S, Codinach M, Canals C, Elorza I, Parody R, Martino R, Trabazo M, de Heredia CD, Ferra C, Valcarcel D, Linares M, Ancochea A, Garcia E, Garcia N, Medina L, Castillo N, Carreras E, Villa J, Querol S. Cryopreservation of unrelated donor hematopoietic stem cells: the right answer for transplantations during the COVID-19 pandemic?. *BONE MARROW TRANSPLANTATION*. 2021; 56(10). DOI:10.1038/s41409-021-01367-x. PMID:34127808. IF:5,483 (Q1/D3).
- Galán V, de la Fuente L, Rodríguez A, Díaz de Heredia Rubio C, González M, Badell I, Fernández JM, Pascual AI, Pérez JM, López M, Maldonado MS, Pérez A. Experience of the Spanish Group for Hematopoietic Transplantation (GETMON-GETH) in allogeneic hematopoietic stem cell transplantation in Philadelphia acute lymphoblastic leukemia. *ANALES DE PEDIATRIA*. 2022; 96(4). DOI:10.1016/j.anpedi.2021.02.015. PMID:33781716. IF:1,500 (Q4/D8).
- Garcia C, Roe E, Rodriguez B, Amat V, Cubiro X, Puig L, Boronat S. A case report of PHF6 mosaicism: Beyond the classic Borjeson-Forssman-Lehmann syndrome. *PEDIATRIC DERMATOLOGY*. 2021; 38(4). DOI:10.1111/pde.14636. PMID:34041787. IF:1,588 (Q3/D8).
- Ginsburg AS, Lenahan JL, Jehan F, Bila R, Lamorte A, Hwang J, Madrid L, Nisar MI, Vitorino P, Kanth N, Balcells R, Baloch B, May S, Valente M, Varo R, Nadeem N, Bassat Q, Volpicelli G. Performance of lung ultrasound in the diagnosis of pediatric pneumonia in Mozambique and Pakistan. *Pediatric Pulmonology*. 2021;56(2):551-560. DOI:10.1002/ppul.25176. PMID: 33205892. IF:3,039 (Q2/D3).
- Lankester AC, Neven B, Mahlaoui N, von EGJ, Courteille V, Alligon M, Albert MH, Serra IB, Bader P, Balashov D, Beier R, Bertrand Y, Blanche S, Bordon V, Bredius RG, Cant A, Cavazzana M, Diaz C, Dogu F, Ehlert K, Entz N, Fasth A, Ferrua F, Ferster A, Formankova R, Friedrich W, Gonzalez M, Gozdzik J, Güngör T, Hoenig M, Ikinciogullari A, Kalwak K, et al. Hematopoietic cell transplantation in severe combined immunodeficiency: The SCETIDE 2006-2014 European cohort. *JOURNAL OF ALLERGY AND CLINICAL IMMUNOLOGY*. 2022; 149(5). DOI:10.1016/j.jaci.2021.10.017. IF:10,793 (Q1/D1).
- Meek CL, Corcoy R, Asztalos E, Kusinski LC, Lopez E, Feig DS, Murphy HR, CONCEPTT GRP. Which growth standards should be used to identify large- and small-for-gestational age infants of mothers with type 1 diabetes? A pre-specified analysis of the CONCEPTT trial. *BMC Pregnancy and Childbirth*. 2021; 21(1):96. DOI:10.1186/s12884-021-03554-6. PMID:33514342. IF:3,007 (Q2/D4).
- Munoz EC, Nabbout R, Guerrero SB, Herguedas JL, Villanueva V, Aibar JA. Impact of COVID-19 on Spanish patients with Dravet syndrome and their caregivers: consequences of lockdown. *REVISTA DE NEUROLOGIA*. 2021; 73(2). DOI:10.33588/rn.7302.2021006. PMID:34254661. IF:0,870 (Q4/D10).
- Murillo-Sanjuán L, González-Vicent M, Argilés Aparicio B, Badell Serra I, Rodríguez Villa A, Uria Oficialdegui ML, López-Duarte M, Beléndez-Bieler C, Sastre Urgelles A, Sevilla Navarro J, Díaz-de-Heredia C; from the Spanish Working Groups for Bone Marrow Transplantation in Children (GETMON), Hematopoietic Transplantation (GETH) and the Spanish Society of Pediatric Hematology and Oncology (SEHOP). Survival and toxicity outcomes of hematopoietic stem cell transplantation for pediatric patients with Fanconi anemia: a unified multicentric national study from the Spanish Working Group for Bone Marrow Transplantation in Children. *BONE MARROW TRANSPLANTATION*. 2021;56(5):1213-1216. DOI:10.1038/s41409-020-01172-y. PMID: 33303901. IF:5,483 (Q1/D3).
- Nan MN, Roig R, Martinez S, Rives J, Urgell E, Espinos JJ, Tirado M, Carreras G, Aulinas A, Webb SM, Corcoy R, Blanco F, Tondo M. Comprehensive Genetic Testing of CYP21A2: A Retrospective Analysis in Patients with Suspected Congenital Adrenal Hyperplasia. *Journal of Clinical Medicine*. 2021; 10(6):1183. DOI:10.3390/jcm10061183. PMID:33809035. IF:4,241 (Q1/D3).
- Natera D, Sola A, Sousa PR, Boronat S, Exposito J, Carrera L, Ortez C, Jou C, Muchart J, Rebollo M, Armstrong J, Colomer J, Garcia A, Hoenicka J, Palau F, Nascimento A. Copper Toxicity Associated With an ATP7A-Related Complex Phenotype. *PEDIATRIC NEUROLOGY*. 2021; 119. DOI:10.1016/j.pediatrneurol.2021.03.005. PMID:33894639. IF:3,372 (Q1/D2).
- Ramirez MJ, Pujol R, Trujillo JP, Minguillon J, Bogliolo M, Rio P, Navarro S, Casado JA, Badell I, Carrasco E, Balmana J, Catala A, Sevilla J, Belendez C, Argiles B, Lopez M, de Heredia CD, Rao G, Nicoletti E, Schwartz JD, Bueren JA, Surrallés J. Natural gene therapy by reverse mosaicism leads to improved hematology in Fanconi anemia patients. *AMERICAN JOURNAL OF HEMATOLOGY*. 2021; 96(8). DOI:10.1002/ajh.26234. PMID:33984160. IF:10,047 (Q1/D1).
- Roca N, Madrid A, Lopez M, Fraga G, Jatem E, Gonzalez J, Martinez C, Segarra A. Multidimensional inflammatory and

immunological endotypes of idiopathic focal segmental glomerulosclerosis and their association with treatment outcomes. *Clinical Kidney Journal*. 2021; 14(7). DOI:10.1093/ckj/sfaa265. PMID:34221390. IF:4,452 (Q1/D3).

• Turon E, Badell I, Trabazo M, Moron G, Coca E, Brio S, Boronat S. Neurological complications in haematopoietic stem cell transplant patients. *REVISTA DE NEUROLOGIA*. 2021; 73(5). DOI:10.33588/rn.7305.2021176. PMID:34328206. IF:0,870 (Q4/D10).

• Valle JM, Miro BR, Carabante M, Diaz C, Bofarull JV, Mendoza N, Martin MT, Soler P. Voriconazole Use in Children: Therapeutic Drug Monitoring and Control of Inflammation as Key Points for Optimal Treatment. *Journal Of Fungi*. 2021; 7(6):456. DOI:10.3390/jof7060456. PMID:34200506. IF:5,816 (Q1/D2).

• Vega N, Perez S, Esperanza E, Vicente C, Torrebade M, Jimenez A, Ortega M, Llop M, Abad L, Vagace JM, Minguela A, Pratcorona M, Sanchez J, Garcia CB, Gomez MT, Martin E, Escudero A, Martinez MR, Munoz L, Velasco MR, Garcia M, Catala A, Pascual A, Velasco P, Fernandez JM, Lassaletta A, Fuster JL, Badell I, Molinos A, Molines A, Guerra P, et al. Measurable Residual Disease Assessed by Flow-Cytometry Is a Stable Prognostic Factor for Pediatric T-Cell Acute Lymphoblastic Leukemia in Consecutive SEHOP Protocols Whereas the Impact of Oncogenetics Depends on Treatment. *Frontiers in Pediatrics*. 2021; 8:614521. DOI:10.3389/fped.2020.614521. PMID:33614543. IF:3,418 (Q1/D2).

• Vicent MG, de Heredia CD, de Pablo JG, Molina B, Regueiro A, Martinez AP, Palomo P, Corral LL, Garcia E, Fernandez JM, Perez A, Jimenez MJ, Guerreiro M, Vallejo C, Gallardo AI, Lopez O, Benito A, Marsal J, Duarte M, Bento L, Badell I, Pedraza A, Ubieta AJ, Gonzalez P, Centurion IG, Costilla L, Belendez C, Esquirol A, Espigado I, Lavilla E, Diaz MA. Defibrotide in hematopoietic stem cell transplantation: A multicenter survey study of the Spanish Hematopoietic Stem Cell Transplantation Group (GETH). *EUROPEAN JOURNAL OF HAEMATOLOGY*. 2021; 106(6). DOI:10.1111/ejh.13618. PMID:33713387. IF:2,997 (Q3/D7).

• Zampieri N, Bianchi F, Vestri E, Patané S, Camoglio FS. Varicocele in paediatric age: Is the scientific community on the correct pathway? *Andrologia*. 2021;53(1):e13844. DOI:10.1111/and.13844. PMID: 33125748. IF:2,775 (Q3/D8).

Other scientific production

• Rios M, Lanaspá M, Noguera A, Baleta L, De Sevilla MF, Ferri D, Gotzens J, Jordan I, Lecina L, Monfort L, Trabazo M, Velasco E, Badell I, Fortuny C, Fumado V. The Spectrum of COVID-19 Disease in Adolescents. *ARCHIVOS DE BRONCONEUMOLOGIA*. 2021; 57. DOI:10.1016/j.arbres.2020.08.016. IF:4,872 (Q2/D3).

Other publications

• Bianchi F, Villanueva CL, Lozano NB, Goruppi I, Guerrero SB. Epiplonic Appendagitis and Omental Infarction as Rare Causes of Acute Abdominal Pain in Children. *Pediatric Reports*. 2021; 13(1). DOI:10.3390/pediatric13010010. PMID:33562670.

• Coca E, Ruiz C, Díaz A, García del Cerro G, Turon E, Boronat S. Acetazolamide for TCF4 Mutation-Related Apneas. *Biomed J Sci & Tech Res*. 2021; 34(1)-2021. DOI:10.26717/BJSTR.2021.34.005503.

• Galvez E, Vallespin E, Arias EG, Sanchez C, Gimenez Y, Navarro S, Rio P, Bogliolo M, Pujol R, Peiro M, Nevado J, Zubicaray J, Sebastian E, Catala A, Belendez C, de Heredia CD, Galera A, Badell I, Madero L, Perona R, Sastre L, Surralles J, Bueren J, Lapunzina P, Sevilla J. Next-generation Sequencing in Bone Marrow Failure Syndromes and Isolated Cytopenias: Experience of the Spanish Network on Bone Marrow Failure Syndromes. *Hemasphere*. 2021; 5(4). DOI:10.1097/HS9.0000000000000539. PMID:33718801.

• Leganés Villanueva C, Goruppi I, Bianchi F, Brun Lozano N, Coca Fernández E, Brió Sanagustín S, Boronat Guerrero. Síndrome neuroléptico maligno en la urgencia pediátrica. *Rev Pediatr Aten Primaria*. 2021;23.

• Leganés Villanueva C, Bianchi, Federica, Brun Lozano N, Goruppi I, Brio Sanagusti S, Coca Fernandez E, Boronat Guerrero S. Blunt Liver Trauma in a Pediatric Patient. *Biomed J Sci & Tech Res*. 2021; 36(3)-2021. DOI:10.26717/BJSTR.2021.36.005862.

• Leganés Villanueva, C, Brun Lozano, N, Bianchi, F, Goruppi, I, Boronat Guerrero, S. Aggressive Recurrence of ingrown Toenail in Pediatric Patient. *Biomed J Sci & Tech Res*. 2021; 35(1)2021. DOI:10.26717/BJSTR.2021.35.005643.

• Leganés Villanueva C, Goruppi I, Brun Lozano N, Bianchi F, Quintero González M, Boronat Guerrero S. Acute Acalculous Cholecystitis Due to a Primary Epstein Barr Virus Infection in a Pediatric Patient. *Pediatr Rep*. 2021; 13:86-90. DOI:10.3390/pediatric13010011. PMID: 33562159..

• Salazar-Quiroz J, Coca-Fernández E, Tirado-Capistros M, Turón-Viñas E, Brió-Sanagustín S, Boronat S. Canvis en les característiques de les intoxicacions en menors de 18 anys. Revisió de casos en un servei d'urgències (2011-2018). *Pediatr catalana*. 2021;81(2):71-6.

• Turón-Viñas E, Díaz-Gómez A, Coca E, Dougherty L, Ruiz C, Boronat S. Long-term Efficacy of Perampanel in a Child with Dravet Syndrome. *Child Neurology Open*. 2021. DOI:10.1177/2329048X211050711.

• Venegas MP, Boronat S, Luna S, Clivillé N, Orus C, de Juan J, Serra C, Alias L, Pujol A, Lasa A. A nonsense MITF mutation associated with autosomal dominant hearing loss and intra-family clinical heterogeneity. *Biomed J Sci & Tech Res*. 2021;37(1)-2021. DOI:10.26717/BJSTR.2021.37.005952.

• Vestri E, Bianchi F, Zampieri N, Patané S, Camoglio FS. 4-Year-Old Girl with Abdominal Pain and Malnutrition. *Ann Pediatr*. 2021;4(1):1063. ISSN:2637-9627.

• Vidal S, Brandi N, Pacheco P, Gerotina E, Blasco L, Trotta JR, Derdak S, O'Callaghan MM, Garcia-Cazorla A, Pineda M, Armstrong J, Rett Working Group [Turon E]. Author Correction:

The utility of Next Generation Sequencing for molecular diagnostics in Rett syndrome. *Sci Rep.* 2021;11(1):18146. DOI:10.1038/s41598-021-97262-y.

• Villanueva CL, Goruppi I, Lozano NB, Bianchi F, Gonzalez MQ, Guerrero SB. Acute Acalculous Cholecystitis Due to a Primary Epstein Barr Virus Infection in a Pediatric Patient. *Pediatric Reports.* 2021; 13(1). DOI:10.3390/pediatric13010011. PMID:33562159.

Communication and dissemination activities

Meeting organisation

• J.M. Valle T-Figueras, L. Minguell, N. Rius, B. Guarch (meeting directors). V Jornada Catalana d'Actualització en Infectologia Pediàtrica: Novetats en patologia infecciosa des dels inicis de la pandèmia. Online edition. 8/10/2021.

Conferences and Meetings

• B. Martínez Estradé, E. Coca Fernández, Juan José Salazar Quiroz, Fátima Castillo Gómez, Manuel Rodríguez Martínez, Rodrigo Burgueño Rico, Laia Turon Viñas, Sònia Brió Sanagustin. Necrosis epidérmica tóxica. Oral Communication CO-161. 35 Congreso Nacional de la Sociedad Española de Cuidados Intensivos Pediátricos. Online edition. 17-21/5/2021.

• B. Suriñach Ayats, E. Carbonell Estarellas, J. Becerra Hervas, M. Josa Eritja, E. López Bernal, E. Moliner Calderon. Epidemiología, características y evolución de recién nacidos de madre con infección por SARS-CoV-2. Oral communication. XXVIII Congreso de Neonatología y Medicina Perinatal (SENEO) y VIII Congreso de la Sociedad Española de Enfermería Neonatal (SEEN). Online Edition. 25-29/10/2021.

• E. Turón Viñas, S. Boronat Guerrero, S. Brió Sanagustin, E. Coca Fernández, M. Rodríguez Martínez, F. Castillo Gómez, M. Trabazo Del Castillo, I. Badell Serra. Complicaciones neurológicas graves en niños sometidos a trasplante alogénico de progenitores hematopoyéticos. Oral Communication CO-024. 35 Congreso Nacional de la Sociedad Española de Cuidados Intensivos Pediátricos. Online edition. 17-21/5/2021.

• E. Turon Viñas; Coca Fernández E; Castillo, F; Brio, S; Trabazo, M; Badell Serra, I. Neurological complications in children undergoing Stem cell transplantation. Oral Communication O-088. 63th Meeting of the Spanish Neuropediatrics Society. 10-15/5/2021.

• G. García Del Cerro, Laura Garriga Grimau, Inés de Mir Messa, Silvia Gartner, Sandra Rovira Amigo, Ana Diez Izquierdo, Ignacio Iglesias Serrano, Alba Torrent Vernetta, Antonio Moreno Gald. Utilidad del LCI para diagnóstico de Bronquiolitis obliterante postinfecciosa. Oral communication. XLII Reunión de la Sociedad Española de Neumología Pediátrica. Online edition. 20-22/5/2021.

• I. Astigarraga Aguirre; Ane Karmele Saenz de Arzamendi Oribe; Marta LLarena Fernandez; Carmen Rodriguez-Vigil Iturrate;

Antonio Pérez Martínez; Ignacio Gutiérrez Carrasco; Montserrat Torrent Español; Susana Garcia Obregón. Participación española en el estudio internacional de histiocitosis de células de langerhans (LCH-IV). experiencia de los primeros 5 años. Oral communication C0119. 1st Iberian Congress of Pediatric Hematology and Oncology. Online edition. 21-23-28-30/9/2021.

• J. Becerra Hervás, J.J. Salazar Quiroz, M.J. García Borau, M. Ramón Jimenéz, E. López Bernal, E. Moliner Calderón. Distrés respiratorio con estridor al nacimiento. Diagnóstico diferencial de masa cervical. Oral communication. XXVIII Congreso de Neonatología y Medicina Perinatal (SENEO) y VIII Congreso de la Sociedad Española de Enfermería Neonatal (SEEN). Online Edition. 25-29/10/2021.

• J.J. Rafael Salazar Quiroz, Berta Martínez Estradé, E. Coca Fernández, S. Brió Sanagustín, Fátima Castillo Gómez, Manuel Rodríguez Martínez, E. Turón Viñas, S. Boronat Guerrero. Complicaciones neurológicas derivadas de la infección por el virus de la influenza entre los años 2013-2019. Oral Communication CO-033. 35 Congreso Nacional de la Sociedad Española de Cuidados Intensivos Pediátricos. Online edition. 17-21/5/2021.

• J.J. Salazar Quiroz; Martínez Estrade, B; Coca Fernández, E; Brió S; Castillo, F; Rodríguez Martínez, M; Turón Viñas E; Boronat Guerrero, S. Neuroinfluenza in the period 2013-2019: analyse of risk factors. Oral Communication CO-043. 35th Congress of the Spanish Pediatric Intensive Care Society (virtual). 17-25/5/2021.

• M. Quinteiro González, Juan José Rafael Salazar Quiroz, Mireia Rius Mir, Emma Carbonell Estarellas, Sara Iglesias Fernández, Fátima Castillo Gómez. Proyecto de instauración de farmcards en urgencias de pediatría en un hospital de tercer nivel. Oral communication COM.190. 25 Reunión de la Sociedad Española de Urgencias de Pediatría. Online Edition. 03-06/03/2021.

• M. Rodríguez Martínez, Fátima Castillo Gómez, E. Coca Fernández, Rodrigo Burgueño Rico, Juanjo Salazar Quiroz, Berta Martínez Estradé, Laia Turón Viñas, S. Brió Sanagustín. Peculiaridades del transporte aéreo pediátrico. Oral Communication. 35 Congreso Nacional de la Sociedad Española de Cuidados Intensivos Pediátricos. Online edition. 17-21/5/2021.

• R. Esmel-Vilomara, Gallardo Calero A, Subirana Campos L, Rodriguez Losada O, Ceña Setien A, Renter Valdovinos L. Mapa de recursos de Catalunya. Proposta d'un Projecte per a millorar el suport telefònic durant el maneig del pacient crític pediàtric i neonatal previ al trasllat interhospitalari. Oral Communication. 1r Congrés Anual Virtual de la Societat Catalana de Pediatría. Online edition. 27-28/5/2021.

• S. Brio Sanagustin, E. Coca Fernadez, Laia Turon Viñas, Fatima Castillo Gómez, Manuel Rodríguez Martínez, Rodrigo Antonio Burgueño Rico, Juan José Salazar Quiroz, I. Badell Serra. Patología respiratoria asociada al trasplante alogénico de progenitores hematopoyéticos. Oral Communication. 35

Congreso Nacional de la Sociedad Española de Cuidados Intensivos Pediátricos. Online edition. 17-21/5/2021.

• S. Hernández Bou, Arístides Rivas García, Aida Bonvehí Soldevila, Esther Lera Carballo, José María Valle T-Figueras, Iris Collazo Vallduriola, Ramón Fernández Álvarez, Anna Maria Borrull Senra, Marta Soriano Arola, Vanessa Bonil Martínez, Encarna Valero Burgos, Ángela Hurtado Mingo, Parisá Khodayar Pardo, Borja Gómez Cortés, Diana Martínez Cirauqui, Laia Sánchez Torrent, Marta Arrudi Moreno. Registro multicéntrico nacional de pacientes pediátricos con infección por coronavirus SARS-CoV-2 diagnosticados en los Servicios de Urgencias. Oral Communication. XXV Reunión de la Sociedad Española de Urgencias de Pediatría (Online edition). 3-6/3/2021.

• V. Amat Samaranch, Helena Iznardo Ruiz, Anna Mozos Rocafort, S. Brio Sanagustín, Lluís Puig Sanz y Esther Roé Crespo. Hospital de la Santa Creu i Sant Pau, Barcelona. Erupción vesículoampollosa generalizada: un reto diagnóstico. Oral Communication. 32 Reunión del grupo español de dermatología pediátrica. Online edition. 26-27/2/2021.

• Multiple posters to national and international congresses (not specified).

• Multiple presentations at courses, seminars and other conferences (not specified).

Teaching activities

• Active participation in teaching at university, in master's degrees and directing final degree projects (not specified).



Ophthalmology

Coordinator

Del Campo Carrasco, Zoraida FGS
zcampo@santpau.cat

Members

Buil Calvo, Jose Antonio	FGS	Gómez Prieto, María José	FGS
Castro Seco, Roberto	FGS	Llorca Cardeñosa, Ana	FGS
Conte Visus, Maria Angels	FGS	Luna Marine, Maria Sabina	FGS
Crespi Vilimelis, Jaume	FGS	Oliva Sierra, Ruth	FGS
Delgado Weingartshofer, Ruben	FGS	Rodriguez Alvarez, Fernando	FGS
Diaz Cascajosa, Jesus	FGS	Salvador Miras, Ignacio	IR
Garcia Pares, Eva	FGS	Tellez Vazquez, Jesus Maria	FGS
Gil Arnal, Julian Miguel Angel	FGS	Vela Segarra, Jose Ignacio	FGS

Main lines of research

- Optimization of the functional rehabilitation of patients after cataract surgery using multifocal intraocular lens, and evaluation of vision quality in terms of parameters such as visual acuity, sensitivity to contrast and aberrometry.
- Ocular repercussions of allogeneic medullary transplants and evaluation of the different clinical manifestations and response to treatment in graft-versus-host disease.
- Comparison of the effectiveness and safety of intravitreal injection of ranibizumab vs

laser photocoagulation in patients with visual alteration due to diabetic macular edema.

Collaborations

Collaborations with other IIB Sant Pau research groups

- "A multicenter, randomized, double-blind, parallel-group, placebo-controlled variable treatment duration study evaluating the efficacy and safety of Siponimod (BAF312) in patients with secondary progressive multiple sclerosis". PI: Dr. Escartín. Team: J. A. Buil, Ruth Oliva, F. Liñan. 2011. Promoter: Novartis

- “Multicenter, randomized, double-blind, placebo-controlled study to assess the efficacy, safety, pharmacokinetics and pharmacodynamics of GZ/SAR402671 in patients with early-stage Parkinson’s disease carrying a GBA mutation or other pre-specified variant”. PI: Dr Kulisevsky. Ophthalmology team: Dr Buil, M.J. Gómez, F. Liñan. Jan 2017/ Apr 2021. Promoter: SANOFI
- “A PHASE III, openlabel, randomized, active-controlled, multicenter study to evaluate the efficacy and safety of Pemigatinib versus Gemcitabine plus cisplatin chemotherapy in first-line treatment of participants with unresectable or metastatic cholangiocarcinoma with FGFR2 rearrangement.” Protocol 54828-302. N° EUDRA CT: 2018-002894-23. Promoter: INCYTE CORPORATION. Jul 2019- Jul 2021. PI: Dr Martín- Richard. Ophthalmology team: Dr Téllez, Lorena Morales, F. Liñan.
- “Estudio de superioridad multicéntrico, aleatorizado, con doble enmascaramiento, con grupos paralelos para evaluar la eficacia y la seguridad de ponesimod como tratamiento complementario en comparación con placebo en sujetos con esclerosis múltiple recurrente tratados con dimetilfumarato (Tecfidera). Protocol num: AC-058B302. N° EUDRA CT: 2012-000541-12. Promoter: ACTELION. PI: Dr. Escartin. Ophthalmology team: Dr Mingorange, Dr Pereira, Ruth Oliva, F.Liñan. Aug 2017 – 2021.
- “An open -label, randomised, multi-drug, biomarker-directed, multi-centre, multi-arm phase 1b study in patients with Muscle Invasive Bladder Cancer (MIBC) who have progressed on prior treatment (BISCAY). Protocol num. BISCAY / D2615C00001. N° Eudra CT: 2015-002228-25. Promoter: AstraZeneca. Dec 2016-2019. PI: Dr Maroto. Ophthalmology team: Dr Luna, Tanit Colobrans, F. Liñan. Ended on Sep 2021.
- “Osimertinib and Bevacizumab versus osimertinib alone as second-line treatment in stage IIIb-IVb with confirmed EGFRm and T790M”. Protocol num. ETOP 10-16 BOOSTER. N° Eudra CT: 2016-002029-12. Promoter: GRUPO ESPAÑOL DE CANCER DE PULMÓN. 26/6/2017. PI: Dr Majen. Ophthalmology team: Dr Luna, Lorena Morales, F. Liñan
- “Estudio multicéntrico abierto, en fase III para evaluar el beneficio clínico de isatuximab (SAR650984) en combinación con bortezomid (velcade), lenaminomida (reulimid) y dexametasona frente a bortezomid, lenalinomida y dexametasona en pacientes con mieloma múltiple recién diagnosticados no elegibles para trasplante”. Protocol num. EFC12522/IMROZ. N° Eudra CT: 2017-002238-21. Promoter: SANOFI. 29/01/18. PI: Dr Granell. Ophthalmology team: Dr Delgado, Tanit Colobrans
- Feasibility and activity of AZD9291 (osimertinib) treatment on positive plasma T790M in EGFR mutant NSCLC patients. Protocol num. EORTC 1613-APPLE. N° Eudra CT: 2016-001834-82. Promoter: EORTC. May 2018. PI: Dr Majem. Ophthalmology team: Dr Luna, Lorena Morales. Finished in 2021.
- A phase II-III multicenter, randomized, double blind study of Selinexor (KPT-330) versus placebo in patients with advanced unresectable dedifferentiated liposarcoma (DDLs). Protocol num. KCP-330-020. N° Eudra CT: 2015-003594-14. Promoter: KARYPHARM THERAPEUTICS INC. Aug 2018 / Aug 2020. PI: Dr Ana Sebio García. Ophthalmology team: Dr Llorca, Tanit Colo4brans. Finished on June 2021.
- A phase 3 study of Erdafitinib compared with Vinflunine or Docetaxel or Pembrolizumab in subjects with advanced urothelial cancer selected FGFR gene aberrations. Protocol num. 42756493BLC3001. N° Eudra: 2017-002932-18 . Promoter: Janssen Research&development. May 2018. PI: Dr Georgia Anguera. Ophthalmology team: Dr Llorca, Ruth Oliva and Lorena Morales.
- A phase3 randomized study of Amivantemab and Lazertinib combination therapy versus Osimartinib versus Lazeertinib as first-line treatment in patients with EGFR- Mutated locally advanced or metastatic non small cell lung cancer. Protocol num.: 73841937NSC3003. N.° Eudra: 2020-000743-31. Promoter: Jansen research&development LLC. Jan 2021/ Oct 2026. PI: Dr Majen. Ophthalmology team: Dr Delgado / Lorena Morales.
- An open-label, randomized, controlled phase 3 study of enfortumab vedotin in combination with pembrolizumab with or without chemotherapy, versus chemotherapy alone in previously untreated locally advanced or metastatic urotelial cancer. Protocol num. QBGJ398-302. N.° Eudra: 2019-004542-15. Promoter: SEATTLE GENETICS, Inc. 2020/2023. PI: Dr Maroto. Ophthalmology team: Delgado / Castro / Tanit Colobrans
- “A Phase 2 randomized, double-blind, placebo-controlled, multicentre study to evaluate the efficacy and safety of AL002 in participants with early Alzheimer’s disease”. Protocol num. AL002-2. Promotor: ALECTOR Inc. 2021. PI: Dr Lleo Bisa. Ophthalmology team: Delgado, Ruth Oliva, F. Liñan.
- Collaborative study Puigvert and Sanofi. Protocol num. EFC15392. Ophthalmology team: Drs Crespi, Sandra Perich, Eva García, M° José Gómez, Ruth Oliva. Finished on July 2021.
- Clinical study protocol a p hace 1b, multicenter, two-part, openlabel study of Trastuzumab Deruxtecan, an anti-human epidermal growth factor receptor-2 (her2)-antibody drug conjugate (adc), in combination with pembrolizumab, an anti-pd.1 antibody, in subjects with locally advanced/metastatic breast or non-small cell lung cancer (nsclc). Protocol num. DS8201-A-U106. Promoter: DAIICHI SANKYO. N.° EUDRAT CT. 2018-002489-38. March 2020 / Sept 2022. PI: Dr Anguera. Ophthalmology team: Delgado, Lorena Morales.
- Estudio en fase II aleatorizado de erdafitinib frente a la elección del investigador de quimioterapia intravesical en pacientes que recibieron el bacilo de Calmette y Guerin (BCG) y presentaron recidiva de cáncer de vejiga no musculo-

invasivo (NMIBC) de alto riesgo y mutaciones o fusiones del FGFR. Protocol num. 42756493BLC2003. Promoter: Janssen Research. N.º EUDRAT CT: 2019-002449-39. Jan 2021 – Aug 2022. PI: Dr Rodríguez Faba. Ophthalmology team: Vela, Giró, Ma José, Eva.

- Ensayo clínico de fase I/IIa de BI-1206, un anticuerpo monoclonal contra CD32b (FcyRIIB), en combinación con rituximab en personas con linfoma no hodgking de linfocitos B de escasa malignidad que ha recidivado o es resistente al rituximab. Protocol num: 17-BI-1206-02. Promoter: bioinvent international AB. N.º EUDRAT CT: 2018-000444-26. April 2021/ April 2026. PI: Dr Silvana Novelli. Ophthalmology team: Delgado, Ruth Oliva.

- A study of enfortumab vedotin (ASG-22CE) as monotherapy or in combination with other anticancer therapies for the treatment of urothelial cancer. Protocol num. SGN22E-002. Promotor: Seagen inc. N.º EUDRAT CT: 2018-001527-39. Apr 2021/ Jul 2026. PI: Dr Maroto. Ophthalmology team: Dr Gómez, Tanit Colobrans.

- Phase 3 randomized study of DS-1062^a versus docetaxel in previously treated advanced or metastatic non-small cell lung cancer without actionable genomic alterations (tropion-lung01). Protocol num. DS1062-A-U301. EUDRA CT: 2020-004643-80. Promotor: DAIICHI SANKYO INC. PI: Dr Margarita Majen. Oncology. Ophthalmology team: Delgado, OPTO 1.

- Estudio de los cambios microvasculares en la retina medidos mediante OCT-angiografía en pacientes con Diabetes Mellitus tipo 1 al inicio de la enfermedad y tras la optimización del control glucémico DM DEBUT. OCT-PREECLAMPSIA. Ophthalmology team: Salvador, Vela, M.ª José, Eva, Ruth, Lorena, Tanit.

External collaborations

- YOSEMITE. Title: "A Phase III, Multicenter, Randomized, Double-Masked, Active Comparator-Controlled Study To Evaluate The Efficacy And Safety Of RO6867461 In Patients With Diabetic Macular Edema (YOSEMITE)" Protocol: GR40349. Project num. 209132. Started on April 2019. Promoter: Roche. PI: Dr Vela. Researchers: Drs Bassaganyas, Crespi, Mingorance, Diaz, Torrell, Perich, Delgado, Alhayek. Nurses: Laura Muñoz, Francesca Liñan, Eva Garcia, Mª Jose Gomez, Ruth Oliva y Montserrat Santander.

- RHONE X (Following Project after YOSEMITE). Protocol number: GR41987. Version number: 2. EUDRACT Number: 2020-000402-29. IND Number: 119225.

- PULSAR. Title: Randomized, double-masked, active-controlled, phase 3 study of the efficacy and safety of high dose aflibercept in patients with neovascular age-related macular degeneration. Protocol: 20968. Protocol Num: BAY 86-5321/ aflibercept. Started on March 2021. PI: Dr Vela. Researchers: Drs Salvador,

Abt, Perich, Marín, Ruiz. Nurses: Laura Muñoz. Francesca Liñan, Mª José Gomez, Ruth Oliva, Eva Garcia, Alberto Molina, Montserrat Santander.

- ADEQUATE. Title: "Ensayo clínico simple ciego para estudiar la tolerabilidad, eficacia, calidad de vida y adherencia de latanoprost/timolol sin conservantes (Fixaprost®) comparados con bimatoprost/timolol con conservantes (Ganfort® P) en pacientes con glaucoma de ángulo abierto o hipertensión ocular". Protocol: LT2347-PIV-02/20. Code: 607-01-VIII. Promoter: Laboratorios Thea S.A. PI: Dr Tellez. Team: Dr Salvador, Mª Jose Gómez, Laura Muñoz, Francesca Liñan

- MANTRA. Title: Estudio observacional prospectivo multicéntrico para evaluar la asociación entre la sensibilidad retiniana y el fluido retiniano en la degeneración macular asociada con la edad neovascular. Protocol: BMF-TIV-2020-01. Started on April 2021. Researchers: Vela, Bassaganyas

Doctoral theses

- Zoraida Del Campo Carrasco, Estudio comparativo entre la membrana amniótica y la membrana de plasma rico en factores de crecimiento (PRGF) en la cirugía de pterigion primario, Autonomuos University of Barcelona (UAB), José Antonio Buil Calvo, 12/02/2021

Scientific production

- Furlano M, Martinez V, Pybus M, Arce Y, Crespi J, Venegas MD, Bullich G, Domingo A, Ayasreh N, Benito S, Lorente L, Ruiz P, Gonzalez VL, Arlandis R, Cabello E, Torres F, Guirado L, Ars E, Torra R. Clinical and Genetic Features of Autosomal Dominant Alport Syndrome: A Cohort Study. *AMERICAN JOURNAL OF KIDNEY DISEASES*. 2021; 78(4). DOI:10.1053/j.ajkd.2021.02.326. PMID:33838161. IF:8,860 (Q1/D1).

- Gras JR, Rodriguez F, Gomez B, Cubero JM, Martel M, Granell E, Lopez M, Montserrat JR, Masegur H. Management of Patients With Graves Orbitopathy Using Endonasal Endoscopic Techniques. *JOURNAL OF CRANIOFACIAL SURGERY*. 2021; 32(4). DOI:10.1097/SCS.0000000000007107. PMID:33170828. IF:1,046 (Q4/D9).

- Mansour AM, Kozak I, Saatci AO, Ascaso FJ, Broc L, Battaglia M, Olivier N, Gili P, Chhablani J, Hedges TR, Honrubia A, Gutierrez L, Panozzo G, Català J, Díaz J, Carreras E, Kadayifcilar S, Al Kahtani ES, Uwaydat SH, Lima LH, Mansour HA, Khan HA, Aaberg TM Jr, Bovino JA, Hunyor AP. Prepapillary vascular loop—a new classification. *Eye (Lond)*. 2021;35(2):425-432. DOI:10.1038/s41433-020-0859-3. PMID: 32291404. IF:3,775 (Q1/D2).

- Miro E, del Cuerpo M, Rubio M, Berengua C, Espanol M, Marin P, Vela JI, Pomar V, Gutierrez C, Navarro F, Rabella N. Whole-genome analysis to describe a human adenovirus D8 conjunctivitis outbreak in a tertiary hospital. *JOURNAL OF*

MEDICAL VIROLOGY. 2021; 93(8). DOI:10.1002/jmv.26850. PMID:33543795. IF:2,327 (Q4/D8).

Other scientific production

• Asensio CP, Mora JC, Cascajosa JD. Crystalline retinopathy associated with chronic retinal detachment in a child. *JOURNAL FRANCAIS D OPHTALMOLOGIE*. 2021; 44(3). DOI:10.1016/j.jfo.2020.06.017. PMID:33419592. IF:0,818 (Q4/D10).

Other publications

• Gil MA. Capítulo de la ponencia oficial del SECOIR 2021: Ópticas de lentes intraoculares.

• Perich González S, Bulnes González V, Vela Segarra JI. Obstrucción de la vena central de la retina en mujer joven con COVID-19+: ¿consecuencia o coincidencia? *Annals d'oftalmologia: òrgan de les Societats d'Oftalmologia de Catalunya, Valencia i Balears*. 2021; 29(2). ISSN-e 1133-7737

Communication and dissemination activities

Outreach activities

• José Ignacio Vela. Casos de enfermedades vasculares y otras patologías médicas de la retina. Curso. Imagen retiniana de campo ultra amplio con sistema Optomap: diagnóstico y manejo de casos complejos. Barcelona. 29-10-2021.

• Jesús Díaz. Casos de patología pediátrica. Curso. Imagen retiniana de campo ultra amplio con sistema Optomap: diagnóstico y manejo de casos complejos. Barcelona. 29-10-2021.

• José Ignacio Vela. Casos prácticos: de la OCT a la función visual. Enfocando el presente y futuro de la DMAE neovascular. Simposio Médico Novartis. 25-11-2021.

• Marta Giró. Augmento del grosor coroideo como primer signo de presentación de un linfoma orbitario. Congrés de la Societat Catalana oftalmología. 25-27/11/2021.

• Jaume Crespí. Taula rodona Retina i uveïtis. Congrés de la Societat Catalana oftalmología. 25-27/11/2021.

• Jesús Díaz. Taula rodona Retina i uveïtis. Congrés de la Societat Catalana oftalmología. 25-27/11/2021.

• Jesús Tellez. Taula rodona catarata. Congrés de la Societat Catalana oftalmología. 25-27/11/2021.

• Alba Marín. Papilitis tras vacuna Covid. Congrés de la Societat Catalana oftalmología. 25-27/11/2021

• Ester Mingorance. Moderación comunicaciones orales y casos clínicos Congrés de la Societat Catalana oftalmología. 25-27/11/2021.

• Anna Hermosa. Pseudopodia lentis i opacitats vitrees com afectació ocular d'amiloidosi familiar. Congrés de la Societat Catalana oftalmología. 25-27/11/2021.

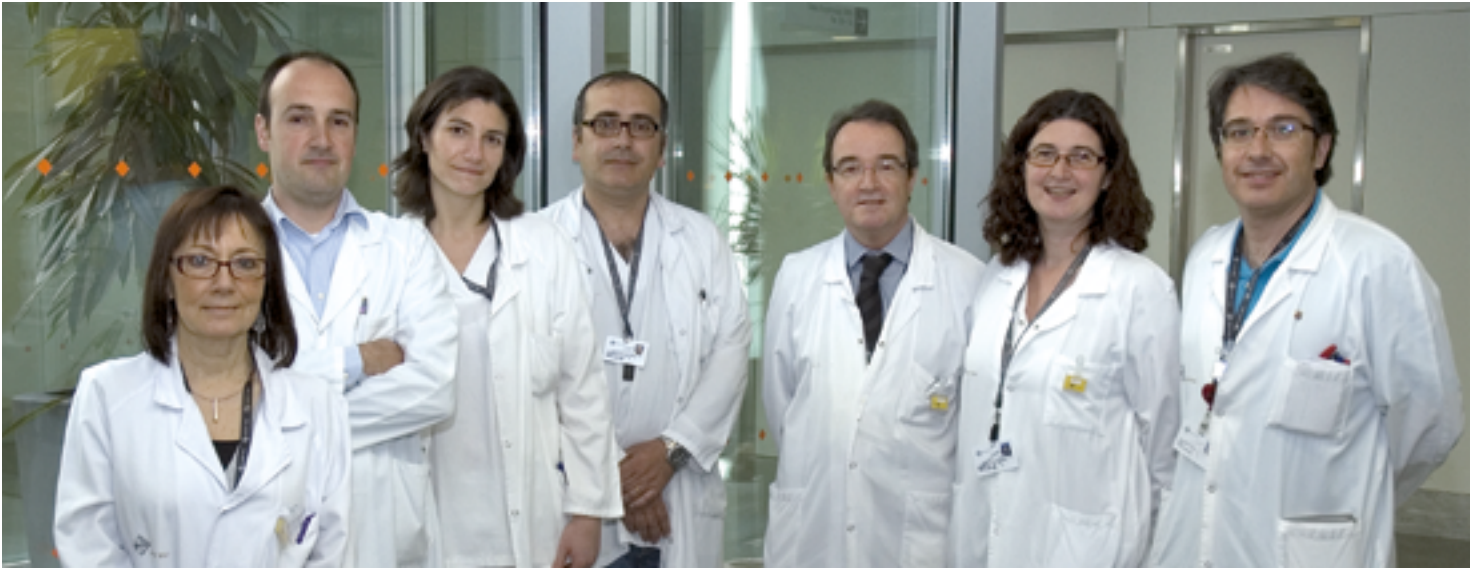
• 11. Sabina Luna. Estrabisme i neurooftalmologia. Congrés de la Societat Catalana oftalmología. 25-27/11/2021.

• Sandra Perich. Descemet stripping only en el tratamiento de la distrofia endotelial de fuch. Congrés de la Societat Catalana oftalmología. 25-27/11/2021.

• Irene Loscos. Síndrome de Charles Bonnet en pacientes con agudeza visual conservada. Congrés de la Societat Catalana oftalmología. 25-27/11/2021.

• Ignacio Salvador. Identificando las Telangiectasias Maculares Idiopáticas tipo 2. Pliegues coroideos: exploración y diagnóstico diferencial. Congrés de la Societat Catalana oftalmología. 25-27/11/2021.

• Jesús Téllez. Cómo poner bien una válvula peserflo: técnica y trucos. Curso Online cirugía de glaucoma.



Nuclear Medicine

Coordinator

Carrio Gasset, Ignasi
icarrio@santpau.cat

UAB

Members

Abouzian Senhaji, Safae	FGS	Fernandez Leon, Alejandro	FGS
Camacho Marti, Maria Del Valle	FGS	Flotats Giralt, Albert	FGS
Domenech Vilardell, Anna	FGS	Fuentes Ocampo, Francisco	FGS
Duch Renom, Joan	FGS	Lopez Mora, Diego Alfonso	IR
Estorch Cabrera, Montserrat	FGS	Sizova, Marina	FGS

Main lines of research

• Oncology

- New diagnostic methods based on the identification and visualization of molecular targets employing metabolic mechanisms, receptor systems, hypoxia, angiogenesis and apoptosis.

- New applications for sentinel node detection and radioguided surgery models.

• Cardiovascular Research

- New methods for non-invasive assessment of ischaemic heart disease and heart failure.

- Cardiovascular functional studies.

- New methods for assessing cardiac innervation.

• Functional Neuroimaging

- Development of new functional imaging methods for evaluating neurodegenerative diseases (Parkinson, Parkinson-Plus, Alzheimer, MCI).

- Dopaminergic system studies using IBZM and Datscan.

Scientific Challenges

• Introduce new technologies to clinical research (given that imaging techniques are evolving very rapidly towards multimodal systems that integrate biological, molecular, anatomical and functional information in a single examination) and include these

technologies, mainly PET/CT and PET/MR, in the group and hospital's research activities.

- **New Molecular Imaging Techniques**

Develop new hybrid molecular imaging technologies, mainly PET/CT and PET/MR, building on pre-clinical and clinical molecular imaging models developed using SPECT and conventional nuclear medicine technologies.

- **PET Imaging Biomarkers**

Develop new PET radioactive tracers to be used as biomarkers in new imaging technologies building on our experience with radioactive tracers to view in vivo diagnostic and therapeutic targets.

Active grants

- **IGNASI CARRIO GASSET.** Improved treatment stratification for Hodgkin lymphoma patients through the use of deep learning, molecular imaging and relevant clinical data. AC19/00141. Instituto de Salud Carlos III. Duration 2020-2022. 82.644,00 €. Note: Total amount granted to PI. It does not include indirect costs.

Scientific production

- Bauckneht M, Chincarini A, Brendel M, Rominger A, Beyer L, Bruffaerts R, Vandenberghe R, Kramberger MG, Trost M, Garibotto V, Nicastro N, Frisoni GB, Lemstra AW, Berckel BNM, Pilotto A, Padovani A, Ochoa MA, Davidsson A, Camacho V, Peira E, Arnaldi D, Pardini M, Donegani MI, Raffa S, Miceli A, Sambuceti G, Aarsland D, Nobili F, Morbelli S. Associations among education, age, and the dementia with Lewy bodies (DLB) metabolic pattern: A European-DLB consortium project. *Alzheimers & Dementia*. 2021; 17(8). DOI:10.1002/alz.12294. PMID:33528089. IF:21,566 (Q1/D1).
- Bejanin A, Iulita MF, Vilaplana E, Carmona M, Benejam B, Videla L, Barroeta I, Fernandez S, Altuna M, Pegueroles J, Montal V, Valldeneu S, Gimenez S, Gonzalez S, Munoz L, Padilla C, Aranha MR, Estelles T, Illan I, Belbin O, Camacho V, Wilson LR, Annus T, Osorio RS, Videla S, Lehmann S, Holland AJ, Zetterberg H, et al. [Alcolea D, Clarimon J, Blesa R, Lleo A, Fortea J]. Association of Apolipoprotein E epsilon 4 Allele With Clinical and Multimodal Biomarker Changes of Alzheimer Disease in Adults With Down Syndrome. *JAMA Neurology*. 2021; 78(8). DOI:10.1001/jamaneurol.2021.1893. PMID:34228042. IF:18,302 (Q1/D1).
- Fuentes F, Lopez DA, Flotats A, Camacho V, Sizova M, Abouzian S, Duch J, Fernandez A, Estorch M, Carrio I. Digital versus analog PET/CT in patients with known or suspected liver metastases. *NUCLEAR MEDICINE COMMUNICATIONS*. 2021; 42(4). DOI:10.1097/MNM.0000000000001341. PMID:33306635. IF:1,690 (Q4/D8).
- Hirschfeld CB, Dondi M, Pascual TNB, Mercuri M, Vitola J, Karthikeyan G, Better N, Mahmarian JJ, Bouyoucef SE, Hee-Seung Bom H, Lele V, Magboo VPC, Alexanderson E, Allam AH, Al-Mallah MH, Flotats A, Jerome S, Kaufmann PA, Luxemburg O, Underwood SR, Rehani MM, Vassileva J, Paez D, Einstein AJ; INCAPS Investigators Group. Worldwide Diagnostic Reference Levels for Single-Photon Emission Computed Tomography Myocardial Perfusion Imaging: Findings From INCAPS. *JACC-Cardiovascular Imaging*. 2021;14(3):657-665. DOI:10.1016/j.jcmg.2020.06.029. PMID: 32828783. IF:14,805 (Q1/D1).
- Hirschfeld CB, Mercuri M, Pascual TNB, Karthikeyan G, Vitola JV, Mahmarian JJ, Better N, Bouyoucef SE, Bom HHS, Lele V, Magboo VPC, Alexanderson E, Allam AH, Al MH, Dorbala S, Flotats A, Jerome S, Kaufmann PA, Luxemburg O, Shaw LJ, Underwood SR, Rehani MM, Paez D, Dondi M, Einstein AJ. Worldwide Variation in the Use of Nuclear Cardiology Camera Technology, Reconstruction Software, and Imaging Protocols. *JACC-Cardiovascular Imaging*. 2021; 14(9). DOI:10.1016/j.jcmg.2020.11.011. PMID:33454257. IF:14,805 (Q1/D1).
- Lleo A, Zetterberg H, Pegueroles J, Karikari TK, Carmona M, Ashton NJ, Montal V, Barroeta I, Lantero J, Videla L, Altuna M, Benejam B, Fernandez S, Valldeneu S, Garzon D, Bejanin A, Iulita MF, Camacho V, Medrano S, Belbin O, Clarimon J, Lehmann S, Alcolea D, Blesa R, Blennow K, Fortea J. Phosphorylated tau181 in plasma as a potential biomarker for Alzheimer's disease in adults with Down syndrome. *Nature Communications*. 2021; 12(1):4304. DOI:10.1038/s41467-021-24319-x. PMID:34262030. IF:14,919 (Q1/D1).
- McCabe JJ, Camps P, Giannotti N, McNulty JP, Coveney S, Murphy S, Barry M, Harbison J, Cronin S, Williams D, Horgan G, Dolan E, Cassidy T, McDonnell C, Kavanagh E, Foley S, Collins S, O'Connell M, Fernandez A, Delgado R, Marnane M, Marti J, Kelly PJ. Carotid Plaque Inflammation Imaged by PET and Prediction of Recurrent Stroke at 5 Years. *NEUROLOGY*. 2021; 97(23). DOI:10.1212/WNL.00000000000012909. PMID:34610991. IF:9,910 (Q1/D1).
- Moya P, Leon AF, Corica ME, Marti VC, Lopez DA, Castellvi I, Corominas H. "The added value of 18f-FDG PET/CT in the assessment of onset and steroid resistant polymyalgia rheumatica". *PLoS One*. 2021; 16(9):e0255131. DOI:10.1371/journal.pone.0255131. PMID:34559822. IF:3,240 (Q2/D4).
- Ovcaricek PP, Giovanella L, Gasset IC, Hindie E, Huellner MW, Luster M, Piccardo A, Weber T, Talbot JN, Verburg FA. The EANM practice guidelines for parathyroid imaging. *EUROPEAN JOURNAL OF NUCLEAR MEDICINE AND MOLECULAR IMAGING*. 2021; 48(9). DOI:10.1007/s00259-021-05334-y. PMID:33839893. IF:9,236 (Q1/D1).
- Pegueroles J, Montal V, Bejanin A, Vilaplana E, Aranha M, Santos MA, Alcolea D, Carrio I, Camacho V, Blesa R, Lleo A, Fortea J. AMYQ: An index to standardize quantitative amyloid load across PET tracers. *Alzheimers & Dementia*. 2021; 17(9). DOI:10.1002/alz.12317. PMID:33797846. IF:21,566 (Q1/D1).
- Pons G, Abdelfattah U, Sarria J, Duch J, Masia J. Reverse Lymph Node Mapping Using Indocyanine Green Lymphography: A Step Forward in Minimizing Donor-Site

Morbidity in Vascularized Lymph Node Transfer. *PLASTIC AND RECONSTRUCTIVE SURGERY*. 2021; 147(2). DOI:10.1097/PRS.00000000000007585. PMID:33565822. IF:4,730 (Q1/D2).

- Sampedro F, Marin J, Martinez S, Camacho V, Lopez DA, Pagonabarraga J, Kulisevsky J. Extrastriatal SPECT-DAT uptake correlates with clinical and biological features of de novo Parkinson's disease. *NEUROBIOLOGY OF AGING*. 2021; 97. DOI:10.1016/j.neurobiolaging.2020.10.016. PMID:33212336. IF:4,673 (Q2/D3).
- Sampedro F, Stantonyonge N, Martínez-Horta S, Nan N, Camacho V, Chico A. Increased cerebral FDG-PET uptake in type 1 diabetes patients with impaired awareness of hypoglycaemia. *JOURNAL OF NEUROENDOCRINOLOGY*. 2021;33(1):e12910. DOI:10.1111/jne.12910. PMID: 33176042. IF:3,627 (Q3/D6).
- Tian M, Watanabe Y, Kang KW, Murakami K, Chiti A, Carrio I, Civelek AC, Feng JH, Zhu YK, Zhou R, Wu S, Zhu JM, Ding Y, Zhang K, Zhang H, Mol Imaging TA. International consensus on the use of [F-18]-FDG PET/CT in pediatric patients affected by epilepsy. *EUROPEAN JOURNAL OF NUCLEAR MEDICINE AND MOLECULAR IMAGING*. 2021; 48(12). DOI:10.1007/s00259-021-05524-8. PMID:34453559. IF:9,236 (Q1/D1).

Other scientific production

- Cabrera ME. Metabolic therapy and internal dosimetry: A difficult but necessary encounter. *Revista Espanola de Medicina Nuclear e Imagen Molecular*. 2021; 40(3). DOI:10.1016/j.rem.2021.03.010. PMID:33820750. IF:1,359 (Q4/D9).
- López-Mora DA, Carrió I. Advances And New Indications of PET/CT scan. *Medicina Clinica*. 2021;156(2):65-67. English, Spanish. DOI:10.1016/j.medcli.2020.04.019. PMID: 32620354. IF:1,725 (Q3/D7).
- Lopez DA, Fernandez A, Duch J, Carrio I. Follow-up F-18-FDG PET/CT in an oncological asymptomatic COVID-19 patient. *Revista Espanola de Medicina Nuclear e Imagen Molecular*. 2021; 40(6). DOI:10.1016/j.rem.2020.11.004. PMID:34752372. IF:1,359 (Q4/D9).
- Velloso MJG, Garcia DB, Pena C, Ruano R, Fernandez I, Gomez A, Mitjavila M, Estorch M, Cordero JM. SEMNIM, the power of all of us. *Revista Espanola de Medicina Nuclear e Imagen Molecular*. 2021; 40(6). DOI:10.1016/j.rem.2021.09.003. PMID:34627727. IF:1,359 (Q4/D9).



Intensive Medicine

Coordinator

Mancebo Cortes, Jordi FGS
jmancebo@santpau.cat

Members

Baldirà Martínez de Irujo, Jaume	FGS	Santos Rodriguez, Jose Alberto	FGS
Betbesé Roig, Antoni Jordi	FGS	Suárez Montero, Juan Carlos	FGS
Izura Gómez, Marta	FGS	Torrens Sonet, Maria	FGS
Moran Chorro, Indalecio	FGS	Vera Artazcoz, Paula	FGS
Rodríguez Farré, Núria	FGS	Zapata Fenor, Luis	FGS

Main lines of research

Acute Respiratory Failure and Artificial Ventilation

- Non-invasive ventilation.
- New ventilation modes: proportional-assist ventilation and NAVA.
- Prone decubitus in acute respiratory dysfunction syndrome (ARDS).
- Artificial ventilation withdrawal.
- Expert ventilation systems.
- Sleep and artificial ventilation.
- Early and active mobilization of the critical patient.
- Extracorporeal CO₂ removal in ARDS patients.
- High-flow oxygen administration by nasal cannula in postextubation phase.
- Prevalence of drug interactions in critical care unit.

Study of the Usefulness of New Biomarkers in Critically Ill Patients

- BNP in weaning from mechanical ventilation.
- Use of the NGAL protein in the renal prognosis of critically ill patients.
- Strict control of blood glucose in critically ill patients.
- Prophylaxis of acute gastric mucosal injury in critically ill patients.
- Study of the haemodynamic effects of different antipyretic drugs in critically ill patients.
- Influence of position change to supine decubitus position in intra-abdominal pressure.

Scientific Challenges

- Consolidate clinical and physiological research into ventilation in critically ill patients through multicentre and multinational networking.
- Create a stable and well-trained group of researchers in this discipline.

Active grants

- JUAN CARLOS SUAREZ MONTERO. Reversibilidad precoz de la disfunción diastólica como marcador pronóstico en el shock séptico (REPRISS). SOCMIC 2018. Societat Catalana de Medicina Intensiva i Crítica. Duration 2018-2022. 1.363,64 €.

Note: Total amount granted to PI. It does not include indirect costs.

Doctoral theses

- Marcos Fernando Murillo Avecillas, Implementación de un sistema de gestión de calidad en las terapias continuas de depuración extrarenal, UAB, Antoni Betbesé Roig, Francisco Javier González de Molina Ortiz, 28/01/2021

Scientific production

- Albaiceta GM, Brochard L, Santos CCD, Fernandez R, Georgopoulos D, Girard T, Jubran A, Lopez J, Mancebo J, Pelosi P, Skrobik Y, Thille AW, Wilcox ME, Blanch L. The central nervous system during lung injury and mechanical ventilation: a narrative review. *BRITISH JOURNAL OF ANAESTHESIA*. 2021; 127(4). DOI:10.1016/j.bja.2021.05.038. PMID:34340836. IF:9,166 (Q1/D1).
- Astigarraga P, Lerma FA, Zambrano CB, Costa RG, Vidal FG, Navarro RD, Suarez CR, Pallas TA, Montero JG, Vera P, Alemparte E. Epidemiology and prognosis of patients with a history of cancer admitted to intensive care. A multicenter observational study. *Medicina Intensiva*. 2021; 45(6). DOI:10.1016/j.medin.2020.01.013. PMID:32307264. IF:2,491 (Q3/D8).
- Berenguer J, Borobia AM, Ryan P, Rodriguez J, Bellon JM, Jarrin I, Carratala J, Pachon J, Carcas AJ, Yllescas M, Arribas JR, López J, Pascual P, Pomar V, Rabella N, Benito N, Domingo P, Bonfill X, Mancebo J, MARTIN A. Development and validation of a prediction model for 30-day mortality in hospitalised patients with COVID-19: the COVID-19 SEIMC score. *THORAX*. 2021; 76(9). DOI:10.1136/thoraxjnl-2020-216001. PMID:33632764. IF:9,139 (Q1/D2).
- Grieco DL, Maggiore SM, Roca O, Spinelli E, Patel BK, Thille AW, Barbas CSV, De Acilu MG, Cutuli SL, Bongiovanni F, Amato M, Frat JP, Mauri T, Kress JP, Mancebo J, Antonelli M. Non-invasive ventilatory support and high-flow nasal oxygen as first-line treatment of acute hypoxemic respiratory failure and ARDS. *INTENSIVE CARE MEDICINE*. 2021; 47(8). DOI:10.1007/s00134-021-06459-2. PMID:34232336. IF:17,440 (Q1/D1).
- Gutierrez B, del Toro MD, Borobia AM, Carcas A, Jarrin I, Yllescas M, Ryan P, Pachon J, Carratala J, Berenguer J, Arribas JR, Rodriguez J, López J, Pascual P, Pomar V, Rabella N, Benito N, Domingo P, Bonfill X, Puig M, Mancebo J, Martinez G. Identification and validation of clinical phenotypes with prognostic implications in patients admitted to hospital with COVID-19: a multicentre cohort study. *LANCET INFECTIOUS DISEASES*. 2021; 21(6). DOI:10.1016/S1473-3099(21)00019-0. PMID:33636145. IF:25,071 (Q1/D1).
- Johnstone J, Meade M, Lauzier F, Marshall J, Duan E, Dionne J, Arabi YM, Heels D, Thabane L, Lamarche D, Surette M, Zytaruk N, Mehta S, Dodek P, McIntyre L, English S, Rochweg B, Karachi T, Henderson W, Wood G, Ovakim D, Herridge M, Granton J, Wilcox ME, Goffi A, Stelfox HT, Niven D, Muscedere J, Lamontagne F, D'Aragon F, St C, Ball I, et al. [Mancebo J]. Effect of Probiotics on Incident Ventilator-Associated Pneumonia in Critically Ill Patients A Randomized Clinical Trial. *JAMA-JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION*. 2021; 326(11). DOI:10.1001/jama.2021.13355. PMID:34546300. IF:56,272 (Q1/D1).
- Lomeli M, Cenzano LD, Torres L, Chavarria U, Poblano M, Tendillo F, Blanch L, Mancebo J. Aggressive alveolar recruitment in ARDS: more shadows than lights. *Medicina Intensiva*. 2021; 45(7). DOI:10.1016/j.medin.2020.03.008. IF:2,491 (Q3/D8).
- Madotto F, McNicholas B, Rezoagli E, Pham T, Laffey JG, Bellani G, Mancebo J, Pesenti A. Death in hospital following ICU discharge: insights from the LUNG SAFE study. *CRITICAL CARE*. 2021; 25(1):144. DOI:10.1186/s13054-021-03465-0. PMID:33849625. IF:9,097 (Q1/D2).
- Mauri T, Foti G, Fornari C, Grasselli G, Pinciroli R, Lovisari F, Tubiolo D, Volta CA, Spadaro S, Rona R, Rondelli E, Navalesi P, Garofalo E, Knafelj R, Gorjup V, Colombo R, Cortegiani A, Zhou JX, D'Andrea R, Calamai I, Gonzalez AV, Roca O, Grieco DL, Jovaisa T, Bampalis D, Becher T, Battagliani D, Ge HQ, Luz M, Constantin JM, Ranieri M, Guerin C, Mancebo J, et al. Sigh in Patients With Acute Hypoxemic Respiratory Failure and ARDS The PROTECTION Pilot Randomized Clinical Trial. *CHEST*. 2021; 159(4). DOI:10.1016/j.chest.2020.10.079. PMID:33197403. IF:9,410 (Q1/D1).
- Nasa P, Azoulay E, Khanna AK, Jain R, Gupta S, Javeri Y, Juneja D, Rangappa P, Sundararajan K, Alhazzani W, Antonelli M, Arabi YM, Bakker J, Brochard LJ, Deane AM, Du B, Einav S, Esteban A, Gajic O, Galvagno SM, Guerin C, Jaber S, Khilnani GC, Koh Y, Lascarrou JB, Machado FR, Malbrain MLNG, Mancebo J, McCurdy MT, McGrath BA, Mehta S, et al. Expert consensus statements for the management of COVID-19-related acute respiratory failure using a Delphi method. *CRITICAL CARE*. 2021; 25(1):106. DOI:10.1186/s13054-021-03491-y. PMID:33726819. IF:9,097 (Q1/D2).
- Penuelas O, del Campo L, de Aledo A, Anon JM, Rodriguez C, Mancebo J, Vera P, Ballesteros D, Jimenez J, Maseda E, Figueira JC, Franco N, Algaba A, Aviles JP, Diaz R, Abad B, Canabal A, Abella A, Gordo F, Garcia J, Suarez JG, Cedeno J,

Martinez B, Manteiga E, Martinez O, Blancas R, Bardi T, Pestana D, Lorente JA, Muriel A, Esteban A, Frutos F. Long-term survival of mechanically ventilated patients with severe COVID-19: an observational cohort study. *Annals of Intensive Care*. 2021; 11(1):143. DOI:10.1186/s13613-021-00929-y. PMID:34601646. IF:6,925 (Q1/D2).

- Peñuelas O, Frutos-Vivar F, Muriel A, Mancebo J, García-Jiménez A, de Pablo R, Villedor M, Ferrer M, León M, Quiroga JM, Temprano S, Vallverdú I, Fernández R, Gordo F, Anzueto A, Esteban A. Mechanical ventilation in Spain, 1998-2016: Epidemiology and outcomes. *Medicina Intensiva (Engl Ed)*. 2021;45(1):3-13. English, Spanish. DOI:10.1016/j.medin.2020.04.024. PMID: 32723483. IF:2,491 (Q3/D8).
- Pham T, Montanya J, Telias I, Piraino T, Magrans R, Coudroy R, Damiani LF, Artigas RM, Madorno M, Blanch L, Brochard L, Mancebo J, Papazian L. Automated detection and quantification of reverse triggering effort under mechanical ventilation. *CRITICAL CARE*. 2021; 25(1):60. DOI:10.1186/s13054-020-03387-3. PMID:33588912. IF:9,097 (Q1/D2).
- Pham T, Pesenti A, Bellani G, Rubinfeld G, Fan E, Bugeo G, Lorente JA, Fernandes AD, Van F, Bruhn A, Rios F, Esteban A, Gattinoni L, Larsson A, McAuley DF, Ranieri M, Thompson BT, Wrigge H, Brochard LJ, Laffey JG, Mancebo J, Schomer AM. Outcome of acute hypoxaemic respiratory failure: insights from the LUNG SAFE Study. *EUROPEAN RESPIRATORY JOURNAL*. 2021; 57(6):2003317. DOI:10.1183/13993003.03317-2020. PMID:33334944. IF:16,671 (Q1/D1).
- Robba C, Citerio G, Taccone FS, Galimberti S, Rebora P, Vargiolu A, Pelosi P, Mancebo J, Laffey J. Multicentre observational study on practice of ventilation in brain injured patients: the VENTIBRAIN study protocol. *BMJ Open*. 2021; 11(8):e047100. DOI:10.1136/bmjopen-2020-047100. PMID:34380722. IF:2,692 (Q2/D4).
- Tomasa TM, Sabater J, Pérez M, Ortiz P, Díaz Y, Navas A, Betbesé A, Rodríguez M, Ibarz M, Olmo A, Oliva I, Rovira C, Cano S, Vendrell E, Catalan RM, Miralbé M, González de Molina J, Xirgu J, Marcos P. Augmented renal clearance. An unnoticed relevant event. *SCIENCE PROGRESS*. 2021; 104(2):368504211018580. DOI:10.1177/00368504211018580. PMID:34078190. IF:2,774 (Q2/D5).

Other scientific production

- Guerin C, Mancebo J. Lower V-T and Prone Position: Quo Vadis?. *AMERICAN JOURNAL OF RESPIRATORY AND CRITICAL CARE MEDICINE*. 2021; 203(11). DOI:10.1164/rccm.202101-0156ED. PMID:33556302. IF:21,405 (Q1/D1).
- Mir AS, Xarau SN, Penarrocha R, Chorro IM, Clavero FJM, Martínez MP. Evolution of poisoned patients admitted to Spanish intensive care units: Comparing two periods. *Medicina Intensiva*. 2021; 45(7). DOI:10.1016/j.medin.2020.06.005. PMID:32893034. IF:2,491 (Q3/D8).

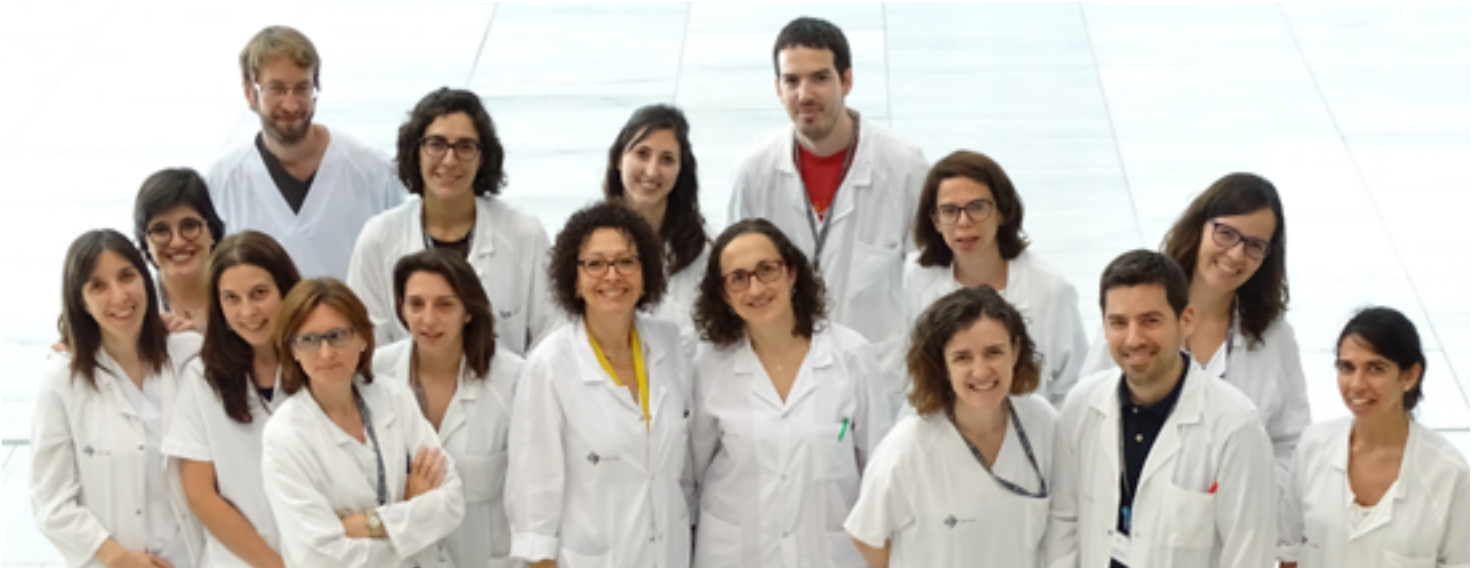
Wendel PD, Roche F, Mancebo J. Positive end-expiratory pressure, or the perennial conundrum surrounding lung recruitment. *Medicina Intensiva*. 2021; 45(9). DOI:10.1016/j.medin.2021.08.004. PMID:34839882. IF:2,491 (Q3/D8).

Communication and dissemination activities

Conferences and Seminars

- Prone position in acute respiratory distress syndrome. New York University, Pulmonary Grand Rounds. Grossman School of Medicine. 13 Jan 2021, virtual
- When and how to wean the ventilator. International Symposium Intensive Care and Emergency Medicine (ISICEM). E-Days ARDS. March 2, 2021, virtual.
- When and how to wean from mechanical ventilation. Moderator: Brochard L. Experts: Goligher E, Juffermans N, Mancebo J. ISICEM. E-Days ARDS. March 2, 2021
- Opening session: High flow nasal canula, ¿Where we are? XIX Simposio Internacional de Emergencias Médicas y Paciente Crítico (SIEMPAC 2021) Sociedad Chilena de Medicina Crítica y Urgencias (Med. Intensiva). 24-28 May 2021, online.
- Reclutamiento en base a la presión esofágica. LVI Congreso Nacional online de la Semicyuc 2021. Barcelona, 31 May to 4 June 2021.
- Management of COVID-19 related Acute Respiratory Failure A Case Based discussion. Chairs: Myatra S, Divatia JV. Speakers: Brochard L, Mani RK, Guerin CI, Mancebo J, Piquilloud L, Pelosi P. Department of Anesthesia, Critical Care and Pain Tata Memorial Hospital. Webinar. Saturday, 5th June 2021.
- Respiratory physiology in COVID-19. ESICM. E-Master Class Programme Mechanical Ventilation - State of the Art 2021. 17, 18 & 25 June 2021, virtual.
- Fisiopatología SDRA COVID-19 y nuestra experiencia en el manejo de soporte ventilatorio en estos pacientes. Aniversario 50 años Departamento de Medicina Crítica "Dr. Mario Shapiro". Centro Médico ABC, Ciudad de México. México, 13 Sep 2021, virtual.
- Fisiopatología ARDS en Covid-19. 1ra Jornada Internacional Manejo Actualizado del paciente crítico, desafío y función actual del intensivista. Cochabamba, Bolivia, 29 Sep 2021, virtual.
- Acute Respiratory Failure. 34rd. Annual Congress ESICM. 6 October, virtual Lives 2021.
- What have we learned from COVID-19 for the future?: High-flow as the preferred oxygenation technique? 24 Jornadas Medicina Intensiva do Porto, 15 Oct, 2021. Virtual format.

- SDRA: Ventilación protectora decúbito prono. XV Curso Nacional de Ventilación Mecánica. Ventibarna. Formato virtual, 16-23 Nov 2021
- Ventilación en EPOC/Asma. XV Curso Nacional de Ventilación Mecánica. Ventibarna. Virtual, 16-23 Nov 2021
- Prone Positioning in COVID and Beyond. Respiratory Failure From Primary Health Care To the Intensive Care Unit. Portaria, Greece, November 19th to 21st, 2021
- Fenotipos en ARDS. XLVIII Congreso Anual del Colegio Mexicano de Medicina Crítica, 22- 27 Nov 2021, Mérida, México.
- Novedades en soporte respiratorio no invasivo en insuficiencia respiratoria aguda. XLVIII Congreso Anual del Colegio Mexicano de Medicina Crítica, 22-27 Nov 2021, Mérida, México.
- Ajustes ventilatorios en SDRA: ¿podemos individualizar? XLVIII Congreso Anual del Colegio Mexicano de Medicina Crítica, , 22-27 Nov 2021. Mérida, México.
- Mecánica. Parámetros/modos. Weaning. Moderador: Mancebo J. Speakers: Suárez-Sipman F, Peñuelas O, Domínguez L. XV Curso Nacional de Ventilación Mecánica. Ventibarna. Virtual. Majadahonda, 14 December 2021.
- Sesión práctica: Presiones motrices. Presiones de oclusión. Presión transpulmonar. XV Curso Nacional de Ventilación Mecánica. Ventibarna. Majadahonda, 15 December 2021.
- Sesión práctica: Volúmenes pulmonares: CRF, volumen reclutado. XV Curso Nacional de Ventilación Mecánica. Ventibarna. Majadahonda, 15 December 2021
- Mechanical ventilation: evolution in the COVID 19 pandemic. V Critical Care Bellvitge Symposiu. "Hypoxemic acute respiratory failure". Bellvitge University Hospital, December 2nd, 2021.



Pharmacy

Coordinator

Mangues Bafalluy, Maria Antonia FGS
mmangues@santpau.cat

Members

Barredo Hernández, Anna	IR	Jorba Cortada, Celia	IR
Berga Garrote, Nuria	IR	Juanes Borrego, Ana Maria	FGS
Campo Troyano, Magi	IR	Juanes Borrego, Maria Elena	IR
Cardenete Ornaque, Juana	FGS	López Vinardell, Laia	IR
Cascales Sánchez, Sara	IR	Martínez Casanova, Javier	IR
De Dios López, Anna	FGS	Masip Torne, Montserrat	FGS
De Pourcq, Jan Thomas	FGS	Montero Pérez, Olalla	IR
Feliu Ribera, Anna	FGS	Moreno Martinez, Maria Estela	FGS
Fernandez De Gamarra Martinez, Edurne	FGS	Pages Puigdemont, Neus	FGS
Fuset González, Marina	IR	Riba Sole, Mireia	FGS
Gamez Lechuga, María	FGS	Rodríguez Murphy, Esther	FGS
Garin Escriva, Noé	FGS	Rodriguez-Arias Pal, Ainhoa	IR
Garrido Alejos, Gemma	FGS	Ruíz Ramos, Jesús	FGS
Gasó Gago, Ingrid	FGS	Vallez Valero, Lucía	FGS
Gomis Pastor, Mar	FGS	Villamarín Vallejo, Laura	FGS
Gras Martín, Laura	FGS	Zafri Kasas, Nabila	IR

Main lines of research

- Pharmaceutical care and personalized medicine.
- Clinical Epidemiology and Public Health.
- Artificial nutrition.
- Pharmaceutical formulation.
- Oncohaematology.
- Independent clinical trials.
- Innovation, artificial intelligence & big data.

Scientific Challenges

- Evaluate the impact of different pharmaceutical care programmes on the effectiveness and the safety of pharmacological treatments: personalized medicine (clinical pharmacokinetics & pharmacogenetics), health education, medication reconciliation, identification and prevention of drug related health problems, etc.
- Use of clinical epidemiology to gain evidence in patient care: association between risk factors and health outcomes, study of drug interactions, adherence to medication, assessment of regular clinical practice.
- Evaluate the impact of artificial nutrition on the clinical evolution of patients.
- Study the stability of cytostatics in different pharmaceutical forms.
- Determine the stability and the PK-PD of protein nanoparticles with antimetastatic activity.
- Actively cooperate in independent clinical trials performed in Sant Pau.
- mHealth, eHealth, artificial intelligence, big data, innovative procedures, etc.

Collaborations

Collaborations with other IIB Sant Pau research groups

- Oncogenesis and Antitumour Drugs (GOA) - CIBER-BBN
- Clinical Haematology.
- Medical Oncology
- Chronic Respiratory Diseases
- Emergency
- Cardiology
- Infectious diseases (HIV)
- Reumatology
- Genetics
- Pediatrics
- Biochemistry

External collaborations

- Centro de Investigación Biomédica en Red de Bioingeniería, Biomateriales y Nanomedicina (CIBER-BBN). Instituto de Salud Carlos III.
- Centro de Investigación en Salud Mental (CIBERSAM). Instituto de Salud Carlos III.
- Centro de Investigación Biomédica en Red de Enfermedades Raras (CIBERER). Instituto de Salud Carlos III.
- Department of Pharmacology, Toxicology and Therapeutic Chemistry, Faculty of Pharmacy, University of Barcelona.
- European Association of Hospital Pharmacists
- Spanish Society of Hospital Pharmacy.
- Catalan Society of Clinical Pharmacy
- Col·legi Oficial de Farmacèutics de Barcelona

Active grants

- MARIA ANTONIA MANGUES BAFALLUY. Abordaje integral de los problemas de salud relacionados con los medicamentos: Código Medicamento. PI18/00889. Instituto de Salud Carlos III. Duration 2019-2021. 72.000,00 €.
- PAU RIERA ARMENGOL. Integració de la farmàcia hospitalària i comunitària per a la implementació de la farmacogenètica a la pràctica assistencial. JOAQUIM BONAL 2019. Societat Catalana de Farmàcia Clínica. Duration 2019-2022. 12.000,00 €. Note: Total amount granted to PI. It does not include indirect costs.

Other active grants

- Monitorización y tratamiento psicosocial online escalonado en supervivientes de cáncer: un ensayo clínico, controlado y aleatorizado. - Code: PI19/01880. Funding organisation: FIS - Instituto de Salud Carlos III. Amount: 48.400 €- PI: Cristian Ochoa Arnedo. Collaborator: Mireia Riba Solé (Farmacia).
- Evaluación de la eficacia y seguridad de los tratamientos farmacológicos antibióticos inhalados en las bronquiectasias no fibrosis quística. Code: FEF-BRO-2020-03. Funding organisation: Sociedad Española de Farmacia Hospitalaria. Amount: 6.600 €. PI and coordinator: Noé Garin Escrivà.
- "Innovative nanotherapy for highly-metastatic peritoneal cancers: activating neuroreceptors to kill cancer stem cells". Instituto de Salud Carlos III. PI20/00623. PI: M^a Virtudes Céspedes Navarro. Investigadora colaboradora: María Gámez. 2021-2024.
- Fragilidad en pacientes con cirrosis: estudio del valor pronóstico del ángulo de fase en pacientes hospitalizados y efecto de una intervención multifactorial consistente en ejercicio físico a domicilio, aminoácidos ramificados y un probiótico multiespecies en la prevención de la fragilidad. Collaborator: E Juanes. Beca FIS, Instituto de Salud Carlos III. Convocatoria: 2019-2022.
- Impact of exercise and mediterranean diet vs aspirin on live-birth rate and cardiovascular programming in vitro fertilization: a randomized study. Collaborator: Elena Juanes. Entidad Financiadora: Instituto de Salud Carlos III. 2020-2023.
- Ensayo clínico piloto, aleatorizado, multicéntrico y abierto de uso combinado de hidroxiclороquina, azitromicina y tocilizumab para el tratamiento de la infección por SARS-CoV-2 (COVID-19). Funding organisation: Instituto de Salud Carlos III. Ensayo clínico n^o EudraCT 2020-001442-19. Convocatoria de proyectos de investigación sobre el SARS.CO-2 y la enfermedad COVID19. Researchers: Pere Domingo (PI) , Isabel Mur, M^a Ema Molas, Noemí Corbacho, Natividad de Benito, Ivan Castellví, Héctor Corominas, M^a Antonia Mangues, Jordi Casademont. 2020-2021. Amount: 807.360,00 €

- Implementación y expansión de un modelo asistencial no presencial de atención farmacéutica. Call: Financiación De Un Proyecto De Salud Móvil De La Sociedad Española de Farmacia Hospitalaria (SEFH). Funding organisation: Sociedad Española de Farmacia Hospitalaria. Co-PI and coordinator: Mar Gomis-Pastor. 03/2021-03/2023.

- Análisis Nacional De La Multimorbilidad Y Complejidad Terapéutica En Receptores De Trasplante De Órgano Sólido. Grupo de Trabajo FARMATRASPLANTE. Promotor Farmatrasplante con Código: COMPLEX-TOS. CEIC de referència HSCSP. Funding organisation: Sociedad Española de Farmacia Hospitalaria. Call "Convocatoria de Ayudas a Grupos de Trabajo de la SEFH 2020/2021." PI and coordinator: Mar Gomis. 07/2020 – 07/2023.

- Integración de la farmacogenética y la telemedicina mediante salud móvil para el manejo de los efectos adversos en pacientes con cáncer colorrectal (ePGx study). PI21/01913. Funding organisation: IIS – Instituto de Salud Carlos III. PIs: Pau Riera and David Páez. Researchers: Mar Gomis, Neus Pagès, Estela Moreno. 1/1/2022-31/12/2024

- Un enfoque genómico de eHealth en la trombosis asociada al cancer (PROYECTO ONCOTHROMB_2). PI20/00325. Funding organisation: FIS – Instituto de Salud Carlos III. Collaborator: Mar Gomis. 01/01/2020-31/12/2022

- Marco de Colaboración en proyectos de telemedicina relacionados con la Plataforma mHealthcare. Researchers: Mar Gomis Pastor, M. Antònia Mangués Bafalluy. Funding organisations: Amgen Pharma SL. 15/10/2019 Duration: 4 years.

- Acuerdo de Cooperación en el Programa de Becas de Investigación Científica firmada entre Janssen-Cilag y Fundación Institut de Recerca de l'Hospital de la Santa Creu i Sant Pau. Coordinator: M. Antònia Mangués.

- "Código Medicamento: prevención secundaria de problemas de salud por medicamentos", developed by: Laia López Vinardell.

- "Investigación aplicada en atención farmacéutica en pacientes crónicos", desarrollado por Javier Martínez Casanova y Olalla Montero Pérez

- Marco de colaboración de patrocinio de Amgen S.L. Implementación del estudio eSalut. Ampliación del proyecto Medplan Plus entre la Fundació de Gestió Sanitària Hospital Santa Creu i Sant Pau i AMGEN, S.A. 28/03/2021.

- Anexo 1 de l'Acord Marc: Proyecto Mantenimiento del Portal Emma
- Anexo 2 de l'Acord Marc: Proyecto Validación EMMA Salud

- Marco de colaboración de patrocinio de Amgen S.L. Implementación del estudio eSalut Ampliación del proyecto

Medplan Plus entre la Fundació de Gestió Sanitària Hospital Santa Creu i Sant Pau i AMGEN, S.A. 26/11/2021.

- Anexo 1 de l'Acord Marc: Proyecto Validación Oncommunities
- Anexo 2 de l'Acord Marc: Proyecto Proyecto Fracture Leasure Service FLS

- Convenio de colaboración con Gilead. Estudio piloto clínico en el paciente con VIH con soporte de eSalud. 23/03/2021

- EIT Health 2020. Proyecto 19046 "Oncommunities": online cancer support communities Entidad de realización. Partner Sant Pau: Mar Gomis Pastor.

- EIT Health (European Union). Tipo de entidad: Centros de Innovación y Tecnología. 03/2019- 06/2021.

Awards

- Garin N. 10 mejores trabajos científicos 2021 – Divulga Science SEFH. Sociedad Española de Farmacia Hospitalaria (SEFH)

- Garin N. Premio "Ruta de la Innovación 2021". Sociedad Catalana de Farmacia Clínica • nov. 2021

- Gomis M. III Edición Premios OAT Adherencia 2019. Mejor proyecto adherencia Farmacia Hospitalaria. Entitat: GrupoOAT. 2021.

- Gomis M. Primer y único finalista de Neurovation in Migraine (II edición) con el proyecto: Evaluación del impacto asistencial de la telemedicina mediante una plataforma de salud en línea en el manejo integral de pacientes con migraña. 3a signant. Autores: N Morollón, R Belvís, M Gomis, A De Dios, N Pagès. 2021

Scientific production

- Castro V, Garin N, Jaen A, Casado JL, Leal L, Cenoz S, Fuster MJ. Recreational Drug Use in People Living with HIV in Spain: Factors Associated with Drug Use and the Impact on Clinical Outcomes. *AIDS AND BEHAVIOR*. 2021; 25(12). DOI:10.1007/s10461-021-03271-3. PMID:33932187. IF:3,895 (Q1/D2).

- Castro V, Garin N, Jaen A, Cenoz S, Galindo MJ, Apodaca MJFR. Prevalence, beliefs and impact of drug-drug interactions between antiretroviral therapy and illicit drugs among people living with HIV in Spain. *PLoS One*. 2021; 16(11):e0260334. DOI:10.1371/journal.pone.0260334. PMID:34797882. IF:3,240 (Q2/D4).

- Corominas H, Castellvi I, Diaz C, Matas L, de la Rosa D, Mangués MA, Moya P, Pomar V, Benito N, Moga E, Hernandez N, Casademont J, Domingo P. Sarilumab (IL-6R antagonist) in critically ill patients with cytokine release syndrome by SARS-CoV2. *MEDICINE*. 2021; 100(19):e25923. DOI:10.1097/MD.00000000000025923. PMID:34106658. IF:1,889 (Q3/D6).

- Corominas H, Castellvi I, Pomar V, Antonijoan R, Mur I, Matas L, Gich I, de Benito N, Laiz A, Castillo D, Villamarin L, Filella D, Mill AM, Quijada MA, Puig M, Casademont J, Domingo P. Effectiveness and safety of intravenous tocilizumab to treat COVID-19-associated hyperinflammatory syndrome: Covizumab-6 observational cohort. *CLINICAL IMMUNOLOGY*. 2021; 223:108631. DOI:10.1016/j.clim.2020.108631. PMID:33189888. IF:3,969 (Q3/D6).
- Falgas A, Pallares V, Unzueta U, Nunez Y, Sierra J, Gallardo A, Alba L, Manges MA, Alamo P, Villaverde A, Vazquez E, Manges R, Casanova I. Specific Cytotoxic Effect of an Auristatin Nanoconjugate Towards CXCR4(+) Diffuse Large B-Cell Lymphoma Cells. *International Journal of Nanomedicine*. 2021; 16. DOI:10.2147/IJN.S289733. PMID:33716502. IF:6,400 (Q1/D1).
- Garin N, Sole N, Lucas B, Matas L, Moras D, Rodrigo A, Gras L, Fonts N. Drug related problems in clinical practice: a cross-sectional study on their prevalence, risk factors and associated pharmaceutical interventions. *Scientific Reports*. 2021; 11(1):883. DOI:10.1038/s41598-020-80560-2. PMID:33441854. IF:4,379 (Q1/D3).
- Gomis M, Perez SM, Minguell ER, Loidi VB, Lopez LL, Abarca SR, Tugas EG, Mas N, Bafalluy M. Mobile Health to Improve Adherence and Patient Experience in Heart Transplantation Recipients: The mHeart Trial. *Healthcare*. 2021; 9(4):463. DOI:10.3390/healthcare9040463. PMID:33919899. IF:2,645 (Q2/D5).
- Hernandez MH, Juanes AM, Mila R, Manges MA, Mestres C. The Impact of Pharmaceutical Care in Multidisciplinary Teams on Health Outcomes: Systematic Review and Meta-Analysis. *Journal of the American Medical Directors Association*. 2021; 22(12). DOI:10.1016/j.jamda.2021.05.0381525-8610. PMID:34228962. IF:4,669 (Q2/D3).
- Ruiz J, Alcon EV, Ramos FM, Santolaya R, Tey JMG. Antimicrobial stewardship programs in emergency departments: how do we measure antimicrobial use? A systematic review. *Revista Espanola de Quimioterapia*. 2021; 34(6). DOI:10.37201/req/028.2021. PMID:34523327. IF:1,553 (Q4/D9).
- Garin N et al. Boletín Grupo NEUMO Actualización en patología respiratoria; 1(1). ISSN: 2792-8365
- Garin N, Jornet S. La gestión Farmacotorapéutica del asma al día. *Circ Farm*. 2021; 79(2):10-14.
- Juanes A, Ruíz J, Puig M, Martí-Fabregas J, Blazquez M, López L, Quesada L, Manges MA. Cardioembolic ischemic stroke associated with undertreated atrial fibrillation: an observational study. 2021. ILAPHAR.
- Moreno ME (Miembro del comité técnico). Estrategia en Cáncer del Sistema Nacional de Salud. Comité de seguimiento y evaluación de la estrategia en cáncer del sistema nacional de salud. 2021. Accesible en: https://www.sanidad.gob.es/organizacion/sns/planCalidadSNS/pdf/Estrategia_en_cancer_del_Sistema_Nacional_de_Salud_Actualizacion_2021.pdf
- Ramos JR, Gras L, Borrego A, Blazquez M, Campmany MP, Manges MA. Development of an Emergency Revisit Score for Patients With Drug-Related Problems. *Journal Of Pharmacy Technology*. 2021; 37(4):87551225211011731. DOI:10.1177/87551225211011731. PMID:34752577.
- Riera P, Riba M, Bernal S, Virgili AC, Paez D, Moreno ME. Frequency and clinical relevance of DPYD genetic variants in gastrointestinal cancer patients. *Farmacia Hospitalaria*. 2021; 45. DOI:10.7399/fh.11683. PMID:35379107.
- Ruiz J, Santolaya R, Garcia MA, Sempere P, Alonso M, Calderon B. Prevalence of adverse drug events in emergency departments. FARM-URG multi-center project. *Farmacia Hospitalaria*. 2021; 45(4). DOI:10.7399/fh.11596. PMID:34218762.

Other scientific production

- Curto E, Torrego A, Garin N, Crespo A, Plaza V. Reply to "Managing T2-high severe asthma in HIV-infected patients". *Journal of Allergy and Clinical Immunology-In Practice*. 2021; 9(2). DOI:10.1016/j.jaip.2020.11.014. PMID:33551032. IF:8,861 (Q1/D2).

Other publications

- Conejo I, López L, Martínez C, Garin N. Cetoacidosis diabética en un paciente tratado con inhibidores del cotransportador del canal sodio-glucosa 2. *Circ. Farm*. 2021; 79(1):19-23.
- Fernández de Gamarra-Martínez E. Grans dosis d'incertesa. *Annals de Medicina*. 2021; 104:53-55.

Books or chapters with ISBN

- Moreno ME (Miembro del Equipo de trabajo). Indicadores y estándares para una atención de calidad a pacientes con cáncer de próstata avanzado. Marzo 2021. Sociedad Española de Calidad Asistencial. ISBN: 978-84-09-29433-6. Accesible <https://calidadasistencial.es/wp-seca/wp-content/uploads/2021/04/Indicadores-y-estandares-Cancer-de-próstata.pdf>
- Moreno ME (Miembro del Equipo de trabajo). Indicadores y estándares para una atención de calidad a pacientes con leucemia mieloide aguda. Abril 2021. Sociedad Española de Calidad Asistencial. ISBN: 978-84-09-29434-3 Accesible <https://calidadasistencial.es/wp-seca/wp-content/uploads/2021/04/libro-sobre-leucemia-mieloide-cronica-definitivo.pdf>

Communication and dissemination activities

Outreach activities

- XLVIII Curso de Farmacia Clínica Joaquín Bonal. Directora: M^a Antònia Manges, 4-8 Feb 2021, Barcelona; Accredited by:

Consell Català de Formació Continuada Professions Sanitàries-
Comisión de Formación Continuada del Sistema Nacional de
Salud.

- ¿Cómo incorporar la innovación de forma eficiente en los hospitales? iv encuentro de expertos en gestión sanitaria y economía de la salud. Cátedra de “gestión de las innovaciones en políticas farmacéuticas en el sistema nacional de la salud”UPF - Barcelona School of Management. 24.11.21.
Speaker: MA Mangues

- Atención farmacéutica y farmacia clínica II (6 créditos). Grado de Farmacia; Facultad de Ciencias de la Salud Blanquerna, 2020, Barcelona. Associate professors: Anna Feliu Ribera, Edurne Fernández de Gamarra Martínez, Noé Garin Escrivà, M. Estela Moreno Martínez, Mireia Riba.

- Lecturer at Departamento Farmacia clínica. Grado de Farmacia; Universidad de Barcelona. Associate professors: Ana Juanes Borrego, Jan Thomas De Pourcq.

- Mentoring of students. Pharmacy Degree. Universidad de Barcelona. Associate Professor: Montserrat Masip Torné

- Jornada de actualización en diabetes mellitus para farmacéuticos de hospital. Hospital de la Santa Creu i Sant Pau, Societat Catalana de Farmàcia Clínica. 28 de abril 2021. Organiser: Noé Garin. Speakers: Laia López, Irene Conejo, Noé Garin, Inka Miñambres, Andrea Molina.

Scientific dissemination

- Mangues MA. Procesos de Atención Farmacéutica a Pacientes Ambulatorios y Externos. M Antònia Mangues. II foro de debate reingeniería de procesos en los servicios de farmacia de hospital. Servicio de Farmacia del Complejo Hospitalario Universitario de Pontevedra y Fundación Biomédica Galicia Sur. Pontevedra. 11 Nov 2021

- Mangues MA i Gomà H (dirección i coordinació). Programa de coaching para directivos en el ámbito sanitario. 3ª Edició AULACOACH. Madrid. Nov 21 - Mar 22 (5 sessions)

- Fernandez de Gamarra E, Garin N, Moreno E (comité organizador). Escuela de Primavera. Sociedad Española de Farmacia Hospitalaria. 21-22/09/2021.

- Garin N (speaker). Farmacoterapia del Tromboembolismo. Sesiones Formativas Online. Módulo 3. Sociedad Española de Farmacia Hospitalaria. 06/04/2021.

- Garin N (speaker). Pruebas funcionales en patología respiratoria. 66 congreso de la Sociedad Española de Farmacia Hospitalaria. Vigo, 18-21 Oct 2021.

- Riba M (speaker). Ponent a la sessió “Maneig dels efectes adversos”. XXVI Jornada de la Societat Catalana de Farmàcia Clínica - Nous reptes de la Farmàcia Clínica Oncohematològica. Organiser: Societat Catalana de Farmàcia Clínica. 0,33 hores.

- Riba M (speaker). SESIÓN 14: “Trasplantes: tipos de trasplante, terapia de soporte en pacientes trasplantados, manejo de complicaciones” dentro del módulo iii: tumores hematológicos. Curso on-line Formación Básica en Farmacia Oncológica para Farmacéuticos Residentes. Sociedad Española de Farmacia Hospitalaria.

- Juanes A, Ruiz J (ponentes). I Jornada atención Farmacéutica al Paciente Frágil en Urgencias. Sociedad Española Farmacia Hospitalaria. Online, 25 May 2021.

- Ruiz J (moderador y ponente). Dolor en urgencias, ¿vienes?, distintos pacientes, distintos tipos de dolor, distintos abordajes. 66 congreso de la Sociedad Española de Farmacia Hospitalaria. Vigo, 18-21 Oct 2021.

- Fernandez de Gamarra E (ponente). Jornada de actualización en onco-hematología pediátrica para farmacéuticos de hospital. 11 de marzo de 2021, formato virtual. Sociedad Española de Farmacia Hospitalaria, promovida por los Grupos de Trabajo GEDEFO y Pediatría, en la mesa “Monitorización Terapéutica de Fármacos” con la ponencia “optimización de la dosis de busulfán intravenoso en el acondicionamiento previo al TPH”.

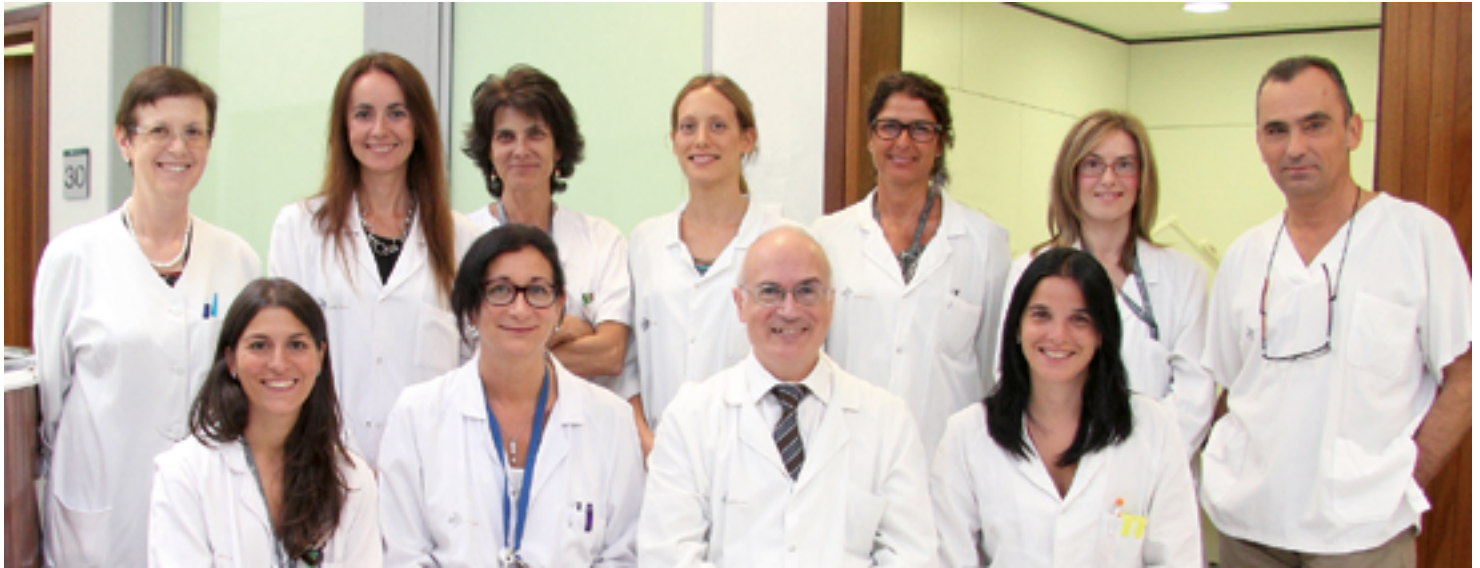
- Fernandez de Gamarra E (ponente). 12º Congreso Farmacia Clínica Intensiva. 39º Congreso Nacional de Medicina Intensiva. Sociedad Chilena de Medicina Intensiva; Ponencia: “Analgosedación en el Paciente Crítico”. Formato virtual. Chile, 22-26 Nov 2021.

- Moreno ME. Coordinadora Sexta Reunión Anual del Grupo de trabajo GEDEFO: Atención Farmacéutica al paciente Oncohematológica. Virtual, 3 - 4 May 2021.

- Gomis M (speaker). Seguimiento digital del paciente. CISFARH XVIII 2021. La Revolución Digital en la Farmacia Hospitalaria. Ciclo de Seminarios de Formación para Farmacéuticos de Hospital (CISFARH). Fecha: 29-30/09/2021

- Gomis M (speaker). Impacto De Un Ecosistema De Salud Móvil En La Práctica Clínica Del Farmacéutico Hospitalario. 66 Congreso Nacional Y II Congreso Virtual De La Sociedad Española De Farmacia Hospitalaria. Fecha: 18-21/10/2021

- Barredo A, de Dios A, Juan E, Ciendones M, Moreno ME, Riba M, Gallardo P, Tibau A, Gomis M. Uso de la salud digital (app EMMASalud) para el seguimiento y la atención psicosocial y sanitaria de pacientes con cáncer de mama. Comunicació oral presentada al 9º Congreso de la Sociedad Española de Psicooncología. Virtual. April 2021.



Dermatology

Coordinator

Puig Sanz, Luis FGS
lpuig@santpau.cat

Members

Agut Busquets, Eugènia	FGS	Lopez Ferrer, Anna	FGS
Alvés Barroso, Jessica	IR	López Sánchez, Cristina	FGS
Bittencourt Moraes, Flavia	IR	Morales Munera, Caridad Elena	FGS
Cubiró Raventós, Xavier	FGS	Roe Crespo, Esther	FGS
Diaz-Salazar Monreal, Maria	IR	Ros Abarca, Sandra	IR
Flores Climente, Víctor Andrian	IR	Ruiz Salas, Veronica	FGS
Garces Gatnau, Joan Ramon	FGS	Serra Baldrich, Esther	FGS
Garcia Muret, Maria Pilar	FGS	Spertino, Jorge Luis	FGS
Gely Vila, Cristina	IR	Vilarrasa Rull, Eva	FGS
Iznardo Ruiz, Helena	FGS	Yelamos Pena, Oriol	FGS

Main lines of research

- Innate and acquired immunity-mediated dermatological diseases.
- Biologic therapy in dermatology.
- OMIC studies in inflammatory dermatoses (psoriasis, atopic dermatitis).
- Medical and physical treatment options for vascular tumours.
- Psychopathological studies of patients with chronic dermatological disorders.
- Implementation of artificial intelligence in the triage of skin lesions
- Standardization of image acquisition in dermatological photography

- Non-invasive/minimally-invasive imaging techniques in the diagnosis/management of dermatological disorders
- Identification of biomarkers for melanoma and other skin tumors
- Development of new treatment strategies for melanoma and other skin tumors

Scientific Challenges

- Ensure a stable clinical research infrastructure and staff.
- Foster interdepartmental collaborative research.

Collaborations

Collaborations with other IIB Sant Pau research groups

Translational Medicine – Inflammatory Diseases

Awards

- Premio accessit comunicació oral: Comunicació 3: ¿Y si medimos la gravedad de la psoriasis mediante AME? Gregorio Carretero Hernández, Ricardo Ruiz Villaverde, Alicia González Quesada, Anna López Ferrer, Isabel Belinchón Romero, Jaume Notario Rosa, Mar Llamas Velasco, José Luis Sánchez Carazo, José Luis López Esteban, Ofeliza Baniandrés Rodríguez, Diana Ruiz Genao, Marta García Bustínduy, Mariano Ara Martín, José Manuel Carrascosa Carrillo y Eva Vilarrasa Rull, de Miembros del Grupo de Psoriasis (GPs) de la AEDV. 7º Congreso Nacional de Psoriasis. Madrid, 21-22 Jan 2022.

Doctoral theses

- Ibrahim, Ahmed Abdelsalam Youssef 436676, Tractament de cicatrius atòriques post-acné amb laser fraccionals combinats amb plasma ric en plaquetes (PRP), UAB, Luis Puig, 19/10/2021

Scientific production

- Amat V, Agut E, Vilarrasa E, Puig L. New perspectives on the treatment of hidradenitis suppurativa. *Therapeutic Advances in Chronic Disease*. 2021; 12:20406223211055920. DOI:10.1177/20406223211055920. PMID:34840709. IF:5,091 (Q1/D3).
- Armstrong AW, Soliman AM, Betts KA, Wang Y, Gao YW, Puig L, Augustin M. Comparative Efficacy and Relative Ranking of Biologics and Oral Therapies for Moderate-to-Severe Plaque Psoriasis: A Network Meta-analysis. *Dermatology and Therapy*. 2021; 11(3). DOI:10.1007/s13555-021-00511-1. PMID:33788177. IF:3,264 (Q2/D5).
- Beecker J, Papp KA, Dutz J, Vender RB, Gniadecki R, Cooper C, Gisondi P, Gooderham M, Hong CH, Kirchhof MG, Lynde CW, Maari C, Poulin Y, Puig L. Position statement for a pragmatic approach to immunotherapeutics in patients with inflammatory skin diseases during the coronavirus disease 2019 pandemic and beyond. *JOURNAL OF THE EUROPEAN ACADEMY OF DERMATOLOGY AND VENEREOLOGY*. 2021; 35(4). DOI:10.1111/jdv.17075. PMID:33533553. IF:6,166 (Q1/D2).
- Buhl T, Rosmarin D, Serra E, Fernandez P, Igarashi A, Konstantinou MP, Chen S, Lu N, Pierce E, Casillas M. Itch and Sleep Improvements with Baricitinib in Patients with Atopic Dermatitis: A Post Hoc Analysis of 3 Phase 3 Studies. *Dermatology and Therapy*. 2021; 11(3). DOI:10.1007/s13555-021-00534-8. PMID:33899152. IF:3,264 (Q2/D5).
- Campos MC, Tubau C, Segura S, Gonzalez M, Iglesias M, Fernandez MT, Garcia MP, Mozos A. Oral submucous fibrosis

presenting with histopathological lichenoid changes as predominant feature: Report of five cases and review of the literature. *JOURNAL OF CUTANEOUS PATHOLOGY*. 2021; 48(11). DOI:10.1111/cup.14084. PMID:34151457. IF:1,587 (Q4/D8).

- Carretero G, Carrascosa JM, Puig L, Sánchez-Carazo JL, López-Ferrer A, Cueva P, Soria C, Rivera R, Belinchón I; Psoriasis Group of the Spanish Academy of Dermatology, Venereology. Definition of minimal disease activity in psoriasis. *JOURNAL OF THE EUROPEAN ACADEMY OF DERMATOLOGY AND VENEREOLOGY*. 2021;35(2):422-430. DOI:10.1111/jdv.16564. PMID: 32367536. IF:6,166 (Q1/D2).
- Cubiro X, Garcia C, Morales CE, Roe E, Riera A, Mora JM, Iriarte A, Puig L, Baselga E. Satisfactory treatment of mucocutaneous lesions in hereditary hemorrhagic telangiectasia patients with dual pulsed dye laser and neodymium: yttrium-aluminum-garnet. *Dermatologic Therapy*. 2021; 34(6):e15124. DOI:10.1111/dth.15124. PMID:34486206. IF:2,851 (Q3/D6).
- De Bruin M, Merola JF, Hong CH, Baldrich ES, Ettl K, Sierka D, Delevry D, Chen Z, Rossi AB. Efficacy of Dupilumab in Atopic Dermatitis: The Patient's Perspective. *Dermatology and Therapy*. 2021; 11(6). DOI:10.1007/s13555-021-00621-w. PMID:34767181. IF:3,264 (Q2/D5).
- Galvan C, Mitja O, Esteban S, Kafulafula J, Phiri T, Navarro I, Roman C, Mtenje H, Thauzeni G, Harawa E, Kaluzi S, Diere M, Mkandawire M, Malizani S, Chifundo A, Utrera M, Roncero M, Martin SL, Vilanova I, Petiti GH, Aranda MVD, Perez NN, Gomez MR, Iranzo P, Garcia PE, De Troya M, Gomez JR, Cardenoso E, Truyols SL, Unanue LA, et al. [Cubiro X, Lopez C]. A facility and community-based assessment of scabies in rural Malawi. *PLoS Neglected Tropical Diseases*. 2021; 15(6):e0009386. DOI:10.1371/journal.pntd.0009386. PMID:34061851. IF:4,411 (Q1/D1).
- Garcia C, Roe E, Rodriguez B, Amat V, Cubiro X, Puig L, Boronat S. A case report of PHF6 mosaicism: Beyond the classic Borjeson-Forsman-Lehmann syndrome. *PEDIATRIC DERMATOLOGY*. 2021; 38(4). DOI:10.1111/pde.14636. PMID:34041787. IF:1,588 (Q3/D8).
- Garcia J, Delgadillo J, Vilarrodona A, Querol S, Ovejo J, Coll R, Millan A, Madrigal A, Soria G, Vidal F, Vives J, Herrero MJ, Lopez I, Sauleda S, Contreras E, Grifols JR, Guasch R, Tahull E, Puig L, Masip A, Argelagues E, Muniz E. SARS-CoV-2/COVID-19 pandemic: first wave, impact, response and lessons learnt in a fully integrated Regional Blood and Tissue Bank. A narrative report. *Blood Transfusion*. 2021; 19(2). DOI:10.2450/2021.0259-20. PMID:33539280. IF:3,443 (Q2/D5).
- García-Martínez FJ, Vilarrasa E, Salgado-Boquete L, Martorell A, Pascual JC, Hernández-Martín Á, Silvente C, Ciudad-Blanco C, Andrés Esteban E, Alfageme-Roldán F. Intralesional corticosteroid injection for the treatment of hidradenitis suppurativa: a multicenter retrospective clinical study. *JOURNAL OF DERMATOLOGICAL TREATMENT*. 2021y;32(3):286-290. DOI:10.1080/09546634.2019.1655524. PMID: 31402725. IF:3,359 (Q2/D4).

- Girolomoni G, de Bruin M, Aoki V, Kabashima K, Deleuran M, Puig L, Bansal A, Rossi AB. Nomenclature and clinical phenotypes of atopic dermatitis. *Therapeutic Advances in Chronic Disease*. 2021; 12:20406223211002979. DOI:10.1177/20406223211002979. PMID:33854747. IF:5,091 (Q1/D3).
- Gomis-Pastor M, Mirabet Perez S, Roig Minguell E, Brossa Loidi V, Lopez Lopez L, Ros Abarca S, Galvez Tugas E, Mas-Malagarriga N, Mangues Bafalluy MA. Mobile Health to Improve Adherence and Patient Experience in Heart Transplantation Recipients: The mHeart Trial. *Healthcare (Basel)*. 2021;9(4):463. DOI:10.3390/healthcare9040463. PMID: 33919899. IF:2,645 (Q2/D5).
- González-Manso A, Agut-Busquet E, Romani J, Vilarrasa E, Bittencourt F, Mensa A, Cantó E, Aróstegui JI, Vidal S. Hidradenitis Suppurativa: Proposal of Classification in Two Endotypes with Two-Step Cluster Analysis. *Dermatology*. 2021;237(3):365-371. DOI:10.1159/000511045. PMID: 33171462. IF:5,366 (Q1/D2).
- Iznardo H, Baselga E, Mozos A, Szafranska J, Orellana R, Roe E. Net-like superficial lymphatic malformation. *PEDIATRIC DERMATOLOGY*. 2021; 38(2). DOI:10.1111/pde.14526. PMID:33486776. IF:1,588 (Q3/D8).
- Iznardo H, Puig L. Dual inhibition of IL-17A and IL-17F in psoriatic disease. *Therapeutic Advances in Chronic Disease*. 2021; 12:20406223211037846. DOI:10.1177/20406223211037846. PMID:34408825. IF:5,091 (Q1/D3).
- Iznardo H, Puig L. Exploring the Role of IL-36 Cytokines as a New Target in Psoriatic Disease. *INTERNATIONAL JOURNAL OF MOLECULAR SCIENCES*. 2021; 22(9):4344. DOI:10.3390/ijms22094344. PMID:33919434. IF:5,923 (Q1/D3).
- Iznardo H, Puig L. The interleukin-1 family cytokines in psoriasis: pathogenetic role and therapeutic perspectives. *Expert Review of Clinical Immunology*. 2021; 17(2). DOI:10.1080/1744666X.2021.1886081. PMID:33538202. IF:4,473 (Q2/D5).
- Julia A, Martinez SH, Domenech E, Canete JD, Ferrandiz C, Tornero J, Gisbert JP, Fernandez A, Dauden E, Barreiro M, Perez C, Queiro R, Lopez FJ, Carazo JLS, Mendoza JL, Alperi M, Montilla C, Venegas JJP, Munoz F, Castaneda S, Lasanta ML, Marsal S, Fonseca E, Rodriguez J, Carreira P, Garcia V, Pinto JA, Puig L, Ricart E, Blanco F, Gratacos J, et al. [Garcia E, Diaz C]. Food groups associated with immune-mediated inflammatory diseases: a Mendelian randomization and disease severity study. *EUROPEAN JOURNAL OF CLINICAL NUTRITION*. 2021; 75(9). DOI:10.1038/s41430-021-00913-6. PMID:33893449. IF:4,016 (Q2/D5).
- Kocatürk E, Salman A, Cherrez-Ojeda I, Criado PR, Peter J, Comert-Ozer E, Abuzakouk M, Agondi RC, Al-Ahmad M, Altrichter S, Arnaout R, Arruda LK, Asero R, Bauer A, Ben-Shoshan M, Bernstein JA, Bizjak M, Boccon-Gibod I, Bonnekoh H, Bouillet L, Brzoza Z, Busse P, Campos RA, Carne E, Conlon N, Criado RF, de Souza Lima EM, Demir S, et al. [Serra-Baldrich E]. The global impact of the COVID-19 pandemic on the management and course of chronic urticaria. *Allergy*. 2021;76(3):816-830. DOI:10.1111/all.14687. PMID: 33284457. IF:13,146 (Q1/D1).
- Lambert J, Hansen JB, Sohr A, Puig L. Dermatology Life Quality Index in Patients with Moderate-to-Severe Plaque Psoriasis Treated with Brodalumab or Ustekinumab. *Dermatology and Therapy*. 2021; 11(4). DOI:10.1007/s13555-021-00545-5. PMID:33988818. IF:3,264 (Q2/D5).
- Liao J, Masnou H, Romero C, Bargallo A, Gely C, Manosa M, Gordillo J, Garcia E, Domenech E. Noninvasive assessment of liver fibrosis in Crohn's disease patients exposed to methotrexate. *EUROPEAN JOURNAL OF GASTROENTEROLOGY & HEPATOLOGY*. 2021; 33(6). DOI:10.1097/MEG.0000000000001799. PMID:32804842. IF:2,566 (Q4/D9).
- Lopez C, Falla LM, Roe E, Arostegui JI, Mozos A, Bernal S, Iznardo H, Baselga E. Excellent response to secukinumab in an infant with severe generalized pustular psoriasis. *JOURNAL OF DERMATOLOGY*. 2021; 48(6). DOI:10.1111/1346-8138.15673. PMID:33543522. IF:4,005 (Q2/D3).
- Lopez C, Romani J, Garbayo P, Agut E. Vulvar hidradenitis suppurativa: Clinical cross-sectional study of 25 patients. *JOURNAL OF DERMATOLOGY*. 2021; 48(4). DOI:10.1111/1346-8138.15728. PMID:33547675. IF:4,005 (Q2/D3).
- Lopez C, Romani J, Roe E, Giavedoni P, Vidal D, Wortsman X. Ultrasonographic patterns of cutaneous sarcoidosis. *JOURNAL OF ULTRASOUND IN MEDICINE*. 2021; 40(11). DOI:10.1002/jum.15631. PMID:33459396. IF:2,153 (Q2/D4).
- Mahil SK, Dand N, Mason KJ, Yiu ZZN, Tsakok T, Meynell F, Coker B, McAteer H, Moorhead L, Mackenzie T, Rossi MT, Rivera R, Mahe E, Carugno A, Magnano M, Rech G, Balogh EA, Feldman SR, De La Cruz C, Choon SE, Naldi L, Lambert J, Spuls P, Jullien D, Bachelez H, McMahon DE, Freeman EE, Gisondi P, Puig L, Warren RB, Di P, Langan SM, Capon F, et al.; PsoProtect GRP. Factors associated with adverse COVID-19 outcomes in patients with psoriasis-insights from a global registry-based study. *JOURNAL OF ALLERGY AND CLINICAL IMMUNOLOGY*. 2021; 147(1). DOI:10.1016/j.jaci.2020.10.007. PMID:33075408. IF:10,793 (Q1/D1).
- Mahil SK, Yates M, Langan SM, Yiu ZZN, Tsakok T, Dand N, Mason KJ, McAteer H, Meynell F, Coker B, Vincent A, Urmston D, Vesty A, Kelly J, Lancelot C, Moorhead L, Bachelez H, Bruce IN, Capon F, Contreras CR, Cope AP, de la Cruz C, Di P, Gisondi P, Hyrich K, Jullien D, Lambert J, Marzo H, McInnes I, Naldi L, Norton S, Puig L, Sengupta R, Spuls P, et al.; PsoProtect CORE GRP. Risk-mitigating behaviours in people with inflammatory skin and joint disease during the COVID-19 pandemic differ by treatment type: a cross-sectional patient survey. *BRITISH JOURNAL OF DERMATOLOGY*. 2021; 185(1). DOI:10.1111/bjd.19755. PMID:33368145. IF:9,302 (Q1/D1).
- Marron SE, Gomez M, Aragones LT, Goni A, Vilarrasa E, Diaz RM, Garcia FJ, Campos R, Fuentelsaz V, Gilaberte Y, Gracia T, Morales

AM, Ros S, Madrid MB, Puig L. Quality of Life in Hidradenitis Suppurativa: Validation of the HSQoL-24. *ACTA DERMATO-VENEREOLOGICA*. 2021; 101:adv00529. DOI:10.2340/00015555-3905. PMID:34427316. IF:4,437 (Q1/D3).

• Massey PR, Schmults CD, Li SJ, Arron ST, Asgari MM, Bavinck JNB, Billingsley E, Blalock TW, Blasdale K, Carroll BT, Carucci JA, Chong AH, Christensen SR, Chung CL, DeSimone JA, Ducroux E, Escutia B, Ferrandiz C, Fox MC, Genders RE, Geusau A, Gjersvik P, Hanlon AM, Harken E, Hofbauer GFL, Hopkins RS, Leitenberger JJ, Loss MJ, Del Marmol V, et al. [Ruiz V]. Consensus-Based Recommendations on the Prevention of Squamous Cell Carcinoma in Solid Organ Transplant Recipients A Delphi Consensus Statement. *JAMA Dermatology*. 2021; 157(10). DOI:10.1001/jamadermatol.2021.3180. PMID:34468690. IF:10,282 (Q1/D1).

• Mogedas A, Agut E, Marsal MY, Aguilar JL, de la Torre OE. Integra as Firstline Treatment for Scalp Reconstruction in Elderly Patients. *JOURNAL OF ORAL AND MAXILLOFACIAL SURGERY*. 2021; 79(12). DOI:10.1016/j.joms.2021.07.009. PMID:34391723. IF:1,895 (Q3/D8).

• Muniz E, Llopis J, Parra R, Roig I, Ferrer G, Grifols J, Millan A, Ene G, Ramiro L, Maglio L, Garcia N, Pinacho A, Jaramillo A, Pero A, Artaza G, Valles R, Sauleda S, Puig L, Contreras E. Relationship between the ABO blood group and COVID-19 susceptibility, severity and mortality in two cohorts of patients. *Blood Transfusion*. 2021; 19(1). DOI:10.2450/2020.0256-20. PMID:33196417. IF:3,443 (Q2/D5).

• Munoz FZ, Rios M, Roe E, Bernabeu J, Montserrat MT, Puig L, Gich I, Baselga E. Efficacy and Safety of Topical Timolol for the Treatment of Infantile Hemangioma in the Early Proliferative Stage A Randomized Clinical Trial. *JAMA Dermatology*. 2021; 157(5). DOI:10.1001/jamadermatol.2021.0596. PMID:33825828. IF:10,282 (Q1/D1).

• Nieto LM, Ciudad C, Sanmartin O, Garces JR, Rodriguez MA, Vilarrasa E, de Eusebio E, Minano R, Escutia B, Gonzalez B, Artola JL, Rubio AA, Redondo P, Delgado Y, Sanchez JM, Allende I, Alonso ML, Garcia B, Dobao PD, Navarro R, Suarez R, Carnero L, Vazquez H, Barchino L, Ruiz V, Sanchez P, Lopez JL, Botella R, Feal C, Calatayud AM, Gil P, et al. Mohs micrographic surgery in dermatofibrosarcoma protuberans: Rate and risk factors for recurrence in a prospective cohort study from the Spanish Registry of Mohs Surgery (REGESMOHS) and review of the literature. *EXPERIMENTAL DERMATOLOGY*. 2021; 30(5). DOI:10.1111/exd.14291. PMID:33523531. IF:3,960 (Q2/D3).

• Papp KA, Lebwohl MG, Puig L, Ohtsuki M, Beissert S, Zeng J, Rubant S, Sinvhal R, Zhao Y, Soliman AM, Alperovich G, Leonardi C. Long-term efficacy and safety of risankizumab for the treatment of moderate-to-severe plaque psoriasis: interim analysis of the LIMMitless open-label extension trial beyond 3 years of follow-up. *BRITISH JOURNAL OF DERMATOLOGY*. 2021; 185(6). DOI:10.1111/bjd.20595. PMID:34157132. IF:9,302 (Q1/D1).

• Papp KA, Soliman AM, Done N, Carley C, Wirtz EL, Puig L. Deterioration of Health-Related Quality of Life After Withdrawal of Risankizumab Treatment in Patients with Moderate-to-Severe Plaque Psoriasis: A Machine Learning Predictive Model. *Dermatology and Therapy*. 2021; 11(4). DOI:10.1007/s13555-021-00550-8. PMID:34019229. IF:3,264 (Q2/D5).

• Pereira MP, Zeidler C, Wallengren J, Halvorsen JA, Weisshaar E, Garcovich S, Misery L, Brenaut E, Savk E, Potekaev N, Lvov A, Bobko S, Szepletowski JC, Reich A, Bozek A, Legat FJ, Metz M, Streit M, Serra E, Goncalo M, Storck M, Nau T, Hoffmann V, Steinke S, Greiwe I, Dugas M, Augustin M, Stander S, European Prurigo Project Epp C. Chronic Nodular Prurigo: A European Cross-sectional Study of Patient Perspectives on Therapeutic Goals and Satisfaction. *ACTA DERMATO-VENEREOLOGICA*. 2021; 101:adv000403. DOI:10.2340/00015555-3726. PMID:33320272. IF:4,437 (Q1/D3).

• Pereira MP, Ziehfrennd S, Rueth M, Ewering T, Legat FJ, Lambert J, Elberling J, Misery L, Brenaut E, Papadavid E, Garcovich S, Evers A, Halvorsen JA, Szepletowski JC, Reich A, Goncalo M, Lvov A, Bobko S, Serra E, Wallengren J, Savk E, Leslie T, Stander S, Zink A, EADV Task Force P. Google search trends for itch in Europe: a retrospective longitudinal study. *JOURNAL OF THE EUROPEAN ACADEMY OF DERMATOLOGY AND VENEREOLOGY*. 2021; 35(6). DOI:10.1111/jdv.17077. PMID:33295009. IF:6,166 (Q1/D2).

• Piquero-Casals J, Martínez-Martínez L, Alomar A, Rozas-Muñoz E, Juárez C, Puig L. LRP1/CD91 is highly expressed in monocytes from patients with vitiligo - even after repigmentation. *Experimental Dermatology*. 2021;30(3):390-395. DOI:10.1111/exd.14249. PMID: 33249636. IF:3,960 (Q2/D3).

• Puig L, Bakulev AL, Kokhan MM, Samtsov AV, Khairutdinov VR, Morozova MA, Zolkin NA, Kuryshev IV, Petrov AN, Artemeva AV, Zinkina AV. Efficacy and Safety of Netakimab, A Novel Anti-IL-17 Monoclonal Antibody, in Patients with Moderate to Severe Plaque Psoriasis. Results of A 54-Week Randomized Double-Blind Placebo-Controlled PLANETA Clinical Trial. *Dermatology and Therapy*. 2021; 11(4). DOI:10.1007/s13555-021-00554-4. PMID:34060012. IF:3,264 (Q2/D5).

• Puig L, Wu JJ, Gooderham MJ, You Y, Shen YK, Randazzo B, Kerdel F. Consistent response to guselkumab treatment between Hispanic and non-Hispanic patients with psoriasis: an analysis from VOYAGE 1 and VOYAGE 2. *JOURNAL OF DERMATOLOGICAL TREATMENT*. 2021;32(5):484-491. DOI:10.1080/09546634.2019.1679336. PMID: 31613178. IF:3,359 (Q2/D4).

• Reich K, Hansen JB, Puig L, Konstantinou MP, Warren RB. Complete clearance and Psoriasis Area and Severity Index response for brodalumab and ustekinumab by previous treatment history in AMAGINE-2 and AMAGINE-3. *JOURNAL OF THE EUROPEAN ACADEMY OF DERMATOLOGY AND VENEREOLOGY*. 2021; 35(10). DOI:10.1111/jdv.17433. PMID:34076919. IF:6,166 (Q1/D2).

- Rivera A, Sanchez A, Luque S, Mur I, Puig L, Crusi X, Gonzalez JC, Sorli L, Gonzalez A, Horcajada JP, Navarro F, Benito N. Intraoperative Bacterial Contamination and Activity of Different Antimicrobial Prophylaxis Regimens in Primary Knee and Hip Replacement. *Antibiotics-Basel*. 2021; 10(1):18. DOI:10.3390/antibiotics10010018. PMID:33375415. IF:4,639 (Q2/D3).
- Román E, Parramón M, Flavià M, Gely C, Poca M, Gallego A, Santesmases R, Hernández E, Nieto JC, Urgell E, Alvarado-Tapias E, Vidal S, Ferrero-Gregori A, Vargas V, Guarner C, Soriano G. Frailty in outpatients with cirrhosis: A prospective observational study. *Liver International*. 2021;41(2):357-368. DOI:10.1111/liv.14694. PMID: 33030788. IF:5,828 (Q2/D3).
- Roman E, Poca M, Amoros G, Rosell J, Gely C, Nieto JC, Vidal S, Urgell E, Ferrero A, Alvarado E, Cuyas B, Hernandez E, Santesmases R, Guarner C, Escorsell A, Soriano G. Phase angle by electrical bioimpedance is a predictive factor of hospitalisation, falls and mortality in patients with cirrhosis. *Scientific Reports*. 2021; 11(1):20415. DOI:10.1038/s41598-021-99199-8. PMID:34650096. IF:4,379 (Q1/D3).
- Ruiz V, Sanmartin O, Garces JR, Vilarrasa E, Minano R, Escutia B, Florez A, Artola JL, Alfaro A, Redondo P, Delgado Y, Sanchez J, Allende I, Bracamonte BG, de la Cueva P, Ciudad C, Carnero L, Vazquez H, Sanchez P, Estebanz JL, Botella R, Gonzalez B, Martorell A, Morales V, Toll A, Mayor M, Suarez R, Sainz L, Descalzo MA, Garcia I. Complications Associated with Mohs Micrographic Surgery: Data from the Nationwide Prospective Cohort REGESMOHS. *DERMATOLOGY*. 2022; 238(2). DOI:10.1159/000517010. PMID:34380138. IF:5,366 (Q1/D2).
- Rusinol L, Amat V, Baselga E, Puig L, Roe E. Prepubertal retroareolar cysts. *PEDIATRIC DERMATOLOGY*. 2021; 38(5). DOI:10.1111/pde.14786. PMID:34514639. IF:1,588 (Q3/D8).
- Salvador JFS, Gimenez AM, de la Fuente EG, del Castillo JG, Virto A, Blanco IM, Serra E, Llorens P. Managing urticaria in the emergency department: recommendations of a multidisciplinary expert panel. *Emergencias*. 2021; 33(4). PMID:34251143. IF:3,881 (Q1/D2).
- Sanchez MJ, Docampo A, Mercader P, Gonzalez R, Hervella M, Sanz T, Cordoba S, Sanchez J, Heras F, Gimenez AM, Gatica ME, Pastor MA, Zaragoza V, Carrascosa JM, Garcia B, Ruiz I, Borrego L, Sanchez P, Frutos JO, Armario JC, Garcia J, Fernandez V, Serra E, Silvestre JF. Frequency of sensitization to the individual fragrances of fragrance mix I and II according to the factors included in the MOAHLFA index. *CONTACT DERMATITIS*. 2021; 84(6). DOI:10.1111/cod.13801. PMID:33534191. IF:6,600 (Q1/D1).
- Speeckaert R, Lambert J, Puig L, Speeckaert M, Lapeere H, De Schepper S, van N. Vaccinations in Patients Receiving Systemic Drugs for Skin Disorders: What Can We Learn for SARS-Cov-2 Vaccination Strategies?. *DRUGS IN R&D*. 2021; 21(3). DOI:10.1007/s40268-021-00349-0. PMID:34106430. IF:2,594 (Q3/D7).
- Storck M, Sandmann S, Bruland P, Pereira MP, Steinke S, Riepe C, Soto I, Garcovich S, Augustin M, Blome C, Bobko S, Legat FJ, Potekaev N, Lvov A, Misery L, Weger W, Reich A, Savk E, Streit M, Serra E, Szepletowski JC, Dugas M, Stander S, Zeidler C. Pruritus Intensity Scales across Europe: a prospective validation study. *JOURNAL OF THE EUROPEAN ACADEMY OF DERMATOLOGY AND VENEREOLOGY*. 2021; 35(5). DOI:10.1111/jdv.17111. PMID:33411947. IF:6,166 (Q1/D2).
- Suppa M, Fontaine M, Dejonckheere G, Cinotti E, Yélamos O, Diet G, Tognetti L, Miyamoto M, Orte Cano C, Perez-Anker J, Panagioutou V, Trepant AL, Monnier J, Berot V, Puig S, Rubegni P, Malveyh J, Perrot JL, Del Marmol V. Line-field confocal optical coherence tomography of basal cell carcinoma: a descriptive study. *JOURNAL OF THE EUROPEAN ACADEMY OF DERMATOLOGY AND VENEREOLOGY*. 2021;35(5):1099-1110. DOI:10.1111/jdv.17078. PMID: 33398911. IF:6,166 (Q1/D2).
- Torres T, Puig L, Vender R, Lynde C, Piaserico S, Carrascosa JM, Gisondi P, Dauden E, Conrad C, Mendes P, Ferreira P, Leite L, Lu JSD, Valerio J, Bruni M, Messina F, Nidegger A, Llamas M, del Alcazar E, Mufti A, White K, Caldarola G, Teixeira L, Romanelli P, Desai K, Gkalpakiotis S, Romanelli M, Yeung JN, Nogueira M, Chiricozzi A. Drug Survival of IL-12/23, IL-17 and IL-23 Inhibitors for Psoriasis Treatment: A Retrospective Multi-Country, Multicentric Cohort Study. *AMERICAN JOURNAL OF CLINICAL DERMATOLOGY*. 2021; 22(4). DOI:10.1007/s40257-021-00598-4. PMID:33786754. IF:7,403 (Q1/D1).
- Tubau C, Puig L. IL-13 antagonists in the treatment of atopic dermatitis. *Immunotherapy*. 2021; 13(4). DOI:10.2217/imt-2020-0253. PMID:33430628. IF:4,196 (Q3/D6).
- Tubau C, Puig L. Therapeutic targeting of the IL-13 pathway in skin inflammation. *Expert Review of Clinical Immunology*. 2021;17(1):15-25. DOI:10.1080/1744666X.2020.1858802. PMID: 33275064. IF:4,473 (Q2/D5).
- Valdivielso-Ramos M, Martín-Santiago A, Azaña JM, Hernández-Núñez A, Vera A, Perez B, Tercedor J, Feito M, Vicente A, Prat C, Lopez-Gutierrez JC, Garnacho G, Baselga E, Roe E, Palencia S, Cordero P, Moreno R, Agudo A, de la Cueva P, Torrelo A. Capillary malformation-arteriovenous malformation syndrome: a multicentre study. *CLINICAL AND EXPERIMENTAL DERMATOLOGY*. 2021;46(2):300-305. DOI:10.1111/ced.14428. PMID: 32840927. IF:3,470 (Q2/D4).
- Van KR, Tzellos T, Guillem P, Benhadou F, Cuenca C, Daxhelet M, Daoud M, Efthymiou O, Giamarellos EJ, Jemec G, Katoulis AC, Koenig A, Lazaridou E, Marzano AV, Matusiak L, Molina A, Moltrasio C, Pinter A, Potenza C, Romani J, Saunte DM, Skroza N, Stergianou D, Szepletowski J, Trigoni A, Vilarrasa E, van der Zee HH. The efficacy and tolerability of tetracyclines and clindamycin plus rifampicin for the treatment of hidradenitis suppurativa: Results of a prospective European cohort study. *JOURNAL OF THE AMERICAN ACADEMY OF DERMATOLOGY*. 2021; 85(2). DOI:10.1016/j.jaad.2020.12.089. PMID:33484766. IF:11,527 (Q1/D1).
- Vidal S, Puig L, Carrascosa JM, Gonzalez A, Ruiz JC, Velasco AM. From Messengers to Receptors in Psoriasis: The Role of

IL-17RA in Disease and Treatment. *INTERNATIONAL JOURNAL OF MOLECULAR SCIENCES*. 2021; 22(13):6740. DOI:10.3390/ijms22136740. PMID:34201664. IF:5,923 (Q1/D3).

• Yélamos O, Alejo B, Ertekin SS, Villa-Crespo L, Zamora-Barquero S, Martínez N, Domínguez M, Iglesias P, Herrero A, Malveyh J, Puig S. Non-invasive clinical and microscopic evaluation of the response to treatment with clobetasol cream vs. calcipotriol/betamethasone dipropionate foam in mild to moderate plaque psoriasis: an investigator-initiated, phase IV, unicentric, open, randomized clinical trial *JOURNAL OF THE EUROPEAN ACADEMY OF DERMATOLOGY AND VENEREOLOGY*. 2021;35(1):143-149. DOI:10.1111/jdv.16559. PMID: 32365242. IF:6,166 (Q1/D2).

Other scientific production

• Amat-Samaranch V, Garcia-Melendo C, Tubau C, Puig L, Serra-Baldrich E. Occupational allergic contact dermatitis to isobornyl acrylate present in cell phone screen protectors. *Contact Dermatitis*. 2021;84(5):352-354. DOI:10.1111/cod.13747. PMID: 33222188. IF:6,600 (Q1/D1).

• Garcia C, Cubiro X, Tubau C, Mozos A, Munoz C, Puig L. Erythematous plaques with zosteriform distribution in a patient treated with TNF-alpha inhibitor adalimumab for psoriasis. *INTERNATIONAL JOURNAL OF DERMATOLOGY*. 2021; 60(11). DOI:10.1111/ijd.15710. PMID:34138480. IF:2,736 (Q3/D6).

• Iznardo H, Vilarrasa E, Lopez A, Puig L. Real-world drug survival of guselkumab, ixekizumab and secukinumab for psoriasis. *BRITISH JOURNAL OF DERMATOLOGY*. 2021; 185(3). DOI:10.1111/bjd.20416. PMID:33913516. IF:9,302 (Q1/D1).

• Rozas-Muñoz E, López-Sánchez C, Piquero-Casals J, Roé E, Mir-Bonafé JF. Papules and vesicles on the ears of a young boy. *INTERNATIONAL JOURNAL OF DERMATOLOGY*. 2021;60(8):951-952. DOI:10.1111/ijd.15336. PMID: 33259059. IF:2,736 (Q3/D6).

• Rusiñol L, Cubiró X, López-Sánchez C, García-Melendo C, Puig L. An atypical and infrequent palmoplantar affection. *INTERNATIONAL JOURNAL OF DERMATOLOGY*. 2021;60(6):703-704. DOI:10.1111/ijd.15211. PMID: 32989758. IF:2,736 (Q3/D6).

• Salvador JFS, Gimenez AM, de la Fuente EG, del Castillo JG, Virtos A, Blanco IM, Serra E, Llorens P. Urticaria in the emergency department: the view of allergy and immunology specialists Reply. *Emergencias*. 2021; 33(4). IF:3,881 (Q1/D2).

Other publications

• Andersen D, Yélamos O, Røpke M, Pont Giralte M, Banhos N, Danneskiold-Samsøe, Kristiansen K, Malveyh J, Guy R, Puig S, Brix S. Identification of novel molecular markers of disease severity and skin itchiness in children with atopic dermatitis. *J Invest Dermatol*. 2021; 141(5):S22.

• Yélamos O, D Andersen, P Iglesias, M Potrony, M Dominguez, A Herrero, B Alejo, J Mateu, M Røpke, M Pont Giralte, N Banhos,

Danneskiold-Samsøe, K Kristiansen, J Malveyh, R Guy, S Brix, S Puig. Development of a minimally-invasive method, guided by in vivo non-invasive imaging, to sample atopic skin. *J Invest Dermatol*. 2021; 141(5):S23.

Books or chapters with ISBN

• Yélamos O. Caso 40: Tumor melanocítico inactivado para BAP1. In *Dermatoscopia: Casos clínicos*. (Cabo H, eds) 2021. Buenos Aires: Ediciones Journal, 2021; 125. ISBN: 9789874922946

• Yélamos O. Caso 96: Dermatofibroma. In "Dermatoscopia: In Dermatoscopia: Casos clínicos. (Cabo H, eds) 2021. Buenos Aires: Ediciones Journal, 2021; 313. ISBN: 9789874922946

Communication and dissemination activities

• Itching, skin pain and scaling in patients with moderate to severe plaque psoriasis: The relationship between improvements in Psoriasis Area and Severity Index and Psoriasis Symptoms and Impacts Measure responses. Andreas Pinter, Matthias Augustin, David Pariser, Paolo Gisondi, Anna López-Ferrer, Matthias Hoffmann, Rhys Warham, Balint Szilagyi, Susanne Wiegatz, Valerie Ciaravino, Alice B. Gottlieb. SPIN 2022

• Moderator at Simposio: 4ª Parte: Propuestas para y por pacientes. 7º Congreso Nacional de Psoriasis. Madrid, 21-22 Jan 2022.

• 3 Communication: ¿Y si medimos la gravedad de la psoriasis mediante AME? Gregorio Carretero Hernández, Ricardo Ruiz Villaverde, Alicia González Quesada, Anna López Ferrer, Isabel Belinchón Romero, Jaume Notario Rosa, Mar Llamas Velasco, José Luis Sánchez Carazo, José Luis López Estebanz, Ofeliza Baniandrés Rodríguez, Diana Ruiz Genao, Marta García Bustínduy, Mariano Ara Martín, José Manuel Carrascosa Carrillo y Eva Vilarrasa Rull, de Miembros del Grupo de Psoriasis (GPs) de la AEDV. 7º Congreso Nacional de Psoriasis. Madrid, 21-22 Jan 2022. Accesit Prize to Best Oral Communication.

• 11 Comunicación: Pitiriasis rubra pilaris: en busca de un algoritmo terapéutico. Victoria Amat Samaranch, Carla Tubau, Eva Vilarrasa, Anna López Ferrer, Xavier Cubiró, Lluís Puig, Servicio de Dermatología. Hospital de la Santa Creu i Sant Pau. 7º Congreso Nacional de Psoriasis. Madrid, 21- 22 Jan 2022.

• 13 Communication: Tratamiento biológico de la psoriasis en pacientes con antecedente oncológico. Lluís Rusiñol Batlle, Anna López Ferrer, Eva Vilarrasa Rull, Lluís Puig Sanz, Servicio de Dermatología. Hospital de la Santa Creu i Sant Pau de Barcelona. 7º Congreso Nacional de Psoriasis. Madrid, 21-22 Jan 2022.

• 15 Communication: Experiencia con brodalumab en pacientes naïve, serie muticéntrica de casos. Xavier Cubiró, Eva Vilarrasa, Anna López, Josep Manel Armenteros, Cristina López, Oriol Yélamos, Helena Iznardo, Lluís Puig. 7º Congreso Nacional de Psoriasis. Madrid, 21-22 Jan 2022.

- Validación de la versión española del cuestionario PURE-4 para el cribaje de artritis psoriásica. Isabel Belinchón Romero, Rubén Queiro Silva, Ana López-Ferrer, Marta Ferrán i Farrés, Raquel Rivera Díaz, David Vidal Sarro, Lourdes Rodríguez Fernández-Freire, Pablo de la Cueva Dobao, Jorge Santos Juanes, Vicenç Rocamora Durán, Cristina Sanabra Palau, Guillermo Guinea Uzábal, Víctor Martín Vázquez, en nombre del PURE4 Study Group (Poster) 7º Congreso Nacional de Psoriasis. Madrid, 21- 22 Jan 2022.
- Actualización de supervivencia de tratamiento biológico de nueva generación: experiencia en el servicio de dermatología del Hospital de Sant Pau. Guillermo Sánchez Rodríguez, Helena Iznardo, Anna López Ferrer, Eva Vilarrasa y Lluís Puig, de Servicio de Dermatología y Venereología. Hospital de la Santa Creu i Santa Pau (Poster) 7º Congreso Nacional de Psoriasis. Madrid, 21- 22 Jan 2022.
- Efectividad y seguridad de guselkumab en psoriasis en placa moderadagrave a las 52 semanas: estudio observacional, retrospectivo y multicéntrico del Grupo Español de Psoriasis Elena del Alcázar, Anna López, Álvaro Martínez, Marc Julià, Ricardo Ruiz, Lourdes Rodríguez, Jaime Notario, Mº del Mar Llamas, Marta Ferrán, David Vidal, Elena Remedios Martínez, Antonio Sahuquillo, Gloria Aparicio, Laura García, Pablo de la Cueva, Vicenç Rocamora, Diana Patricia Ruiz, Mariano Ara, Noemí Eirís, Raquel Rivera, Gregorio Carretero, Isabel Belinchón, Laura Salgado, Almudena Mateu, Esther de Eusebio, Amalia Pérez, Alberto Romero, Antonio Martorell, Carlos Muñoz y José Manuel Carrascosa (Poster). 7º Congreso Nacional de Psoriasis. Madrid, 21- 22 Jan 2022..
- A.López Ferrer. Psoriasis en el anciano. Speaker. Simposio Las edades de la psoriasis. 48º Congreso Nacional de la AEDV, Bilbao 2 Dec 2021.
- A.López Ferrer. Psoriasis: aprendiendo con los pacientes. Speaker at Simposio. 48º Congreso Nacional de la AEDV, Bilbao 1 Dec 2021.
- A.López Ferrer. Moderator. Mesa Perspectivas en Psoriasis. Simposio Satélite. 48º Congreso Nacional de la AEDV, Bilbao 3 Dec 2021.
- A.López Ferrer. De la piel al alma. Simposio Satélite. 48º Congreso Nacional de la AEDV, Bilbao 2 Dec 2021.
- A.López Ferrer . Psoriasis pustulosa generalizada, más allá de las pústulas. 48º Congreso Nacional de la AEDV, Bilbao 2 Dec de 2021.
- A.López Ferrer. Debates de futuro en dermatología: reimaginando la formación. Taller. 48º Congreso Nacional de la AEDV, Bilbao 2 Dec 2021.
- Análisis de la supervivencia de fármacos biosimilares en psoriasis en práctica clínica habitual. Anna López Ferrer, Eva Vilarrasa Rull, Elena del Alcázar Viladomiu, Gregorio Carretero Hernández, Susana Armesto Alonso, Antonio Sahuquillo Torralba, Álvaro González Cantero, Antonio Martorell Calatayud, Raquel Rivera Díaz, Marina Sáez Belló, Almudena Mateu Puchades, Isabel Belinchón Romero, Anna Isabel Lázaro Simó, José Luis López Estebanz, Ignasi Gich Saladich y Lluís Puig Sanz. Comunicación Oral. 6º Congreso Nacional Psoriasis. 22-23 Jan 2021. Virtual.
- A.López Ferrer .Moderadora Comunicaciones Orales . 6º Congreso Nacional Psoriasis. 22-23 Jan 2021. Virtual.
- Efectividad y seguridad de guselkumab en psoriasis en la práctica clínica real a las 24 semanas: estudio observacional, retrospectivo y multicéntrico del Grupo Español de Psoriasis. Elena del Alcázar, Álvaro Martínez, Anna López, Mº del Mar Llamas, Antonio Sahuquillo, Jaime Notario, Vicenç Rocamora, Ricardo Ruiz, Marc Julià, Marta Ferran, Pablo de la Cueva, Almudena Mateu, Raquel Rivera, Antonio Martorell, Diana Patricia Ruiz, Laura García, Elena Remedios Martínez, Esther de Eusebio, Susana Bel, Amalia Pérez, Gloria Aparicio, Gregorio Carretero, Josep A. Pujol, Laura Salgado, Mariano Ara, Lourdes Rodríguez Fernández, Carlos Muñoz, David Vidal, Isabel Belinchón, Cristina Grau, Francisco Javier Ferrando, Jesús Rodero, Alberto Romero, Noemí Eirís, Anna Isabel Lázaro y José Manuel Carrascosa. 6º Congreso Nacional Psoriasis. 22-23 Jan 2021. Virtual.
- Efectividad y seguridad de brodalumab en psoriasis en la práctica clínica real: estudio observacional, retrospectivo y multicéntrico del Grupo Español de Psoriasis. Antonio Sahuquillo Torralba, Mercedes Hospital Gil, Conrad Pujol Marco, Ricardo Ruiz, Manel Velasco, Raquel Rivera Díaz, Fátima la Fuente, Eva Vilarrasa, Mar Llamas Velasco, Pedro Herranz Pinto ,Ana López, Ferran Ballescà López, Pablo de la Cueva Dobao, José Luis López Estebanz, Susana Medina Montalvo, José Manuel Carrascosa, Miquel Ribera Piber-nat, Beatriz Aranegui Arteaga, Susana Medina Montalvo, Cristina López Lluñell, Susana Armesto, María Luisa Fernández, Ignacio Yanguas, Ofelia Baniandrés Rodríguez, Laura Salgado, Marta García, Isabel Belinchón, José María Ortiz, Alberto Romero Mate, Elena Martínez Lorenzo y Rafael Botella Estrada. 6º Congreso Nacional Psoriasis. 22-23 Jan 2021. Virtual.
- Supervivencia de tratamiento biológico de nueva generación: experiencia en el servicio de dermatología del Hospital Sant Pau. Helena Iznardo, Carla Tubau, Victoria Amat, Guillermo Julián Sánchez, Anna López, Eva Vilarrasa y Luís Puig, de Hospital de Sant Pau-Servicio de Dermatología. 6º Congreso Nacional Psoriasis. 22-23 Jan 2021. Virtual.
- Embarazo y maternidad: estudio para explorar las necesidades y preocupaciones de las mujeres con psoriasis. Sandra Ros Abarca, Anna López Ferrer, Eva Vilarrasa Rull y Lluís Puig Sanz, de Servicio de Dermatología. 6º Congreso Nacional Psoriasis. 22-23 Jan 2021. Virtual.
- Eficacia y seguridad de bimekizumab frente a adalimumab en pacientes con psoriasis en placas de moderada a grave: resultados de un ensayo fase III, multicéntrico, aleatorizado, doble ciego (BE SURE). Anna López Ferrer, Richard B. Warren, Andrew Blauvelt, Jerry Bagel, Kim A. Papp, Paul Yamauchi, April Armstrong, Richard Langley, Veerle Vanvoorden, Luke Peterson,

Dirk De Cuyper, Nancy Cross y Kristian Reich. 6° Congreso Nacional Psoriasis. 22-23 Jan 2021. Virtual.

- Efectividad de certolizumab en pacientes con psoriasis en práctica clínica habitual: estudio retrospectivo multicéntrico de 27 pacientes. Marta Ferran, Jimena Escobar, Anna López, Emma Beltrán, Ana Urruticoechea-Arana, Mercè Alsina, Josep Riera, David Vidal, Jaime Notario, José Manuel Carrascosa, Gloria Aparicio, Miquel Ribera y Fernando Gallardo. 6° Congreso Nacional Psoriasis. 22-23 Jan 2021. Virtual.
- En la piel de nuestros pacientes. Ponencia. Jornadas Virtuales AEDV 2021, 17 June 2021.
- Perspectivas y desarrollo de la dermatología en el ámbito público. Ponencia. Jornadas Virtuales AEDV 2021, 17 June 2021.
- M Suppa, M Fontaine, G Dejonckheere, E Cinotti, O Yélamos, L Boussingault, G Diet, L Tognetti, M Miyamoto, C Orte Cano, J Perez-Anker, V Panagiotou, AL Trepant, J Monnier, V Berot, S Puig, P Rubegni, J Malveyh, JL Perrot, V del Marmol. Line-field confocal optical coherence tomography of basal cell carcinoma: a descriptive study. Poster at the World Congress of Melanoma/ EADO Congress 2021. Virtual, April 15-17, 2021
- C Garcia Melendo, CE. Morales-Munera, J Dalmau, X Cubiró, C López Sánchez, A Mozos, O Yélamos. Extensive lichen planopilaris as exclusive lichenoid reaction secondary to pembrolizumab in a patient with metastatic melanoma. Poster at the World Congress of Melanoma/ EADO Congress 2021. Virtual, April 15-17, 2021
- L Rusiñol, Ana Mozos, C López-Sánchez, A Barba, MV Camacho Martí, X Cubiró, M Estorch Cabrera, S Lopez-Fernandez, M Majem, R Orellana, L Puig, O Yélamos, I Sullivan. Melanomas presenting with histological sarcomatoid features: importance of immunohistochemical and molecular testing. Poster at the World Congress of Melanoma/ EADO Congress 2021. Virtual, April 15-17, 2021
- C Tubau, L Rusiñol, G Sánchez-Rodríguez, H Iznardo, V Amat-Samaranch, O Yélamos. Five synchronous melanomas: role of dermoscopy as a triage tool to manage melanoma. Poster at the World Congress of Melanoma/ EADO Congress 2021. Virtual, April 15-17, 2021
- V Amat-Samaranch, O Yélamos, E Agut-Busquet, J Dalmau, A Mozos, S López, E Roé. Spitzoid proliferative nodules arising in a medium congenital melanocytic nevus: dermoscopic description. Poster at the World Congress of Melanoma/ EADO Congress 2021. Virtual, April 15-17, 2021
- V Amat-Samaranch, O Yélamos, E Agut-Busquet, J Dalmau, A Mozos, S López, E Roé [Spitzoid proliferative nodules on a medium congenital melanocytic nevus]. Poster at the 8th Advanced Dermoscopy Course, Virtual 22-24 April 2021
- L Rusiñol, C Tubau, G Sánchez-Rodríguez, H Iznardo, V Amat-Samaranch, O Yélamos. [Five synchronous melanomas: the role of dermoscopy as a triage tool for melanoma management]. Poster at the 8th Advanced Dermoscopy Course, Virtual 22-24 April 2021
- O Yélamos, D Andersen, P Iglesias, M Potrony, M Domínguez, A Herrero, B Alejo, J Mateu, M Røpke, M Pont Giral, N Banhos Danneskiold-Samsøe, K Kristiansen, J Malveyh, R Guy, S Brix, S Puig. Development of a minimally-invasive method, guided by in vivo non-invasive imaging, to sample atopic skin. Poster at the 2021 Society for Investigative Dermatology (SID) Virtual Meeting, May 3-8 2021
- D Andersen, O Yélamos, M Røpke, M Pont Giral, N Banhos Danneskiold-Samsøe, K Kristiansen, J Malveyh, R Guy, S Puig, S Brix. Identification of novel molecular markers of disease severity and skin itchiness in children with atopic dermatitis. Poster at the 2021 Society for Investigative Dermatology (SID) Virtual Meeting, May 3-8 2021
- NA. Richarz, A Boada, A Jaka, J Bassas, C Ferrándiz, O Yélamos. Challenges for new adopters in pre-surgical margin assessment by handheld reflectance confocal microscope of basal cell carcinoma. Poster at the Virtual 2nd World Congress on Confocal Microscopy. May 21-23, 2021
- Sánchez Rodríguez G, Cubiró X, García Melendo C, Català A, Yélamos O, Roé E, Mozos A, Puig L. [Leishmaniasis associated with tumor necrosis factor alpha inhibitors: clinical variability]. Poster at the 2021 Congress of the Spanish Academy of Dermatology and Venereology, Bilbao 3.12.2021
- Yélamos O. Change in the paradigm of topical treatment in psoriasis: from reactive to proactive treatment. 6th Meeting of the Spanish Psoriasis Group. Virtual, 22.1.2021. (oral presentation)
- Yélamos O. Management of cutaneous immune-mediated skin toxicity of immunotherapy. 1st Multidisciplinary Melanoma Session. Virtual. 17.2.2021. (oral presentation)
- Yélamos O. BAP1 inactivated melanocytic tumors (bapomas) and the role of dermoscopy. 2021 Colombian Congress of Dermatology and Venereology. Virtual, 26.3.2021. (oral presentation)
- Yélamos O. In vivo mosaicking with the handheld reflectance confocal microscope. 2nd World Congress on Confocal Microscopy. New York City, USA + virtual, 22.5.2021. (oral presentation)
- Yélamos O. When dermoscopy does not match with histology. Virtual World Congress of Dermoscopy 2021. 10.6.2021. (oral presentation)
- Yélamos O. Digital photography for dermatologists' workshop. 48th Spanish Academy of Dermatology Meeting. Bilbao, Spain 3.12.2021. (oral presentation)
- Rusiñol L, Mozos A, Roé E, Puig L, Yélamos O. [Importance of skin examination in the diagnosis of systemic hamartomatous syndromes]. 2021 Congress of the Spanish Academy of Dermatology and Venereology, Bilbao 3.12.2021 (oral presentation)



Anaesthesiology

Coordinator

Paniagua Iglesias, Pilar FGS
ppaniagua@santpau.cat

Members

Argilaga Nogues, Marta	FGS	Gil Sánchez, José María	FGS
Azparren Cabezón, Gonzalo	FGS	Gine Serven, Marta	FGS
Baños Lapuente, Victoria	FGS	Gómez Caro, Ana M.	FGS
Bastitta, María Micaela	FGS	Guadalupe Fernández, Nerea	FGS
Batalla González, Astrid María	FGS	Herranz Pérez, Gracia	FGS
Bausili Ribera, Marc	FGS	Illa Ribera, Sussana	FGS
Baute Sanjuan, Javier	FGS	India Aldana, Inmaculada	FGS
Bueno Izquierdo, Ana	FGS	Italiano, Stefano	FGS
Castrillo Ferrando, Agustí	FGS	Koller , Tobias Bernhard	FGS
Cegarra Sanmartin, Virginia	FGS	Maestre Hittinger, Maria Luz	FGS
Cueva Castro, Luisa Fernanda	FGS	Merten , Alfredo R.	FGS
Espinosa Guerrero, Alejandra Nallely	IR	Miralles Bagan, Jordi	FGS
Espinosa Lopez Davalillo, Nieves	FGS	Moral Garcia, Maria Victoria	FGS
Felipe Correoso, María Mar	FGS	Moreno Bueno, Marisa	FGS
Fernandez Nuñez, Jose Anton	FGS	Pablo Fernández, Rosa	FGS
Font Gual, Adria	FGS	Pelaez Vaamonde, Xavier	FGS
Galan Serrano, Josefa	FGS	Rivilla Lizano, Maria Teresa	FGS
Garcia Alvarez, Maria Mercedes	FGS	Rodriguez Prieto, Mireia	FGS
Garcia Muret, Albert	FGS	Solans Duran, José Ramón	FGS
Gil De Bernabe Sala, Maria Angels	FGS	Villamor Vazquez, Jose Maria	FGS

Main lines of research

- Intraoperative respiratory strategies
- Management of preoperative anxiety in Pediatric Anesthesia and Surgery
- Perioperative TVP management
- Perioperative medicine
- Patient Blood management
- Massive blood transfusion and associated hemostatic disorders

- Loco-regional anesthesia and ecographic plexus identification
- Ecocardiography
- ECMO therapy
- Acute and chronic pain management
- New modalities of care delivery: Preoperative prehabilitation, team preoperative evaluations and perioperative care in Ophthalmic surgery
- Social communication of of peri-partum process

Scientific Challenges

- Critical analysis of new clinical technologies.
- Patient blood management.
- Perioperative medicine.
- Development of new health service systems.
- Clinical and preclinical research into physiology, pharmacology and anaesthetic/analgesic techniques.

Collaborations

Collaborations with other IIB Sant Pau research groups

- IIBSP-COV_2021 -63, 2021, Ongoing. PI: M. Melo
- HIP-ATTACK-2, 2021, Ongoing PI: J. Martin
- EPIS-AKI 2021, Ongoing, PI M. Garcia Alvarez
- Estudio Relación entre la morbimortalidad y el TCA basal en pacientes sometidos a cirugía vascular. Intrahospitalario. PI: Rivilla M. 2021.
- Asociación entre el uso de fármacos en el dolor crónico y la incidencia y gravedad de la infección COVID -19: Un estudio caso población. Multicéntrico nacional. Promoter: Dr Víctor Mayoral, Hospital de Belvitge. IP M. Revuelta
- IIBSP-DOL-2021-31 "Influencia de las comorbilidades en la intensidad del dolor en los pacientes con lumbalgia crónica en la Unidad del Dolor." PI Martha Melo.

External collaborations

- Incidence and clinical relevance of perioperative elevation of Troponin I and N-Terminal Pro-Bain natriuretic peptide in patients undergoing lung resection. Funding Agency: Instituto de Salud Carlos III. Application number: PI20/00154. IP: Miriam de Nadal. Collaborator: Ana Parera.
- Colchicine for the prevention of perioperative atrial fibrillation (COP_AF) trial Funding Agency: Canadian Institute for Health Research (CIHR). Application number: 420801. PI: David Conen. Collaborator: Ana Parera.

Active grants

- PILAR PANIAGUA IGLESIAS. Evaluación del grado de cumplimiento e impacto clínico de los protocolos de transfusión masiva (PTM).. PI16/01134. Instituto de Salud Carlos III. Duration 2017-2021. 82.000,00 €.

Note: Total amount granted to PI. It does not include indirect costs.

Doctoral theses

- Jordo Miralles Bagán, Influència de l'albumina en el desenvolupament de la disfunció renal aguda, associada a la cirurgia cardíaca sota circulació extracorpòrea, Universitat autònoma de Barcelona, Xavier León Vintró, 04/06/2021

Scientific production

- Anaya R, Rodriguez M, Gil JM, Vilalta N, Merchan A, Moral V, Mateo J, Martinez MJ. Correlation between PlateletWorks(R) and PFA-100(R) for Measuring Platelet Function before Urgent Surgery in Patients with Chronic Antiplatelet Therapy. *Journal of Clinical Medicine*. 2021; 10(2):255. DOI:10.3390/jcm10020255. PMID:33445597. IF:4,241 (Q1/D3).
- Anaya R, Rodriguez M, Millan A, Reguant F, Llorca J, Guilbert P, Ruiz A, Pantoja PE, Gil JM, Moral V, Merchan A, Martinez MJ. Early Surgery with Neuraxial Anaesthesia in Patients on Chronic Antiplatelet Therapy with a Proximal Femur Fracture: Multicentric Randomised Clinical Trial. *Journal of Clinical Medicine*. 2021; 10(22):5371. DOI:10.3390/jcm10225371. PMID:34830654. IF:4,241 (Q1/D3).
- Khan JS, Sessler DI, Chan MTV, Wang CY, Garutti I, Szczeklik W, Turan A, Busse JW, Buckley DN, Paul J, McGillion M, Fernandez C, Srinathan SK, Shanthanna H, Gilron I, Jacka M, Jackson P, Hankinson J, Paniagua P, Pettit S, Devereaux PJ. Persistent Incisional Pain after Noncardiac Surgery: An International Prospective Cohort Study. *ANESTHESIOLOGY*. 2021; 135(4). DOI:10.1097/ALN.0000000000003951. PMID:34499129. IF:7,892 (Q1/D1).
- Koller T, Kinast N, Castellanos AG, Garcia SP, Iglesias PP, Vintro XL, Arranz JM, Seto NV, Garcia MVM, Moreno AB, Aznar J, Albaladejo GE, Diaz M. Normalization of blood clotting characteristics using prothrombin complex concentrate, fibrinogen and FXIII in an albumin based fluid: experimental studies in thromboelastometry. *Scandinavian Journal of Trauma Resuscitation & Emergency Medicine*. 2021; 29(1):57. DOI:10.1186/s13049-021-00867-5. PMID:33836790. IF:2,953 (Q2/D3).
- Koller T, Ruiz AP, Diaz M, Caro A. Role of fibrinogen concentrates for treatment of critical perioperative hemorrhage. *DRUGS OF TODAY*. 2021; 57(3). DOI:10.1358/dot.2021.57.3.3250287. PMID:33729219. IF:2,245 (Q4/8D).
- Osuna AG, Rojas LF, Lamas C, Roig XA, Pla F, Videla S, Martinez MJ, Valle M, Font A, Fernández JA, Rodriguez M, Banos V. Population Pharmacokinetics of Intra-articular and Intravenous Administration of Tranexamic Acid in Patients Undergoing Total Knee Replacement. *CLINICAL PHARMACOKINETICS*. 2022; 61(1). DOI:10.1007/s40262-021-01043-9. PMID:34255299. IF:6,447 (Q1/D1).
- Serrano AB, Diaz O, Melchor J, Abad A, Ramirez JM, Martinez J, Sanchez M, Rodriguez R, Jorda L, Gil S, Cabellos M, Bordonaba D, Aldecoa C, Azparren G, Bastitta M, Batalla A, Cueva L, Gine M, Gómez AM, India I, POWER GRP. Neuromuscular blockade

management and postoperative outcomes in enhanced recovery colorectal surgery: secondary analysis of POWER trial. *Minerva Anestesiologica*. 2021; 87(1). DOI:10.23736/S0375-9393.20.14589-9. PMID:33538417. IF:3,051 (Q3/D6).

- Weiss R, Saadat-Gilani K, Kerschke L, Wempe C, Meersch M, Zarbock A; EPIS-AKI Investigators [Batalla A]. Epidemiology of Surgery-Associated Acute Kidney Injury (EPIS-AKI): study protocol for a multicentre, observational trial. *BMJ Open*. 2021;11(12):e055705. DOI:10.1136/bmjopen-2021-055705. PMID:35588372. IF:2,692 (Q2/D4).

- Zarbock A, Kullmar M, Ostermann M, Lucchese G, Baig K, Cennamo A, Rajani R, McCorkell S, Arndt C, Wulf H, Irqsusi M, Monaco F, Di AL, Alvarez MG, Italiano S, Bagan JM, Kunst G, Nair S, L'Acqua C, Hoste E, Vandenberghe W, Honore PM, Kellum JA, Forni LG, Grieshaber P, Massoth C, Weiss R, Gerst J, Wempe C, Meersch M. Prevention of Cardiac Surgery-Associated Acute Kidney Injury by Implementing the KDIGO Guidelines in High-Risk Patients Identified by Biomarkers: The PrevAKI-Multicenter Randomized Controlled Trial. *ANESTHESIA AND ANALGESIA*. 2021; 133(2). DOI:10.1213/ANE.0000000000005458. PMID:33684086. IF:5,108 (Q1/D3).

- Zorrilla A, Stone AB, Ripollés J, Abad A, Ramirez JM, Galan P, Mena GE, Grant MC, Batalla A, Azparren G, Bastitta M, Felipe M, Cueva L, Gine M, Gómez AM, India I, Piñol S, Renedo P. Institutional factors associated with adherence to enhanced recovery protocols for colorectal surgery: Secondary analysis of a multicenter study. *JOURNAL OF CLINICAL ANESTHESIA*. 2021; 74:110378. DOI:10.1016/j.jclinane.2021.110378. PMID:34144497. IF:9,452 (Q1/D1).

Other publications

- Margarit JA, Pajares MA, Garcia C, Castano M, Gomez M, Garcia J, Soto MJ, Lopez J, Martin E, Blanco J, Mateo E, Hernandez C, Vives M, Llorens R, Fernandez J, Acosta J, Pradas C, Garcia M, Aguilar EM, Castano B, Lopez S, Bel A, Gabaldon T, Fernandez AR, Gutierrez E, Lopez C, Moreno J, Galan J, Osseyran F, Bustamante J, Veiras S, Vicente R. Guidelines for enhanced recovery after cardiac surgery. Consensus document of Spanish Societies of Anesthesia (SEDAR), Cardiovascular Surgery (SECCE) and Perfusionists (AEP). *Cirugia Cardiovascular*. 2021; 28. DOI:10.1016/j.circv.2020.11.004.

- Martinez L, Pajares A, Lopez M, Osca J, Diez JL, Paniagua P, Argente P, Arana E, Alonso C, Rodriguez T, Vicente R, Anguita M, Alvarez J. Consensus document for anaesthesiologist-assisted sedation in interventional cardiology procedures. *Revista Espanola De Anestesiologia Y Reanimacion*. 2021; 68(6). DOI:10.1016/j.redar.2021.01.001. PMID:33931263.

- Pajares MA, Margarit JA, Garcia C, Garcia J, Mateo E, Castano M, Forte CL, Menendez JL, Gomez M, Soto MJ, Veiras S, Martin E, Castano B, Palanca SL, Gabaldon T, Acosta J, Cruz JF, Lopez A, Garcia M, Acuna CH, Moreno J, Osseyran F, Vives M, Pradas C, Aguilar EM, Minguez A, Bustamante J, Gutierrez E, Llorens

R, Galan J, Blanco J, Vicente R. Guidelines for enhanced recovery after cardiac surgery. Consensus document of Spanish Societies of Anesthesia (SEDAR), Cardiovascular Surgery (SECCE) and Perfusionists (AEP). *Revista Espanola De Anestesiologia Y Reanimacion*. 2021; 68(4). DOI:10.1016/j.redar.2020.11.005. PMID:33541733.

- Ripollés J, Aldecoa C, Alday E, Del Río S, Batalla A, Del E, Uña R, Muñoz JL, Lorente JV, Espinosa ÁV, Ferrando C, Jover JL, Abad A, Ramírez JM, Abad A, investigators' group of the POWER and POWER studies for the Spanish Perioperat 2. Intraoperative crystalloid utilization variability and association with postoperative outcomes: A post hoc analysis of two multicenter prospective cohort studies. *Revista Espanola De Anestesiologia Y Reanimacion*. 2021; 68(7). DOI:10.1016/j.redare.2021.07.004. PMID:34364826.

Books or chapters with ISBN

- Manual de Tratamiento del dolor, 4a. edición. Editorial Permanyer. 2021. ISBN 9788418150661

Communication and dissemination activities

Courses

- Formación continuada en dolor: Jornada de actualización en dolor. XXI Edición 21 Oct 2021. Dr Catala . Hospital de la Santa Creu i sant Pau. Barcelona

- Curso intensivo teórico-práctico del bloqueo nervioso 42 edición. 2 Jul 2021. Hospital de la Santa Creu i sant Pau. Barcelona

- Curso teorico - practico de la oxigenacion por membrana extracorporea (ECMO) venoarterial en pacientes adultos con shock cardiogenico refractario. 2.3 puntos. 19-20 May 2021

- Assessment of massive transfusion protocol level of compliance in 5 high level university hospitals 21 Annual Nata symposium April 12-16,2021.

- Alteraciones hemodinámicas durante cirugía mayor laparoscópica del lactante registradas mediante el método P.R.A.M. S. Illa, I. India, M. A, Gil de Bernabé. SEDAR 4-6 Nov 2021. Santander.

- Brilma modificado en cirugía hepática pediátrica. I. India, S. Illa, M. A, Gil de Bernabé. SEDAR 4-6 Nov 2021. Santander.

- Consideraciones anestésicas pre y postoperatorias en pacientes con Miastenia Gravis. Barcelona. Curso nacional. Mar 2021. Dr A. Parera, speaker.

- II Curso de actualización en el diagnóstico y tratamiento de los tumores tímicos.

- Postoperative Pain Management in Thoracic Surgery. Fifth International Joint Meeting on THORACIC SURGERY. Congreso

internacional. Barcelona 17-18-19 November 2021. A. parera Speaker.

- Thymectomy by assisted thoracoscopic surgery (VATS). Should a paravertebral catheter be part of multimodal postoperative pain management?. Parera A, Melo M, Díaz R, Trujillo JC, Català E. 17 World Congress of Anesthesiologist. September 1-5, 2021.

- X Reunió del abordaje del dolor para residentes y adjuntos jóvenes. Comunicació oral: Dificultad en el manejo de altas dosis de opioides intraespinales tras retirada de implante intratecal por infección. Toral D, Genové M, Ferrándiz M, Núñez S, Català E. Barcelona (España). Mar 2021.

- “Prótesis y reparaciones valvulares: te cuento mis trucos”, Webinar “Curso de Ecocardiografía Perioperatoria: Un cambio de paradigma en el manejo perioperatorio cardiovascular”. Organiser: Sociedad Española de Imagen Cardíaca (SEIC). Broadcasted 28 Jan.

- XV congrés de la SCARTD: Inestabilitat hemodinàmica intraoperatòria: utilitat de la ecocardiografia transesofàgica. Gerard Moreno Giménez; Jordi Miralles Bagán; Raúl Hernández Alós; Miriam Domínguez Tenreiro; Mercedes García Álvarez; Ma Àngels Gil de Bernabé Sala. Hospital de la Santa Creu i Sant Pau, Servei d’Anestesiologia i Reanimació. 3rd Prize to Best Presentaton.

- Farmacología el dolor orofacial agudo y cronico. Ruben Diaz. Curso de Experto Universitario de ATM y Dolor Orofacial. Universitat de Barcelona 28/05/2021 Speaker.

- Neurofisiología del dolor orofacial. Ruben Diaz. Curso de Experto Universitario de ATM y Dolor Orofacial. Universitat de Barcelona 26/03/2021 Speaker.

- Prótesis y reparaciones valvulares: te cuento mis trucos”, Webinar “Curso de Ecocardiografía Perioperatoria: Un cambio de paradigma en el manejo perioperatorio cardiovascular”, M^a Luz Maestre. Organiser: Sociedad Española de Imagen Cardíaca (SEIC). Broadcasted 28 Jan 2021. Speaker.

- Dorsalgia aguda tras implante de estimulador medular: coexistencia de dos procesos independientes. 9^a Reunió de l’abordatge del dolor Societat Catalana del Dolor . April 2021. Cristina Heredia Carqués, Miren Revuelta Rizo, Rubén Díaz Jover, Elena Català Puigbó.

- Guía clínica para la Atención al paciente Long Covid/Covid persistente. Documento colaborativo entre colectivos de pacientes y Sociedades Científicas. SEMG Long Covid ACTS .01/05/2021. Miren Revuelta Rizo.

- 42º Curso intensivo teorico practico del bloqueo nervioso: Dr M. Rodriguez, Dr. M. Bausili

- “Indicacions, Selecció selectiva de pacients. Evidència científica A Dr Miren E. Revuelta. Actualitzacions en Neuromodulació: Neuroestimulació i Teràpia Intratecal. Sociedad Catalana del Dolor. 26 Nov 2021 PACIENTS. EVIDÈNCIA CIENTÍFICA Dra. Miren E. Revuelta.

- Actualitzacions en Neuromodulació: Neuroestimulació i Teràpia Intratecal. Sociedad Catalana del Dolor. 26 Nov 2021. Dr Miren E. Revuelta. Actualitzacions en Neuromodulació: Neuroestimulació i Teràpia Intratecal. Sociedad Catalana del Dolor. 26 Nov 2021

- Congreso nacional de la SED . Oct 2021 Miren Revuelta Moderadora en la mesa de posters de la secció del infermeria.

- El cóctel “traumatismo * lesión nerviosa”, ¿cambia algo? Miren Revuelta. Jornadas de aprendizaje 360º sobre Dolor Regional Complejo, Valencia 11-12 de Nov 2021

- Tratamiento del dolor neuropatico en la era postCovid. III Jornada del Grupo de Trabajo de Dolor Neuropático de la SED. 5 Nov 2021 Miren Revuelta Moderator.

- Liderazgo y responsabilidad. Las clínicas del dolor desde sus inicios. Una mirada basada en la perspectiva de género (profesionales y pacientes) Jornada de Actualización en Dolor XXI. Barcelona Oct 2021. Miren Revuelta, Moderator.

- Master Abordaje integral del dolor. Módulo 2: Tipos de dolor crónico; 2.5 Dolor herpético. Dra Miren Revuelta, Dra Martha Melo. Universidad Francisco de Vitoria. UFMadrid. Editorial Panamericana. April 2021/2022

- Comorbidity Paterns and Pain. Multivariable Model of Factors Associated With Intensity of Low Back Pain. Melo M, Diaz R, Rius C, Catalá E, Santuelaria T IASP Virtual World Congress on Pain 2021. 9-11 June 2021.



Plastic Surgery

Coordinator

Masià Ayala, José Jaume FGS
jmasia@santpau.cat

Members

Condrea, Sílvia	FGS	Núñez-Villaveiran Baselga, M. Teresa	FGS
Fernandez Garrido, Manuel	FGS	Olivares Dominguez, Maria De Leyre	FGS
Lopez Fernandez, Susana	FGS	Pérez Sempere, María	FGS
Mallen Bosch, Elena	IR	Pons Playa, Gemma	FGS
Mohedano Puig, Elena	IR	Zamora Alarcón, Paul David	FGS

Main lines of research

- Application of imaging techniques for intraoperative studies of perforator vessels with the aim to improve the design of flaps, evaluate the suitable blood perfusion and the viability of the flaps avoiding secondary postoperative complications secondary to vascular supply problems.
- Anatomical studies of the variability of perforator vessels in the following regions: internal mammary artery, inferior epigastric system and internal superficial circumflex system.
- Study of the perioperative and postoperative factors that influence on the viability of the microsurgical free flaps.
- Research by indocyanine green angiography and Thermography of the concept of vascular blood balance after the dissection of a perforator flap.
- Research by indocyanine green angiography of the relationship between the different anatomical patterns of lymphatic vessels in the upper extremity and its readiness to develop lymphedema in the affected breast cancer patients.
- Feasibility of the research in animal models of major surgical and nonsurgical techniques existing today to treat secondary lymphatic insufficiency: fat transplant of autologous stem cells, stem cell transplantation autologous from bone marrow, lymphatic-venous anastomosis, free flap of vascularised autologous lymph nodes.

- Lymphangiogenesis studies in a comparative animal model between transplantation of adipose tissue stem cells vs bone marrow stem cells, lymphatic-venous anastomoses and transplantation of vascularized lymph nodes for lymphoedema treatment.
- Research in an experimental animal model on lymphangiogenesis and regeneration of the lymphatic system after a model of obstructive lymphoedema.
- Imaging studies using lymphography and indocyanine green, as well as lympho-magnetic resonance techniques.
- Correlation between Indocyanine Green Lymphography and Thermography to evaluate areas of dermal backflow in lymphedema.
- Correlation between Indocyanine Green Lymphography and Thermography to evaluate perfusion in free flaps.

Scientific Challenges

- Improvement of the preoperative planning of perforator flaps with the help of advances in imaging techniques and knowledge of anatomy.
- Consolidate and optimize preoperative management techniques for locating the most suitable perforating vessels for each microsurgical flap.
- Minimize intra- and postoperative complications in perforator flaps using new imaging techniques to visualize intraoperatively patterns of vascularisation of the flaps and vascular blood supply dominance.
- Lymphedema prevention in those patients with mastectomy in which we perform searching procedures of sentinel node and/or axillaries lymph node dissections using new techniques of surgical treatment for this disease (lymphatic venous anastomosis, transfer of vascularised lymph nodes,...).
- Identification by indocyanine green angiography for those patients affected with breast cancer with a major risk of developing secondary lymphedema.

Collaborations

Collaborations with other IIB Sant Pau research groups

- "Evaluación intraoperatoria de la perfusión de colgajos libres de perforantes mediante termografía dinámica infrarroja, angiografía con verde de indocianina y velocidad de perfusión de la perforante con ecografía Doppler". Protocol num: IIBSP-PER-2019-109. Promoter: Institut de Recerca de l'hospital de la santa Creu i Sant pau - IIB Sant Pau

- IIBSP-SMV-2020-113. manejo quirúrgico de malformaciones venosas.
- IIBSP-NAS-2021-06. The one-staged folded nasolabial perforator flap to cover full-thickness defects of eha nasal alae.

External collaborations

- BRR-17-001 Molecular and functional studies of primary cells isolated from tissues of vascular overgrowth conditions.
- Use of circulating extracellular vesicles and cfDNA from lymphatic fluid exudate obtained post-lymphadenectomy as surrogate markers of minimal residual disease in melanoma patients. protocolo: EXMEL 2021/75-ONC-DEX. 12 July 2021. Oncología médica at Hospital Universitari Dexeus. Dr Maria Gonzalez Cao, Hospital Universitari Dexeus - Grupo Quirónsalud, Barcelona. Dr Peinado CNIO, Madrid.
- "Latitude: estudio prospectivo de cohorte europeo sobre el uso del láser UrgoTouch para la prevención de cicatrices lineales anormales". Study num: EN/URGO/VT TOUCH/2018

Scientific production

- Angrigiani C, Rancati AO, Masia J, Farhadi J, Khouri K, Acquaviva J, Rancati A. Modified anterior intercostal artery perforator flap (AICAP) for autologous breast volume restoration after explantation. *Journal of Plastic Reconstructive and Aesthetic Surgery*. 2021; 74(11). DOI:10.1016/j.bjps.2021.03.123. PMID:34020904. IF:2,740 (Q2/D5).
- Chang DW, Dayan J, Greene AK, MacDonald JK, Masia J, Mehrara B, Neligan PC, Nguyen D. Surgical Treatment of Lymphedema: A Systematic Review and Meta-Analysis of Controlled Trials. Results of a Consensus Conference. *PLASTIC AND RECONSTRUCTIVE SURGERY*. 2021; 147(4). DOI:10.1097/PRS.0000000000007783. PMID:33761519. IF:4,730 (Q1/D2).
- Gil LSP, Vintro XL, Fernandez SL, Garcia CV, Playa GP, Garrido MF, Ayala JM. The Effect of Perioperative Blood Transfusions on Microvascular Anastomoses. *Journal of Clinical Medicine*. 2021; 10(6):1333. DOI:10.3390/jcm10061333. PMID:33807085. IF:4,241 (Q1/D3).
- Pons G, Abdelfattah U, Sarria J, Duch J, Masia J. Reverse Lymph Node Mapping Using Indocyanine Green Lymphography: A Step Forward in Minimizing Donor-Site Morbidity in Vascularized Lymph Node Transfer. *PLASTIC AND RECONSTRUCTIVE SURGERY*. 2021; 147(2). DOI:10.1097/PRS.0000000000007585. PMID:33565822. IF:4,730 (Q1/D2).
- Suarez X, Fernandez E, Pinol P, Alonso J, Carrasco A, Lleixa C, Lopez S, Pons G, Soria L, Bigot A, Mouly V, Illa I, Gallardo E, Jaiswal JK, Diaz J. Isolation of human fibroadipogenic progenitors and satellite cells from frozen muscle biopsies. *FASEB JOURNAL*. 2021; 35(9):e21819. DOI:10.1096/fj.202100588R. PMID:34405910. IF:5,191 (Q1/D2).

- Zhang YX, Xiao WT, Ng S, Zhou HH, Min PR, Xi WJ, Masia J, Blondeel P, Feng SQ. Infrared thermography-guided designing and harvesting of pre-expanded pedicled flap for head and neck reconstruction. *Journal of Plastic Reconstructive and Aesthetic Surgery*. 2021; 74(9). DOI:10.1016/j.bjps.2020.12.102. PMID:33551358. IF:2.740 (Q2/D5).

Other scientific production

- Martinez P, Masia J, Forero CG, Fuster P, Monforte C. Y Hidden Costs in Breast Cancer-Related Lymphedema. *Seminars in Oncology Nursing*. 2021; 37(2):151118. DOI:10.1016/j.soncn.2021.151118. PMID:33642115. IF:2,315 (Q2/D3).

Other publications

- Estupinan AI, Garrido MF, Dominguez LO, Alarcon PZ, Vilchez JR, Carrillo AG, Romero LT, Ayala JM, Garcia CV. Lower limb salvage in patients older than 75 years old affected of soft tissue sarcoma: beyond the limits. *European Journal Of Plastic Surgery*. 2021; 44(4). DOI:10.1007/s00238-020-01768-z.
- Neumann ED, León Vintró X, Vega García C, Quer Agustí M. Oral cavity colon adenocarcinoma metastases: case report with surgical approach and review of more than 30 years literature. *Oral Maxillofac Surg*. 2021;25(1):99-101. DOI:10.1007/s10006-020-00887-y. PMID: 32719951.
- Sheriff H, Vega C, Garcia J, Lopez S, Shabak K, Hankins C, Masia J, Fernandez M. Indocyanine Green Angiography in Salvage Planning: from pedicle to free supraclavicular flap, and the use of ICG fluorescence angiogram in salvage planning. *International Microsurgery Journal*. 2021;5(1):4. DOI:10.249983/scitemed.imj.2021.00145

Communication and dissemination activities

Conferences and meetings

- ECHNO-ICHNO 2021 European Head and Neck Society. 30 June-3 July 2021 (online)

“Tumors of the lower lip”. Sumarroca A, Vega C, Aguilera J, Lopez-Fernandez S, Leidinger A, Ramirez RD, Pedemonte G, Mackeerrs P, Canton M, Garcia J, Costa JM.

- 12ª Reunión de la Sociedad Española de Anomalías Vasculares. 23-24 Octubre. “Evolución del tratamiento quirúrgico del linfedema genital”. López-Fernández S, Pons G, Vega C, Fernández-Garrido M, Masia J. 12ª Reunión de la Sociedad Española de Anomalías Vasculares. 23-24 Oct.

- 14th UK Neuromuscular translational research conference 2021 (online event). 25-26 Mar 2021. “Selected isolation of human fibroadipogenic progenitor and satellite cells from frozen muscle biopsies”. Suarez Calvet X, Fernandez-Simon E, Piñol Jurado P, Alonso-Perez J, Carrasco Rozas A, Lopez-Fernández S, Pons G, Soria L, Bigot A, Mouly V, Illa I, Gallardo E, Jaiswal J, Diaz-Manera J.

- 7th Congress of the European Academy of neurology - virtual 2021. 19-22 Jun 2021. Isolation of human fibroadipogenic progenitors and satellite cells from frozen muscle biopsies. Suarez Calvet X, Fernández-Simon E, Piñol-Jurado P, Alonso-Perez J, Carrasco-Rozas A, S.López-Fernández, G. Pons, Soria L, Bigot A, Mouly V, Illa I, Gallardo E, Jaiswal J, Diaz-Manera J

- WMS 2021 Virtual Congress. 20-24 Sep 2021. “Rhoa/ROCKS2 signalling is enhanced by PDGF-AA in fibro-adipogenic progenitor cells in DMD. Fernandez-Simon V, suarez-Calvet X, Carrasco Rozas A, Piñol-Jurado P, López Fernández S, Bech Serra J, Torre C, Luna N, gallardo E, Diaz J

- XIII Congreso de la Sociedad Española de Cirugía Plástica, Reparadora y Estética de la Comunidad Valenciana (SCPRECV). “Reconstrucción funcional del First ray: aloinjerto de peroné vs SCIP tipo quimera en lechos quirúrgicos radiados”. Torrano romero L, Zamora Alarcon P, Gomez Carrillo, A Fenandez Garrido. 24-25 Sep 2021.

- 18º Congress of the Spanish Association for Microsurgery. “To bulge or not to bulge: rectus abdominis functional reconstruction after STS resection” Torrano Romero L, Zamora Alarcon P, Ibarra Estupiñan A, Fernandez Garrido M. Cáceres, 21-23 Oct 2021

- 18º Congress of the Spanish Association for Microsurgery. “ Scrotal reconstruction after traumatic injury with a propeller direct SCIP flap”. L Sisternas, S Lopez, A Ibarra, P Zamora, L diaz, M Fernández. Cáceres, 21-23 Oct 2021

- 18º Congress of the Spanish Association for Microsurgery. “Preventing lymphedema in lower limb after STS resection involving lymphatic pathways” Torrano Romero L, Zamora Alarcon P, P. Gomez Carrillo, Fernandez Garrido M. Cáceres, 21-23 Oct 2021

- 18º Congress of the Spanish Association for Microsurgery. “In-vos we trust: subjective vs objective flap assessment”. L Torrano, P Zamora, J Riba, A Ibarra, M fernández. 21-23 Oct 2021

- 18º Congress of the Spanish Association for Microsurgery. “Thoracic wall metastatic breast cancer: huge defects and its unusual reconstruction”. Torrano Romero L, Condrea s, Sisternas L, Pons G. Cáceres, 21-23 Octubre 2021. Cáceres, 21-23 Oct 2021.

- 18º Congress of the Spanish Association for Microsurgery. “Catastrophic abdominal wall reconstruction through biological mesh and anterolateral fasciocutaneous thigh free flap with anastomosis to the gastroepiploic vessels” L Sisternas, M Fernandez-Garrido, A Ibarra estupiñan, A Gomez, L Torrano, S López.

- 15th Congress of the European Federation of Societies for Microsurgery. “Lower limb salvage in patients older than 75 years old affected of soft tissue sarcoma: beyond the limits. A Ibarra, M. Fernandez, P Zamora, J Riba, A Gomez, J Masia, C Vega. June 24-27 2021 (online)

- I Congreso online de la Sociedad Española de Cirugía Plástica, Reparadora y Estética. “Correlation between indocyanine green lymphography and thermography to evaluate areas of dermal back

flow in lymphedema". A Ibarra, G Pons, M Fernandez, P Zamora, L Olivares, C Vega, J Masià. May 2021

- I Congreso online de la Sociedad Española de Cirugía Plástica, Reparadora y Estética. "Catastrophic abdominal wall reconstruction through composite anterolateral and fascia lata perforator free flap. new approach. Fernández Garrido M, González López J, sisternas Hernández L. May 2021.

- I Congreso online de la Sociedad Española de Cirugía Plástica, Reparadora y Estética. "Correlación entre tremografía dinámica infraroja y angiografía con verde de indocianina para la evaluación intraoperatoria de perfusión de colgajos microquirúrgicos en reconstrucción mamaria". A Ibarra, P Zamora, G Pons, L Torrano, J Masià, M Fernández. May 2021

- XXIII Reunión Nacional de Cirugía. "Nuevo enfoque a la reconstrucción catastrófica de pared abdominal mediante colgajo libre compuesto anterolateral de muslo y de fascia lata anastomosado a los vasos gastroepiploicos" J González López, Sisternas L, Fernández garrido M, Ballestgre E, Cambreiro L, Norte garcia. 9-12 Nov 2021

- 9th ERC Meeting & 31st EURAPS Annual Meeting. Virtual edition. "Rabbit hindlimb: a reliable animal model for lymphedema research". 26-29 May

- 9th ERC Meeting & 31st EURAPS Annual Meeting. Virtual edition. "Reverse lymph node mapping using indocyanine green lymphography: a step forward in minimising the donor site morbidity in vascularized lymph node transfer". 26-29 May

Courses

- M. Perez. "Virtual meeting of the American Society of Reconstructive Microsurgery" 15-17 Jan 2021.

- M. Perez. "ICOPLAST webinar. "Surgical treatment of long-term, and short-term complete and incomplete facial paralysis" 21 Feb 2021.

- M. Perez. ICOPLAST webinar: "Pearls and pitfalls of staged reconstruction of complex nasal defects" 27 Mar 2021

- M. Perez. IMC-AOCMF combined Webinars. "Controversies in computer-assisted head and neck reconstruction: has the dust settled yet? 28 Aug 2021

- M. Perez. UCL Head and neck webinar series. "Ear reconstruction" 27 Oct 2021

- C. Vega. Webinar FILACP. "Operando con el experto: Refinamientos en cirugía del pabellón auricular". Mar 2021

- C Vega. Webinar SCCPRE. "planificación quirúrgica avanzada con realidad virtual e impresión 3D". Apr 2021

Talks and seminars

- J Masià. "Actualització en sinologia i patologia mamària" 15 Mar, 17 May, 13 Sep, 15 Nov 2021 (on-line)

- J. Masià. "Master series: microsurgery for residents (Prophylactic treatment for lymphedema)" 5-6 Mar 2021 (online)

- J Masià. "iBreastBook webinar - Breast reconstruction: Free flaps". 10 April 2021 (online)

- J Masià. I Congreso online de la Sociedad española de Cirugía Plástica, Reparadora y Estética (SECPRE). 21-22 May 2021

- J Masià. "Cuarto Cali Breast Meeting" Santiago de Cali, Colombia 24 June 2021

- J Masià. "London Breast meeting - What's new in oncological, reconstructive and aesthetic breast surgery?". London, 1-4 Sep 2021

- J Masià. XIII Curso de Formación en patología de la maam básico para médicos internos de cirugía general y del aparato digestivo y especialistas quirúrgicos. 29 Sep-1 Oct 2021

- J Masià. 51º congreso Argentino de Cirugía Plástica: "Microcirugía II: selección y criterios oncológicos en reconstrucción de mama y pelvis", "Cirugía reconstructiva mamaria". 29-30 Nov, 1-2 Dec 2021

- J Masià. 13ª Reunión de la Sociedad Española de Anomalías Vasculares: "traamiento quirúrgico de linfedema y anastomosis linfático-venosas de las anomalías del conducto central" Barcelona, 22-23 Oct 2021.

- G. Pons. International Breast symposium Düsseldorf: DIEP- flap: my personal tricks to avoid pitfalls. Dusseldorf, Germany. August 19-21 2021

- G. Pons. 18º Congreso Asociación Española de Microcirugía. " Microsurgical alternatives to DIEP flap reconstruction" " Breast cancer lymphedema: our current approach". Cáceres. 21-23 Oct 2021.

- G. Pons. Chicago breast and 10th World Lymphedema Symposium-virtual edition. "Combined breast and lymphedema treatment" April 22-24, 2021

- G. Pons. 1st Egiptian Symposium in Lymphedema: Diagnostic imaging for lymphedema", "LVA: tricks and tips". El Cairo, July 9-11, 2021

- G. Pons. London Breast Meeting: What's new in aesthetic, oncological and reconstructive surgery: "Prophylactic lymphedema surgery". September, 2-4 2021 London

- G. Pons. I Congreso online 360 SECPRE. "Funcional vascularized lymph node transfer for lymphedema treatment". 21-22 May 2021

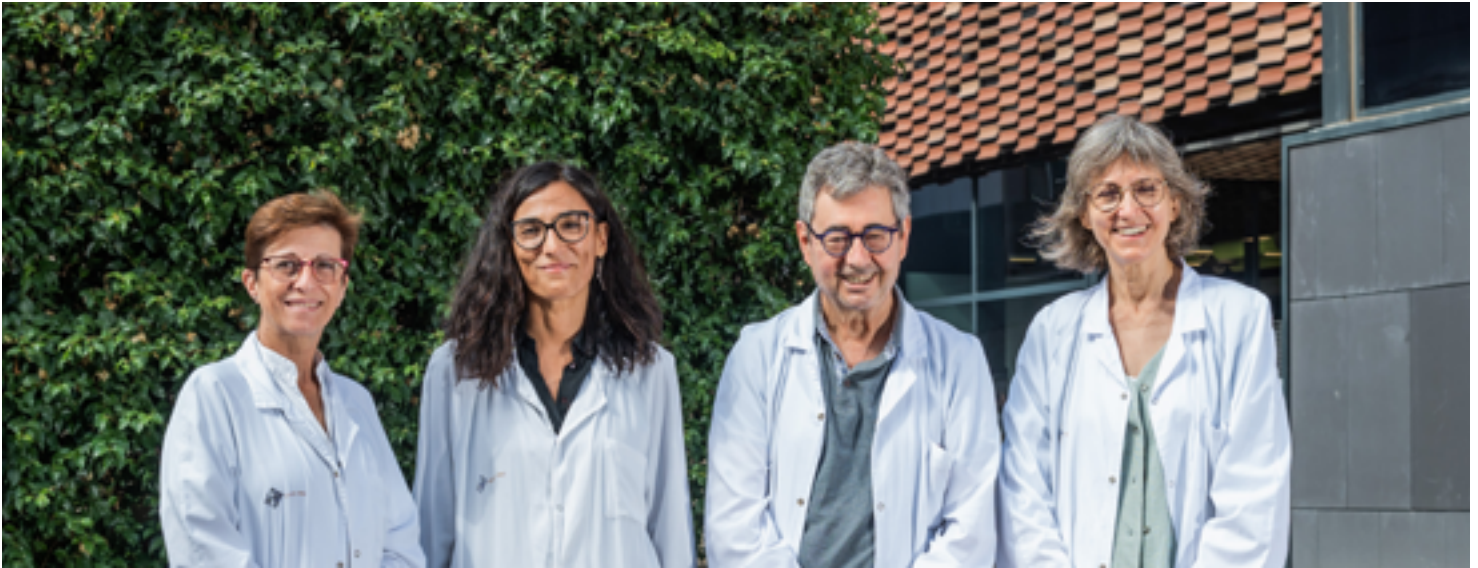
- G. Pons. XV Congreso chileno de Mastología- online- "Tratamiento quirúrgico de linfedema". Chile, 1-3 Oct 2021

- G. Pons. International Breast Surgery Innovation Symposium-online. "Simultaneous breast and lymphatic reconstruction". China, July 24-25, 2021

- G. Pons. Simposio de la Asociación Colombiana de Mastología: Cáncer de mama: escenarios clínicos, correlación imagenológica - online. " Diagnóstico de linfedema". Colombia, 5 Nov 2021

- C. Vega. Workshop Congreso SEORL 2021. "Reconstrucción labio inferior" Jul 2021

- C. Vega. Congreso Nacional de la Sociedad Española de Microcirugía. "Mesa casos clínicos". Oct 2021



Palliative Care

Coordinator

Pascual López, Antonio FGS
apascual@sanpau.cat

Members

Collette, Nadia IR
Guell Perez, Ernest FGS
Prada Jasimez, María Luisa FGS

Main lines of research

- Symptom evaluation and control: pain, dyspnoea, cognitive failure, complex situations.
- End-of-life ethical issues: sedation, expression of a desire for death, euthanasia.
- Psychosocial care for patients and families: adaptation to the terminal situation, grief, spiritual needs.
- Training in palliative care: training needs, outcomes.
- Art therapy.

Scientific Challenges

- Psychosocial care for patients and families.
- Counselling and hospital sensitization.
- Quality evaluation and control.
- Symptom evaluation and control.

- Integrated care: analysis and care of end-of-life emotional, social and spiritual dimensions and adequate ethical reflection in decision making.

Scientific production

- Collette N, Güell E, Fariñas O, Pascual A. Art Therapy in a Palliative Care Unit: Symptom Relief and Perceived Helpfulness in Patients and Their Relatives. *JOURNAL OF PAIN AND SYMPTOM MANAGEMENT*. 2021;61(1):103-111. DOI:10.1016/j.jpainsymman.2020.07.027. PMID: 32739559. IF:3,612 (Q2/D3).

Other publications

- Arantzamendi M, Sapeta P, Collette N, Sesma AB, Torres Pérez-Solero MT, Iribaren Echarri F, Centeno C. Insight and inner peace in palliative care professionals after art therapy workshop focused on personal

self-care: a preliminary experience. *Palliative Medicine Reports*. 2021, 2(1):34-39.

- Collette N. Componentes traumáticos del sufrimiento en el final de la vida. Una aproximación desde la arteterapia en cuidados paliativos. *Arteterapia - Papeles de arteterapia y educación para la inclusión social*. 2021; 16: 203-213.

Communication and dissemination activities

- 17th World Congress of the EAPC. 2021.Virtual meeting. October 2021.Gooni-Fuste B., Crespo I., Monforte-Royo C., Porta-Sales J., JuliàTorrás J., May L., de Santiago A., Llorens S., Rodríguez D., Alonso Babarro A., Güell Pérez E., Pergolizzi D. Exploring Views and Experiences of the Needs Assessment among Palliative Care Healthcare Professionals: A Qualitative Study.

- XV Curso SEOM para Residentes: Control de Síntomas y Terapia de Soporte, May 2021, Valencia, Spain. Sedación. Eutanasia. Antonio Pascual

- Jornada Formacion Continuada Oncologia Medica. Cuidados al final de la vida. April 2021. Castellón. Spain. Manejo de síntomas en los últimos días. Antonio Pascual

- Màster Universitari en Investigació Clínica Aplicada en Ciències de la Salut. Universidad Autonoma de Barcelona. March 2021. Barcelona, Spain. Investigación clínica en el final de la vida. Lecturer; Antonio Pascual

- Master de enfermería oncológica. Escuela Universitaria de Enfermería del Hospital de la Santa Creu i Sant Pau, March 2021. Arteterapia en cuidados paliativos. Lecturer: Nadia Collette

- Master en Atención paliativa integral a personas con enfermedades avanzadas, January - May 2021. Hospital SantPau - Universitat Autònoma de Barcelona, Spain. Lecturers: Antonio Pascual, Ernest Güell, Nadia Collette, María Luisa Prada

- Master de Cuidados Paliativos. Universidad Autónoma de Madrid y Hospital La Paz, June 2021.Arteterapia y sufrimiento en el final de la vida. Lecturer Nadia Collette.

- Master de Arteterapia, Facultad de Bellas Artes, Universidad Politécnica de Valencia e IDECART, June 2021.Arteterapia y cáncer en cuidados paliativos. Lecturer: Nadia Collette

- Master Universitario en Atención Paliativa a Personas con Enfermedades Avanzdas. Universitat de Vic. Institut Catala de Oncologia October 2021. Barcelona. Spain. Atencion paliative en hospitales. Lecturer: Antonio Pascual

- Master de Psicoterapia y Psicología Clínica, Universidad de Valencia, Dec 2021, Valencia, Spain. Arteterapia en el final de la vida. Lecturer: Nadia Collette.



Andrology

Coordinator

Ruiz Castañe, Eduard F. PUIGVERT
 eruiz@fundacio-puigvert.es

Members

Bassas Arnau, Lluís	F. PUIGVERT	Merino Guisado, Paloma	F. PUIGVERT
De Rocco Ponce, Maurizio	F. PUIGVERT	Moreno Mendoza, Daniel	F. PUIGVERT
González Fernández, Mónica	F. PUIGVERT	Peraza Godoy, M. Fernanda	F. PUIGVERT
Krausz, Csilla Gabriella	F. PUIGVERT	Riera Escamilla, Antoni	F. PUIGVERT
Maestre Loren, Francesc	F. PUIGVERT	Sánchez-Curbelo, Josvany	F. PUIGVERT
Martínez Pasarell, Olga	F. PUIGVERT	Sarquella Geli, Joaquim	F. PUIGVERT
Mateu Escudero, Silvia	F. PUIGVERT	Vives Suñé, Álvaro	F. PUIGVERT

Main lines of research

- Genetics applied to male infertility.
- Male fertility preservation in oncological patients.
- Optimisation of preimplantation genetics diagnosis and in vitro fertilization techniques.
- New surgical procedures, drugs and medical devices applied to diagnosis, prevention and treatment of andrological diseases and conditions (male sexual dysfunction, hypogonadism, Peyronie disease, premature ejaculation, sexually transmitted diseases).

- Sexually transmitted diseases and public health.
- Quality of life and integral sexual approach: gender and psychological aspects.

Scientific Challenges

Our multidisciplinary team of professionals develops translational and clinical research in the field of diagnosis and treatment of andrological disorders and female sexuality.

- To improve our knowledge and thereby improve healthcare for patients, we seek to continue active projects, develop new lines of investigation, increase the number of international publications, train professionals

and enhance collaboration with hospital and university groups inside and outside the IIB Sant Pau.

- To promote awareness and divulgate sexuality as health topic and as main aspect of global health and quality life inclusive in chronic and ill patients to professionals who requires a broad and multidisciplinary approach to their patients.
- To work up in the relationship with patient associations and progressively incorporate them as workteam to develop a responsible research with relevant results with social impact.

Collaborations

Collaborations with other IIB Sant Pau research groups

- Nephrology Group
- Urology Group
- Gynecological group
- Syndromes of genome instability and DNA repair

External collaborations

National

- Medical and Molecular Genetics Centre (RI)-IDIBELL: genetics applied to infertility.
- Cellular Biology and Medical Genetics Unit-UAB: preimplantation genetic diagnosis techniques.

International

- Mario Serio Experimental and Clinical Biomedical Sciences Unit, University of Florence: genetics applied to male infertility. Reproductive Genomics Laboratory, Human Genetics Centre (KU Leuven): genetics applied to male infertility.
- New England Research Institutes: hypogonadism.
- European Academy of Andrology: radiology examinations of the male genital tract.

Private

- Participation in clinical studies including clinical trials and postauthorization studies sponsored by national and international pharmaceutical companies.

Active grants

- CSILLA GABRIELLA KRAUSZ. Estudio genético y genómico en pacientes infértiles y pacientes con tumor testicular de células germinales: desarrollo de nuevas herramientas para un diagnóstico precoz. PI17/01822. Instituto de Salud Carlos III. Duration 2018-2022. 102.000,00 €.
- CSILLA GABRIELLA KRAUSZ. Análisis del exoma en pacientes azoospermicos con bloqueo de la espermatogénesis: desarrollo de un panel génico con valor diagnóstico y pronóstico pre-biopsia testicular. PI20/01562. Instituto de Salud Carlos III. Duration 2021-2023. 80.900,00 €.

Note: Total amount granted to PI. It does not include indirect costs.

Other active grants

Competitive Private Grants

- Krausz C. Título: Evaluación del efecto de la terapia citostática sobre el genoma y el epigenoma del gameto masculino. Fundación Merck Salud: "Ayudas Merck de Investigación 2017 en el área de Investigación Clínica en Fertilidad Budget: 30.000€ (2017-2021)
- Krausz C. Severe spermatogenic failure as a centinel for early diagnosis of late-onset Fanconi anemia Fanconi Anemia Research Fund Budget: 103.900 \$ (2021-2022)

Private capital projects

- Title: Satisfacción y Adherencia del tratamiento en mujeres con atrofia vulvovaginal: estudio transversal (Estudio CRETA) PI: González, M. Sponsor: SHIONOGI S.L.U.
- Title: Estudio observacional para la validación del cuestionario de la enfermedad de La Peyronie en su versión en español (Estudio PDQ). (2017-) PI: Ruiz-Castañé, E. Sponsor: Asociación Española de Urología (AEU)
- Title: Caracterización histológica y de expresión génica del tejido cavernoso humano en pacientes con disfunción eréctil y sin disfunción eréctil (2020-) PI: Sánchez, J. Sponsor: Fundació Puigvert.
- Title: Registro prospectivo de pacientes sometidos a implantación de prótesis de pene por disfunción eréctil (Estudio PHOENIX) PI: Ruiz-Castañé, E. Sponsor: EAU-RF
- Title: Manejo del priapismo y su impacto en el pronóstico: un registro internacional (Estudio MARS) (ManAgement of pRiapiSm and its impact on outcomes: an international register). PI: De Rocco, M. Sponsor: Dr. Russo - H. P. Rodolico-San Marco (Catania)
- Title: Estudio vascular de pacientes con disfunción eréctil sometidos a prueba de Rigiscan© PI: De Rocco, M Sponsor: Fundació Puigvert
- Title: Dolor testicular crónico y alextimia. (2013-) PI: Maestre, F. Sponsor: Fundació Puigvert
- Title: Regulació afectiva del malestar en la disfunció sexual: Aferrament, psicopatologia, disfunció erèctil i qualitat de la relació de parella. (2018-) PI: Maestre, F. Sponsor: Fundació Puigvert.
- Title: Apego y asertividad como mediadores del malestar emocional en mujeres que sufren disfunción sexual (2020-) PI: Maestre,F. Sponsor: Fundació Puigvert
- Title: Covid 19 i alteració de l'assistència mèdic-psicològica: Impacte emocional en els pacients de la Fundació Puigvert (2020-) PI: Maestre,F. Sponsor: Fundació Puigvert

Doctoral theses

- Núria Camps Bellonch, Seguiment de Parelles Infèrtils amb Fills Nats amb Tècniques de Reproducció Assistida Mitjançant Observació Indirecta, Facultat de Medicina, Universitat Autònoma de Barcelona, L. Bassas: Theses Director, 28/09/2021

Scientific production

- Arrom LM, Girabent M, Gonzalez M, Palou J, Errando C, Ramirez I. Development and validation of a short version of the Female Sexual Function Index in the Spanish population. *BMC Womens Health*. 2021; 21(1):63. DOI:10.1186/s12905-021-01213-8. PMID:33573647. IF:2,809 (Q2/D4).

- Capalbo A, Poli M, Riera A, Shukla V, Hoffding MK, Krausz C, Hoffmann ER, Simon C. Preconception genome medicine: current state and future perspectives to improve infertility diagnosis and reproductive and health outcomes based on individual genomic data. *HUMAN REPRODUCTION UPDATE*. 2021; 27(2). DOI:10.1093/humupd/dmaa044. PMID:33197264. IF:15,610 (Q1/D1).

- Cervan M, Bossini L, Rivera R, Garrido N, Lujan S, Romeu G, Santos S, Castilla JA, Gonzalvo MD, Clavero A, Vicente FJ, Guzman A, Burgos M, Barrionuevo FJ, Jimenez R, Sanchez J, Lopez O, Peraza MF, Pereira I, Marques PI, Carvalho F, Barros A, Bassas L, Seixas S, Goncalves J, Larriba S, Lopes AM, Carmona FD, Palomino RJ. Effect and in silico characterization of genetic variants associated with severe spermatogenic disorders in a large Iberian cohort. *Andrology*. 2021; 9(4). DOI:10.1111/andr.13009. PMID:33784440. IF:3,842 (Q1/D3).

- Cervan M, Bossini L, Rivera R, Garrido N, Lujan S, Romeu G, Santos S, Castilla JA, Gonzalvo MC, Clavero A, Vicente FJ, Guzman A, Costa C, Llinares I, Khantham C, Burgos M, Barrionuevo FJ, Jimenez R, Sanchez J, Lopez O, Peraza MF, Pereira I, Marques PI, Carvalho F, Barros A, Bassas L, Seixas S, Goncalves J, Larriba S, Lopes AM, Palomino RJ, Carmona FD; IVIRMA GRP, Lisbon GRP. Evaluation of Male Fertility-Associated Loci in a European Population of Patients with Severe Spermatogenic Impairment. *Journal of Personalized Medicine*. 2021; 11(1):22. DOI:10.3390/jpm11010022. PMID:33383876. IF:4,945 (Q1/D2).

- Hardy JJ, Wyrwoll MJ, Mcfadden W, Malcher A, Rotte N, Pollock NC, Munyoki S, Veroli MV, Houston BJ, Xavier MJ, Kasak L, Punab M, Laan M, Kliesch S, Schlegel P, Jaffe T, Hwang K, Vukina J, Brieno MA, Orwig K, Yanowitz J, Buszczak M, Veltman JA, Oud M, Nagirnaja L, Olszewska M, O'Bryan MK, Conrad DF, Kurpisz M, Tuttelmann F, Yatsenko AN, Krausz CG; GEMINI C. Variants in GCNA, X-linked germ-cell genome integrity gene, identified in men with primary spermatogenic failure. *HUMAN GENETICS*. 2021; 140(8). DOI:10.1007/s00439-021-02287-y. PMID:33963445. IF:4,132 (Q2/D4).

- Lotti F, Frizza F, Balercia G, Barbonetti A, Behre HM, Calogero AE, Cremers JF, Francavilla F, Isidori AM, Kliesch S, La Vignera S, Lenzi A, Marcou M, Pilatz A, Poolamets O, Punab M, Godoy MFP, Rajmil O, Salvio G, Shafer O, Weidner W, Maseroli E, Cipriani S, Baldi E, Degl'Innocenti S, Danza G, Caldini AL, Terreni A, Boni L, Krausz C, Maggi M. The European Academy of Andrology (EAA) ultrasound study on healthy, fertile men: Scrotal ultrasound reference ranges and associations with clinical, seminal, and biochemical characteristics. *Andrology*. 2021; 9(2). DOI:10.1111/andr.12951. PMID:33244893. IF:3,842 (Q1/D3).

- Maestre F, Castillo JA, Lopez X, Sarquella J, Andres A, Cifre I. Psychological Distress in Erectile Dysfunction: The Moderating Role of Attachment. *Sexual Medicine*. 2021; 9(5):100436. DOI:10.1016/j.esxm.2021.100436. PMID:34517209. IF:2,491 (Q2/D5).

- Salas-Huetos A, Tüttelmann F, Wyrwoll MJ, Kliesch S, Lopes AM, Goncalves J, Boyden SE, Wöste M, Hotaling JM; GEMINI Consortium, Nagirnaja L, Conrad DF, Carrell DT, Aston KI [Krausz CG]. Disruption of human meiotic telomere complex genes TERB1, TERB2 and MAJIN in men with non-obstructive azoospermia. *Human Genetics*. 2021;140(1):217-227. DOI:10.1007/s00439-020-02236-1. Erratum in: *Human Genetics*. 2020. PMID: 33211200. IF:4,132 (Q2/D4).

- Vinay J, Moreno D, Rajmil O, Ruiz-Castañe E, Sanchez-Curbelo J. Penile low intensity shock wave treatment for PDE5i refractory erectile dysfunction: a randomized double-blind sham-controlled clinical trial. *WORLD JOURNAL OF UROLOGY*. 2021;39(6):2217-2222. DOI:10.1007/s00345-020-03373-y. PMID: 32696128. IF:4,226 (Q1/D3).

- Vives A, da GVM, Alonso C, Suarez JB, Palmisano F, Cosentino M. Haemophilus urethritis in males: A series of 30 cases. *Revista Internacional de Andrologia*. 2021; 19(3). DOI:10.1016/j.androl.2020.01.002. PMID:32563585. IF:1,063 (Q4/10D).

- Vockel M, Riera-Escamilla A, Tüttelmann F, Krausz C. The X chromosome and male infertility. *Human Genetics*. 2021;140(1):203-215. DOI:10.1007/s00439-019-02101-w. PMID: 31875237. IF:4,132 (Q2/D4).

Other scientific production

- Larriba S, Bassas L. Extracellular vesicle ncRNAs in seminal plasma as biomarkers for nonobstructive azoospermia. *HUMAN REPRODUCTION*. 2021; 36(5). DOI:10.1093/humrep/deab019. PMID:33595052. IF:6,918 (Q1/D1).

Other publications

- Álvaro Vives, Co-autor. Efectivitat de les tècniques de selecció espermàtica en pacients amb fragmentació de l'ADN espermàtic alterada. *Biología de la reproducció*. 2021.

- Vives A, Cosentino M, Bassas L, Alonso C, Millan F. Epidemiological, clinical and laboratory differences between male urethral infections due to Haemophilus spp. and those due

to *Neisseria gonorrhoeae*, *Chlamydia trachomatis*, *Mycoplasma genitalium* and *Ureaplasma urealyticum*: A descriptive study. *Archivio Italiano Di Urologia E Andrologia*. 2021; 93(4). DOI:10.4081/aiua.2021.4.468. PMID:34933533.

Books or chapters with ISBN

- ¿Qué límites en los parámetros clínicos y espermáticos aconsejan al clínico la derivación al andrólogo? Bassas L. En: Bruna I, Coroleu B (eds). *Lo esencial en medicina reproductiva*, 3ª edición. IMC Madrid, 2021. ISBN 978-84-7867-832-7.
- ¿Qué sensibilidad y especificidad tiene el seminograma básico en el estudio del varón? ¿Cuándo está indicado repetir un seminograma? Bassas L. En: Bruna I, Coroleu B (eds). *Lo esencial en medicina reproductiva*, 3ª edición. IMC Madrid, 2021. ISBN 978-84-7867-832-7.

Communication and dissemination activities

Outreach activities

- VIII online workshop for patients with breast cancer. Hospital del Vall d'Hebrón, Barcelona, España. 11/11/2021. "¿Cáncer y menopausia pueden afectar a la sexualidad? ¿Qué podemos hacer para evitarlo?". Mónica González
- Press: Infosalus/Investigación. "La Fundació Puigvert investiga si la COVID-19 puede comprometer la fertilidad masculina". 28/06/2021.
- Press: Diari Més Digital. "Salut. Investiguen els beneficis de l'oli d'oliva per millorar la fertilitat". 28/09/2021
- Press: Infosalus/Nutrición. "Impulsan un estudio sobre la relación de la dieta mediterránea con la fertilidad". 28/09/2021
- Press: La Vanguardia. La Contra. Lluís Bassas, Director of the first public semen bank in Spain. "El semen de los españoles está en la banda alta de la fertilidad". 1/10/2021
- Press: Diario de Noticias. "La cifra 1.500 bebés. Banco de esperma Fundació Puigvert". Lluís Bassas.
- Press: Viva. "Ciencia. Faltan donantes de semen"
- Press: 20 Minutos. "El primer Banco de Semen público de España tras propiciar 1.500 nacimientos en 35 años: Faltan donantes". 8/11/2021
- Press: El día de La Rioja. Salud. "1.500 nacimientos ha propiciado desde 1986 la Fundació Puigvert, que abrió el primer Banco de Semen de carácter público en España y que colabora con el Servicio de Ginecología del Hospital de Sant Pau de Barcelona".
- Press: El Mundo. "El COVID-19 deja secuelas en la fertilidad masculina".

- Patient classroom: "Las 10 preguntas más frecuentes de Infecciones de transmisión sexual en los adolescentes". January- December, 2021. Barcelona, España. Dr. Álvaro Vives.

- Dr Josvany R. Sánchez Curbelo, Fundació Puigvert. Video recording for patients' web in collaboration with Laboratorios Coloplast. ¿"Qué es importante saber antes de ponerse una prótesis de pene?" | DE Soluciones. Web: <https://www.soluciones-disfuncion-erectil.es>.

- Dr Mónica González, Fundació Puigvert. Patient seminar about sexuality for patients with Multiple Sclerosis. Hospital Sant Pau.

- Ràdio Estel programs: "COVID i Infertilitat (I)", "COVID i Infertilitat (II)", "COVID i sexualitat de la parella (I)" i "COVID i sexualitat de la parella (II)". Dr E. Ruiz Castañé.

Scientific dissemination activities

- Medicina Materno Fetal Barcelona. Course professor: "Tratamientos de la Fertilidad". Edition: 19 th August 2021- 18 August 2022. Conference: "Tratamiento médico y quirúrgico Factor masculino". Barcelona, España. Dr. Josvany René Sánchez Curbelo, Fundació Puigvert.

- Fundación Medicina Fetal Barcelona. Course professor: "Capacitación en Ginecología, Obstetricia y Neonatología para enfermeras y matronas". Barcelona, España. Dr. Josvany René Sánchez Curbelo, Fundació Puigvert.

- Simposio Internacional Uro-Andrológico Virtual 2021. Argentino-Español. "Postcovid y salud masculina. ¿Cuánto sabemos hoy?". 21 th May. Dr. Eduard Ruiz Castañé, Symposium presenter. Organized by: Fundació Puigvert, Barcelona, España, Instituto Metropolitano de Urología, Rosario, Argentina. Directors: Dr. Eduardo Ruiz Castañé (Barcelona, España), Dra. María Malén Pijoán (Rosario, Argentina).

- "Jornada HIM. Un nuevo encuentro con la Andrología". Laboratorios Rubió. Hotel Meliá Castilla, Madrid, España. 1st october 2021. Dr. Eduard Ruiz Castañé, Fundació Puigvert, Barcelona. Board "nueva masculinidad: Anti-Aging/ Estética masculina: Un mundo por descubrir".

- Dr. Joaquim Sarquella. Clinical training in microsurgical in genitourinary reconstruction. 25-27 th May 2021. Fundació Puigvert-Hospital Sant Pau. "Prosthetic surgery in penile reconstruction. How to avoid complications".

- Communication: "A de novo paradigm for male infertility". Hannah E. Smith¹, Manon S. Oud², Roos M. Smits³, Francesco K. Mastrosera¹, Giles S. Holt¹, Brendan J. Houston⁴, Petra F. de Vries², Bilal K. S. Alobaidi¹, Lois Batty¹, Hadeel Ismail¹, Jackie Greenwood⁵, Harsh Sheth⁶, Aneta Mikulasova¹, Galuh Astuti⁷, Christian Gilissen⁷, Kevin McEleny⁸, Helen Turner⁹, Jonathan Coxhead¹⁰, Simon Cockell¹¹, Didi D. M. Braat³, Kathrin Fleischer³, Kathleen W. M. D'Hauwers¹², E Schaafsma¹³, Don Conrad¹⁴, Corinna Friedrich¹⁵, Sabine Kliesch¹⁶, Kenneth I. Aston¹⁷, Antoni Riera-Escamilla¹⁸, Csilla Krausz¹⁹, Claudia Gonzaga-Jauregui²⁰, Mauro Santibanez-Koref¹, David J.

Elliott¹, Lisenka E. L. M. Vissers², Frank Tüttelmann¹⁵, Moira K. O'Bryan⁴, Liliana Ramos³, Miguel J. Xavier¹, Godfried W. van der Heijden³, Joris A. Veltman¹. ¹Biosciences Institute, Newcastle Upon Tyne, United Kingdom, ²Department of Human Genetics, Donders Institute for Brain, Cognition and Behaviour, Radboudumc, Nijmegen, Netherlands, ³Department of Obstetrics and Gynaecology, Radboudumc, Nijmegen, Netherlands, ⁴School of BioSciences, Faculty of Science, The University of Melbourne, Melbourne, Australia, ⁵Department of Genetic Medicine, The Newcastle upon Tyne Hospitals NHS Foundation Trust, Newcastle Upon Tyne, United Kingdom, ⁶Foundation for Research in Genetics and Endocrinology, Institute of Human Genetics, Ahmedabad, India, ⁷Department of Human Genetics, Radboud Institute for Molecular Life Sciences, Radboudumc, Nijmegen, Netherlands, ⁸Newcastle Fertility Centre, The Newcastle upon Tyne Hospitals NHS Foundation Trust, Newcastle Upon Tyne, United Kingdom, ⁹Department of Cellular Pathology, The Newcastle upon Tyne Hospitals NHS Foundation Trust, Newcastle Upon Tyne, United Kingdom, ¹⁰Genomics Core Facility, Faculty of Medical Sciences, Newcastle University, Newcastle Upon Tyne, United Kingdom, ¹¹Bioinformatics Support Unit, Faculty of Medical Sciences, Newcastle University, Newcastle Upon Tyne, United Kingdom, ¹²Department of Urology, Radboudumc, Nijmegen, Netherlands, ¹³Department of Pathology, Radboudumc, Nijmegen, Nijmegen, Netherlands, ¹⁴Department of Genetics, Washington University in St. Louis, St Louis, MO, USA, ¹⁵Institute of Reproductive Genetics, University of Münster, Münster, Germany, ¹⁶Centre of Reproductive Medicine and Andrology, Department of Clinical and Surgical Andrology, University Hospital Münster, Münster, Germany, ¹⁷Department of Surgery, Division of Urology, University of Utah School of Medicine, Salt Lake City, UT, USA, ¹⁸Andrology Department, Fundació Puigvert, Universitat Autònoma de Barcelona, Institut de Investigacions Biomèdiques Sant Pau, Barcelona, Spain, ¹⁹Department of Biomedical, Experimental and Clinical Sciences "Mario Serio", University of Florence, Florence, Italy, ²⁰Regeneron Genetics Center, Tarrytown, NY, USA.

• "Interpretación y consecuencias de los cambios normativos en análisis de semen: manual OMS-2021, y norma ISO". 20 Congreso Nacional de la Asociación Española de Andrología. Bassas L, Castilla JA. Madrid, 21-23th October 2021

- "Hormonas y vitaminas para el hombre: ¿Cuánto más mejor?" Bassas L. HIM, un nuevo encuentro con la Andrología. Madrid, 1st October 2021
- "Infertilidad masculina: ¿qué puede hacer el endocrinólogo/ andrólogo?" 20 Congreso de SENDIMAD, Bassas L. Aranjuez, 19-20th November 2021
- 21st European Testis Workshop (30 May - 3 June, 2021). Dr. Antoni Riera-Escamilla. Genetic dissection of spermatogenic arrest through exome analysis: clinical implications for the management of azoospermic men. Oral presentation.
- The genetics of male infertility ESHRE campus (30th September and 1st October). Dr. Antoni Riera-Escamilla. Genetic components of Macrozoospermia, Globozoospermia and ciliary dyskinesia. Invited speaker. SNP, CGH and NGS in the characterization of male infertility. Invited speaker
- Dra. Olga Martínez Pasarell. Participation in the online course: "¿Cómo crear y desarrollar un programa de donación de ovocitos?". Aula Virtual Dexeus. 28 September-10th December 2021. Organized by Fundación Dexeus Mujer and with the collaboration of Dpto. de Obstetricia, Ginecología y Reproducción del Hospital Universitari Dexeus.
- Dr. Álvaro Vives. Conference: "Cómo abordar las cuatro consultas venereológicas más frecuentes en urología". Congreso de la Asociación de Urólogos de Centroamérica y el Caribe (AUCA). 15th June 2021.
- Dr. Josvany R. Sánchez Curbelo. 20º Congreso de la Asociación Española de Andrología, Medicina Sexual y Reproductiva y la XV Reunión Ibérica de Andrología, Medicina Sexual y Reproductiva. Madrid, 21-23th October 2021. Oral presentation: "Manejo de la disfunción eréctil en pacientes con respuesta insuficiente a inhibidores de la fosfodiesterasa 5: Estudio observacional retrospectivo y longitudinal".
- Dr. Eduard Ruiz Castañé. Participation in the Confederación Americana de Urología, CAU Perú. Virtual. 28th October-1st November 2021. Recorded videos: "La Andrología en tiempos de la COVID-19" and "Cirugía reconstructiva del pene para casos difíciles".



Urology

Coordinator

Palou Redorta, Juan F. PUIGVERT
 jpalou@fundacio-puigvert.es

Members

Algaba Arrea, Fernando	F. PUIGVERT	Errando Smet, Carlos	F. PUIGVERT
Angerri Feu, Oriol	F. PUIGVERT	Gallioli, Andrea	F. PUIGVERT
Breda , Alberto	F. PUIGVERT	Mateu Escudero, Silvia	F. PUIGVERT
Bujons Tur, Ana	F. PUIGVERT	Ponce de León Roca, Javier	F. PUIGVERT
Emiliani Sanz, Esteban	F. PUIGVERT	Rodriguez Faba, Oscar	F. PUIGVERT

Main lines of research

The Urology Clinical and Basic Research group has been an associated group of IIB Santpau since its very beginning. The group carries out clinical translational research within the field of urinary tract diseases along different lines from urological cancer, functional urology, stone disease, paediatric urology, renal transplant and reconstructive surgery.

Existing lines of research are:

- In the area of urological cancer, Dr. Breda is leading several projects mainly related to liquid biopsy in urothelial and prostate cancers, focal treatment of prostate cancer, methodology in enhancing lymph nodes in prostate and upper urinary tract disease, intraoperative detection of tumour

grade with confocal endomicroscopy in order to facilitate clinical decisions and avoid unnecessary procedures, the role of systemic chemotherapy in upper urinary tract tumours and the role of PET-CT in renal masses and 3D reconstruction in order to facilitate complex renal surgeries. In testis cancer we are evolving to minimally invasive surgery with robotic retroperitoneal dissection in metastatic disease and finally diagnoses using the sentinel node technique in penile cancer, and also reconstructive surgery after partial penectomy plus laparoscopic lymphadenectomy of the groin.

- Dr. Palou is leading mainly the projects in bladder cancer: there is a collaborative translational research line of predictive biomarkers in NMIBC progression with the Inflammatory Group and Malmoe University.

Bladder preservation in high grade tumours is a difficult decision and the possibility to detect those who will progress will allow earlier aggressive treatment. Another line of research is the nerve sparing surgery in cystectomy in order to preserve sexual function after radical surgery.

- In paediatric urology, led by Dra. Bujons, there are several topics under research related to long term follow-up in reconstructive surgery, sexual function in neurological diseases and fertility in patients after scrotal surgery (varicocele, orchidopexy). This includes the study of the usefulness of Botuline toxine in hyperactive bladder in children, PH urine studies for the risk of infection in urinary tract anomalies, optimisation of irrigation fluids for the prevention of unnoticed perioperative hypothermia in children during RIRS and NLP and the Autologous fat graft with stem cells as a treatment for abdominal wall defects in patients with complex exstrophy epispadias.

- In the Urolithiasis line chaired by Dr. Angerri, clinical research in some aspects is performed: laser energy devices for stone destruction (holmium, thulium, superthulium) in collaboration with IIBSantPau General and Digestive Surgery Group for primary hiperparatirodism, tolerance of surgical material for urolithiasis treatment and pH urine research for the management of cystinuria. In cystinuria, there exists an extensive collaborative research with IDIBELL for its genetic study and an active participation in the National Registry of this Rare Disease.

- The functional urology section by Dr. Errando is evaluating the clinical results of different surgical techniques and devices in incontinence in both sexes such as paraurethral substance injections, laparoscopic colposacropexy technique, long term functional results of Botox in males, functional results of the transcavernous artificial urinary sphincter implantation in high risk patients, usefulness of probiotics in the prevention of recurrent urinary tract infections, acidification of urine pH for women with recurrent UTIs. A quality of life research collaboration with the Centre de Fisioteràpia (RAP) in Barcelona (associated to the UAB Vall d'Hebron) in clinical evaluation tools for patients with low urinary tract dysfunction has recently begun.

- Renal transplantation unit by Dr. Breda is investigating 3D reconstruction models to facilitate renal transplant for a better preservation of the kidney. The group is establishing the robotic renal transplant all over Europe and undergoing analysis of the urogenital tumours in renal transplant patient in order to update and change daily practice.

- BPH surgery is one of the most common in urology and the group of Dr. Ponce de Leon is investigating the way to perform surgery with preservation of anterograde ejaculation with different methodologies (TURP, Rezum). The group also study the use of the Rezum system (intraprostatic vaporization) in BPH, the quality of life of patients who had

undergone urethroplasty due to urethral stenosis, the use of oral mucosa for urethroplasties. A recent national collaboration for an Urethroplasties Registry has recently begun. In reconstructive urethral surgery and BPH, Dr Ponce de León is leading international research prospective study on prostate inflammation to validate a clinical nomogram in patients with lower urinary symptoms, and a prospective multicenter study on buccal mucosa extraction effect on patients quality of life.

- Mrs Vanessa Muñoz and nurse Ana Palomino are the coordinators of clinical studies and trials. They are key pieces to continue with the ongoing studies of the department.

Scientific Challenges

- To continue the national and international positions in order to increase the scientific networking of the department.

- Participate and evolve in the elaboration of European Guidelines.

- Continue in basic and clinical research of the different established areas .

- Continue and improve relations with industry (pharmaceutics, medical devices industries and biotechnology companies) in order to be upfront in the development of new compounds and surgical techniques.

Collaborations

Collaborations with other IIB Sant Pau research groups

- Uro-oncology meetings: weekly meetings with urologists, oncologists, radiologists, radiation oncologists and pathologists.
- Uro-pediatric meetings: weekly meetings with urologists, pediatricians, nephrologists, radiologists and nurses.
- Functional urology meeting in chronic pelvic pain: monthly meetings with urologists, anesthesiologists, psychologists and nurses.
- Female and Functional Urology Unit collaboration with Sant Pau Neurology Department for the joining evaluation and management of Neurogenic Bladder, especially in the field of CNS degenerative diseases like Multiple Sclerosis but also in other cases of Neurologic Disorders.
- General and Digestive Surgery IIB Group: collaborative surgical group in complex pelvic tumours and urolithiasis research.
- Clinical Epidemiology and Healthcare Services IIBSantPauGroup: bladder and prostate cancer.
- Inflammatory IIBSantPau Group: Biomarkers in urooncology.
- Paediatrics IIBSantPauGroup: research in uropediatric diseases.

External collaborations

- IRCCVTC (International Renal Cell Carcinoma Venous

- Thrombous Consortium): vena cava thrombus in kidney cancer.
- European Reference Network for rare and complex urogenital diseases and conditions: rare urogenital pediatric conditions.
- Aarhus University Molecular Genetics Department: bladder cancer.
- International Robotic Cystectomy Consortium: robotic cystectomy.
- LARG (Latin American Renal Cancer Group): renal cancer.
- IBCG (International Bladder Cancer Group): bladder cancer.
- IBCN (International Bladder Cancer Network): bladder cancer.
- European Guidelines EAU Group: Non-Muscle Invasive Bladder Cancer.
- European Guidelines EAU Group: Urothelial Carcinomas of the Upper Urinary Tract.
- European Guidelines EAU Group: Testicular cancer panel position in 2020.
- EURS Working Group on RAKT.
- Champalimad Center for the Unknown (Lisbon) and the Malome University: high-grade Non Muscle invasive Bladder Cancer.
- Columbia University New York - Urooncology.
- GENS (Grupo Español de Neuromodulación de Raíces Sacras).
- IDIBELL: Genetic research in cystinuria.
- RAP (Phisiotherapy center): quality of life research in incontinence.
- Genitourinary Pathology Society (GUPS) - Prostate cancer grading.
- International Society of Uro pathology (ISUP) - Expert opinion on grading of urothelial carcinoma.
- World Health Organization Classification of tumours (WHO) - Squamous cell carcinoma of prostate.
- Coordinador Nacional dle Grupo de Uropatología de la Sociedad Española de Anatomía Patológica (SEAP).
- Private national and international collaborations.
- Clinical trials and postauthorization studies promoted by national and international pharmaceuticals, medical devices industries and biotechnology companies.
- “Impacto de la administración preoperatoria intravesical con mitomicina-C (MMC) mediante instilación electromotriz (EMDA) en pacientes con tumor vesical no músculo invasivo (TVNMI). Estudio prospectivo aleatorizado” EUDRACT: 2015-003680-11. Palou, J.. Sponsor: Presurgy S.L.
- “Estudio multicéntrico para evaluar la seguridad y la eficacia de TAR-200 en sujetos con carcinoma de células transicionales de vejiga con invasión muscular que no son elegibles o rechazan quimioterapia con cisplatino y que no son aptos para someterse a una cistectomía radical” EUDRACT: 2017-003107-21. Palou, J.. Sponsor: Taris Biomedical LLC
- “Quimioterapia neoadyuvante versus adyuvante en carcinoma urotelial del tracto urinario superior. Ensayo Clínico randomizado de viabilidad fase II (URANUS)” EUDRACT: 2016-004017-27. Palou, J. Sponsor: European Uro-Oncology Group (EUOG).
- “Ensayo mundial fase III, aleatorizado, abierto, multicéntrico de Durvalumab y el Bacilo de Calmette-Guerin (BCG) administrados como terapia combinada en comparación con BCG en monoterapia, en pacientes con cáncer de vejiga no músculo invasivo de alto riesgo sin tratamiento previo con BCG (POTOMAC)” EUDRACT: 2017-002979-26. Rodríguez-Faba, O. Sponsor: AstraZeneca AB.
- “Ensayo clínico de fase 3, aleatorizado y controlado con un comparador para estudiar la eficacia y seguridad de pembrolizumab (MK-3475) en combinación con el bacilo de Calmette-Guerin (BCG) en participantes con cáncer de vejiga no músculo invasivo (CVNMI AR) de alto riesgo que es persistente o recurrente tras un tratamiento de inducción con BCG (Estudio KEYNOTE-676)” EUDRACT: 2018-001967-22. Rodríguez-Faba, O. Sponsor: Merck, Sharp & Dohme Corp.
- “A Randomized Phase 2 Study of Erdafitinib Versus Investigator Choice of Intravesical Chemotherapy in Subjects Who Received Bacillus Calmette-Guérin (BCG) and Recurred With High Risk Non-Muscle-Invasive Bladder Cancer (NMIBC) and FGFR Mutations or Fusions” EUDRACT 2019-002449-39. Rodríguez-Faba, O. Sponsor: Janssen Cilag Internacional NV
- “Ensayo clínico de fase III, aleatorizado, doble ciego y controlado con placebo de pembrolizumab (MK-3475) en monoterapia para el tratamiento adyuvante del carcinoma renal tras una nefrectomía (KEYNOTE-564)” EUDRACT: 2016-004351-75. Rodríguez-Faba, O. Sponsor: Merck, Sharp & Dohme Corp.
- “Ensayo clínico multicéntrico, abierto y con asignación aleatoria para valorar la no inferioridad de Cysticlean® comparado con Fosfomicina en el tratamiento de la cistitis en mujeres en España”. EUDRACT: 2018-001448-78. Ponce, X. Sponsor: Vita Green Europa S.A.
- “Estudio clínico de fase 2b para evaluar la eficacia y seguridad de TAR-200 en combinación con cetrelimab, TAR-200 solo
- “Estudio de fase III multicéntrico, de confirmación, prospectivo y abierto para evaluar el rendimiento de diagnóstico de girentuximab etiquetado con zirconio-89 (89Zr-TLX250) para detectar de manera no invasiva el carcinoma de células renales constituido por células claras (ccRCC) mediante tomografía por emisión de positrones/TC (PET/TC) en pacientes con masas renales indeterminadas (estudio ZIRCON)” EUDRACT: 2018-002773-21 Breda A. Sponsor: TELIX International Pty Ltd
- “Determinación de la seguridad y la eficacia de reloxalasa (oxalato descarboxilasa) en pacientes con hiperoxaluria entérica: estudio de fase III, aleatorizado, doble ciego y controlado con placebo (URIROX-2)” EUDRACT: 2018-000921-29. Angerri, O. Allena Pharmaceuticals, Inc.

Other active grants

o cetrelimab solo en participantes con cáncer de vejiga no músculo-invasivo (CVNMI) de alto riesgo que no responde a la terapia del bacilo de Calmette-Guerin (BCG) intravesical y que no son candidatos o han elegido no someterse a cistectomía radical (Estudio SUNRISE)". EUDRACT: 2020-002646-16. Rodríguez Faba, O. Sponsor: Janssen Research & Development.

• "A study of intravesical enfortumab vedotin for treatment of patients with non-muscle invasive bladder cancer (NMIBC)". EUDRACT: 2021-001287-22. Palou J. Sponsor: Seagen Inc. - Astellas Pharma GD Inc.

• "Estudio de fase 2, multicéntrico, aleatorizado y abierto, de TAR-200 en combinación con cetrelimab y monoterapia con cetrelimab en participantes con carcinoma urotelial de vejiga músculo-invasivo que se vayan a tratar con cistectomía radical y no sean elegibles o rechacen recibir tratamiento con quimioterapia neoadyuvante basada en platino (Estudio SunRISe-4)". EUDRACT: 2020-005565-13. Rodríguez Faba, O. Sponsor: Janssen Research & Development.

• "Phase 1 Study of Erdafitinib Intravesical Delivery System (TAR-210) in Participants with Non-Muscle-Invasive or Muscle-Invasive Bladder Cancer and Selected FGFR Mutations or Fusions (Estudio ERDARIS)". EUDRACT: 2021-004144-22. Rodríguez Faba, O. Sponsor: Janssen. Research & Development, LLC.

• "En bloc bladder tumor resection: prospective randomized evaluation of monopolar, bipolar and thulium energy (Resección del tumor vesical en bloque: evaluación prospectiva aleatoria mediante la utilización de diferentes técnicas de energía: monopolar, bipolar y láser)". Breda, A. Sponsor: Fundació Puigvert.

• "Ensayo clínico piloto, aleatorizado, de grupos paralelos para valorar la eficacia, seguridad y sintomatología asociada a la utilización de la derivación urinaria JFIL® frente a la utilización del doble J de silicona IMAJIN HYDRO® en pacientes que requieren de derivación temporal urinaria pre ureteroscopia flexible". Angerri, O. Sponsor: Fundació Puigvert.

• "Impacto de la sutura intestinal manual o mecánica en la incidencia y el manejo de complicaciones postoperatorias en pacientes sometidos a cistectomía radical y derivación urinaria. Estudio aleatorizado" Rodríguez-Faba, O. Sponsor: Fundació Puigvert.

• "Resultados de la utilización de la pinza de pene Harex®". Errando, C. Sponsor: MERA MEDICAL SOLUTIONS S.L..

• "Generación de un modelo tridimensional in vitro del tracto urinario inferior a partir de células madre obtenidas de tejido adiposo. Aplicación en ingeniería tisular para enfermedades congénitas". Bujons A. Sponsor: Fundació Puigvert.

• "Reconstrucción virtual tridimensional para la mejoría de la precisión de los scores nefrométricos basados en tomografía computerizada: estudio prospectivo". Breda, A. Sponsor: Fundació Puigvert.

• "Protocolo para manejo diagnóstico y terapéutico del tumor de vías mediante ureteroscopia flexible y uso del sistema de imagen (IMAGE 1 SPIES)". Breda, A. Sponsor: Fundació Puigvert.

• "Development of cold ischemia device and evaluation of functional results and inflammatory markers in open compared to robot-assisted kidney transplantation from living donors". Breda, A. Sponsor: Fundació Puigvert.

• "Biomarkers in renal cancer". Breda, A. Sponsor: Biorek S.r.l.

• "Robot-Assisted Cystectomy (Cistectomía robótica)". Palou, J. Sponsor: Roswell Park Cancer Institute.

• "Estudio observacional internacional en pacientes con cáncer de vejiga para detectar recurrencias tempranas tras la resección transuretral de la vejiga (RTUV) con la prueba Xpert® (Monitor de cáncer de vejiga Xpert®)" (ANTICIPATE X). Palou, J. Sponsor: Cepheid Europe.

• "Evaluación prospectiva de UBC® Rapid y citología en orina en pacientes con cáncer de vejiga no invasivo muscular (NMIBC)". Palou, J. Sponsor: IDL Biotech AB.

• "Estudio de adecuación de la terapia hormonal intermitente en pacientes con cáncer de prostate". Palou, J. Sponsor: Institut Recerca HSCSP - IIB Sant Pau.

• "Estudio piloto para valorar el abordaje mediante citometría de flujo de la expresión de receptores inhibidores en células urinarias de pacientes con cáncer vesical músculo-invasivo". Rodríguez-Faba, O. Sponsor: Fundació Puigvert / SV. Immunologia HSC ST. Pau.

• "Impacto clínico del carcinoma in situ vesical primario, secundario y concomitante en pacientes con tumor vesical no músculo invasivo. Incidencia y factores predictivos de recurrencia, progresión y mortalidad cáncer específica". Rodríguez-Faba, O. Sponsor: Fundació Puigvert.

• "Crioterapia percutánea en el tratamiento de los tumores renales". Rodríguez-Faba, O. Sponsor: Fundació Puigvert.

• "Proyecto Base de Datos de Uretroplastias del Grupo de Cirugía Reconstructiva Urológica (CRU) en la Plataforma de Investigación de Estudios Multicéntricos de la AEU (PIEM)" AEU-PIEM/2016/0006. Ponce de León, J. Sponsor: Asociación Española de Urología (AEU).

• "Análisis prospectivo de la morbilidad oral derivada de la obtención de injertos de la cavidad bucal empleados en

uretroplastias de ampliación y evaluación de sus factores predictores". Ponce de León, J. Sponsor: Fundació Puigvert.

- "Desarrollo y validación interna de un nomograma clínico para diagnosticar inflamación prostática en varones con síntomas del tracto urinario inferior (Development and internal validation of a clinical nomogram to diagnose Prostatic Inflammation in men with Lower Urinary Tract Symptoms (Study PIN)". Ponce de León, J. Sponsor: Institute for Monitoring of Urogenital Diseases.
- "Evolución y tratamiento del Angiomiolipoma Renal a mediano y largo plazo". Ponce, X Sponsor: Fundació Puigvert.
- "Estudio de utilización de catéter doble J siliconado como catéter de larga duración". Emiliani, E Sponsor: Fundació Puigvert.
- "Papel del microbioma vaginal e intestinal en la infección urinaria de repetición". Errando, C Sponsor: ISCIII.
- "Tratamiento de la incontinencia de esfuerzo mediante la inyección de un agente de relleno uretral: efectividad, durabilidad y efectos secundarios". Errando, C Sponsor: Fundació Puigvert.
- "Resultados a largo plazo del tratamiento quirúrgico del síndrome de dolor pélvico crónico". Errando, C Sponsor: Fundació Puigvert.
- "Resultados del tratamiento quirúrgico del síndrome de vejiga hiperactiva". Errando, C. Sponsor: Fundació Puigvert.
- "Actualización molecular en relación a la patogénesis del carcinoma de célula escamosa del pene". Algaba, F. Sponsor: Centre Diagnòstic Biomèdic (H. Clínic Barcelona).
- "Experiencia inicial de la enucleación prostática con láser Soltive Thulium Fiber (ThuFLEP) y comparación retrospectiva con la enucleación con láser Holmium (HoLEP)". Ponce, X. Sponsor: Fundació Puigvert.
- "Uso de microscopía láser confocal "ex vivo" en el diagnóstico intraoperatorio del cáncer de próstata". Breda, A. Sponsor: Fundació Puigvert.
- "Medtronic Hugo RAS System General Surveillance". Breda, A. Sponsor: Medtronic Bakken Research Center B.V.
- "Factors de risc d'insuficiència renal terminal en nens amb vàlvules d'uretra posterior". Bujons A. Sponsor: SV. CIRUGIA - Hospital Sant Joan de Déu.

Awards

- Prize to the best video by the Asociación Española de Urología. Title: Uretroplastia termino-terminal en pacient con fals vía en uretra prostática. Authors: Ponce de León J, Mercadé A,

Schwartzmann I, Robalino JM, Montlleó M, Moncada E, Salvador J, Subiela JD, Balaña J, Palou J.

- EAU Hans Marberger Award 2021 by the European Association of Urology. Research in robot-assisted surgery. Dr. A. Gallioli.
- Award to the best video by the European Society by Paediatric Urology. Title: Mini endoscopic combined intra-renal surgery with endoview puncture in a 12 month boy - a safe but challenging procedure. Authors: Llorens de Knecht E, Quiroz Y, Girón I, Palou J, Bujons A.
- Extraordinary PhD Award by the Universitat Autònoma de Barcelona. Evaluation of holmium: yag laser setting for the non-contact stone fragmentation technique and the curved laser fiber. Dr E. Emiliani
- First Prize Joaquín Albarrán for the best Communication by the Asociación Española de Urología Title: Resercción transuretral en bloque versus convencional de tumores de vejiga: análisis intermedio de un ensayo aleatorizado prospectivo de un solo centro.. Authors: Fontanet Soler S, Gallioli A, Territo A, Sánchez-Puy A, Diana P, Piana A, Mercadé A, Algaba F, Rodríguez-Faba O, Gaya JM, Palou J, Breda A.
- Second Prize Joaquín Albarrán for the best Audiovisual Communication by the Asociación Española de Urología. Title: Resercción transuretral en bloque versus convencional de tumores de vejiga: análisis intermedio de un ensayo aleatorizado prospectivo de un solo centro. Authors: Fontanet Soler S, Gallioli A, Territo A, Sánchez-Puy A, Diana P, Piana A, Mercadé A, Algaba F, Rodríguez-Faba O, Gaya JM, Palou J, Breda A.

Doctoral theses

- Juan Manuel Villamizar Avendaño, Evaluación del rendimiento de la biopsia con fusión cognitiva en el diagnóstico de Cancer de Próstata, Universitat Autònoma de Barcelona, Juan Palou Redorta, 04/06/2021
- José Daniel Subiela Henríquez, Impacto clínico del carcinoma in situ en pacientes con tumor vesical no músculo invasivo. Incidencia y factores predictivos de recurrencia, progresión y mortalidad cáncer específica, Universitat Autònoma de Barcelona, Juan Palou Redorta, 08/10/2021

Scientific production

- Alcaraz A, Rodriguez A, Carballido J, Castro D, Medina J, Fernandez JM, Ficarra V, Palou J, Roca JPD, Angulo JC, Esteban M, Cozar JM, Perez N, Molero JM, Ledesma A, Brenes FJ, Manasanch J. Efficacy and tolerability of the hexanic extract of *Serenoa repens* compared to tamsulosin in moderate-severe LUTS-BPH patients. *Scientific Reports*. 2021; 11(1):19401.

DOI:10.1038/s41598-021-98586-5. PMID:34588509. IF:4,379 (Q1/D3).

- Álvarez-Maestro M, Guerrero-Ramos F, Rodríguez-Faba O, Domínguez-Escrig JL, Fernández-Gómez JM. Current treatments for BCG failure in non-muscle invasive bladder cancer (NMIBC). *Actas Urológicas Españolas (Engl Ed)*. 2021;45(2):93-102. English, Spanish. DOI:10.1016/j.acuro.2020.08.003. PMID: 33012593. IF:0,994 (Q4/D9).
- Amin MSA, Aydin A, Abbud N, Van Cleynenbreugel B, Veneziano D, Somani B, Gözen AS, Redorta JP, Khan MS, Dasgupta P, Makanjuoala J, Ahmed K. Evaluation of a remote-controlled laparoscopic camera holder for basic laparoscopic skills acquisition: a randomized controlled trial. *SURGICAL ENDOSCOPY AND OTHER INTERVENTIONAL TECHNIQUES*. 2021;35(8):4183-4191. DOI:10.1007/s00464-020-07899-5. PMID: 32851466. IF:4,584 (Q1/D2).
- Arrom LM, Girabent M, Gonzalez M, Palou J, Errando C, Ramirez I. Development and validation of a short version of the Female Sexual Function Index in the Spanish population. *BMC Womens Health*. 2021; 21(1):63. DOI:10.1186/s12905-021-01213-8. PMID:33573647. IF:2,809 (Q2/D4).
- Arrom LM, Rubio LS, Palou J, Errando C. Is bladder outlet obstruction responsible for a successful surgical outcome in women with complicated stress urinary incontinence? Urodynamic results before and after a Remeex (R) readjustable sling. *NEUROUROLOGY AND URODYNAMICS*. 2021; 40(8). DOI:10.1002/nau.24774. PMID:34435704. IF:2,696 (Q3/D6).
- Aumatell J, Huguet J, Subiela JD, Gaya JM, Faba OR, Territo A, Palou J, Breda A. Endoscopic exploration directly impacts clinical decision making in the management of patients with suspected upper tract urothelial carcinoma following radical cystectomy. *UROLOGIC ONCOLOGY-SEMINARS AND ORIGINAL INVESTIGATIONS*. 2021; 39(10):732.e1. DOI:10.1016/j.urolonc.2021.03.002. PMID:33863619. IF:3,498 (Q2/D4).
- Aydin A, Griffin CM, Brunckhorst O, Al-Jabir A, Raison N, Aya H, McIlhenny C, Brewin J, Shabbir M, Palou J, Khan MS, Dasgupta P, Ahmed K. Non-technical skills for urological surgeons (NoTSUS): development and evaluation of curriculum and assessment scale. *World Journal of Urology*. 2021;39(6):2231-2237. DOI:10.1007/s00345-020-03406-6. PMID: 32809178. IF:4,226 (Q1/D3).
- Boissier R, Hidalgo R, Faba OR, Territo A, Subiela JD, Huguet J, Sanchez A, Gallioli A, Vanacore D, Mercade A, Martinez C, Palou J, Guirado L, Breda A. History of urological malignancies before kidney transplantation, oncological outcome on the long term. *Actas Urológicas Espanolas*. 2021; 45(10). DOI:10.1016/j.acuro.2020.10.015. PMID:34764048. IF:0,994 (Q4/D9).
- Bonfill X, Martinez MJ, Vernooij RW, Sanchez MJ, Morales M, Emparanza JI, Ferrer M, Pijoan JI, Palou J, Madrid E, Abaira V, Zamora J. Follow-up care over 12 months of patients with prostate cancer in Spain A multicenter prospective cohort study. *MEDICINE*. 2021; 100(47):e27801. DOI:10.1097/MD.00000000000027801. PMID:34964747. IF:1,889 (Q3/D6).
- Bozzini G, Bevilacqua L, Besana U, Calori A, Pastore A, Otero JR, Macchi A, Broggin P, Breda A, Gozen A, Inzillo R, Puliatti S, Sighinolfi MC, Rocco B, Liatsikos E, Muller A, Buizza C. Ureteral access sheath-related injuries vs. post-operative infections. Is sheath insertion always needed? A prospective randomized study to understand the lights and shadows of this practice. *Actas Urológicas Espanolas*. 2021; 45(9). DOI:10.1016/j.acuro.2020.11.010. PMID:34344583. IF:0,994 (Q4/D9).
- Canto E, Faba OR, Zamora C, Mulet M, Garcia MS, Palomino A, Anguera G, Breda A, Maroto P, Vidal S. Immunological Status of Bladder Cancer Patients Based on Urine Leukocyte Composition at Radical Cystectomy. *Biomedicines*. 2021; 9(9):1125. DOI:10.3390/biomedicines9091125. PMID:34572311. IF:6,081 (Q1/D2).
- Caravaca-Fontán F, Trujillo H, Alonso M, Díaz-Encarnación M, Cabello V, Ariceta G, Quintana LF, Marco H, Barros X, Ramos N, Rodríguez-Mendiola N, Cruz S, Fernández-Juárez G, Rodríguez E, de la Cerda F, Pérez de José A, López I, Fernández L, Pérez Gómez V, Ávila A, Bravo L, Lumbreras J, Allende N, Sanchez de la Nieta MD, Olea T, Melgosa M, et al.; C3G Study Group of the Spanish Group for the Study of Glomerular Diseases (GLOSEN) [Fraga G]. Validation of a Histologic Scoring Index for C3 Glomerulopathy. *AMERICAN JOURNAL OF KIDNEY DISEASES*. 2021;77(5):684-695.e1. DOI:10.1053/j.ajkd.2020.11.011. PMID: 33359150. IF:8,860 (Q1/D1).
- D'Andrea D, Soria F, Grotenhuis AJ, Cha EK, Malats N, Di S, Joniau S, Cai T, van BWG, Irani J, Karnes J, Varkarakis J, Baniel J, Palou J, Babjuk M, Spahn M, Ardelit P, Colombo R, Serretta V, Dalbagni G, Gontero P, Bartoletti R, Larre S, Malmstrom PU, Sylvester R, Shariat SF. Association of patients' sex with treatment outcomes after intravesical bacillus Calmette-Guerin immunotherapy for T1G3/HG bladder cancer. *WORLD JOURNAL OF UROLOGY*. 2021; 39(9). DOI:10.1007/s00345-021-03653-1. PMID:33713162. IF:4,226 (Q1/D3).
- Emiliani E, Jara A, Kanashiro AK. Phytotherapy and Herbal Medicines for Kidney Stones. *CURRENT DRUG TARGETS*. 2021; 22(1). DOI:10.2174/1389450121666200929115555. PMID:32990535. IF:3,465 (Q2/D5).
- Emiliani E, Piccirilli A, Cepeda-Delgado M, Kanashiro AK, Mantilla D, Amaya CA, Sanchez-Martin FM, Millan-Rodriguez F, Territo A, Amón-Sesmero JH, Palou-Redorta J, Angerri-Feu O. Flexible ureteroscopy in extreme elderly patients (80 years of age and older) is feasible and safe. *WORLD JOURNAL OF UROLOGY*. 2021;39(7):2703-2708. DOI:10.1007/s00345-020-03448-w. PMID: 32960326. IF:4,226 (Q1/D3).
- Epstein JI, Amin MB, Fine SW, Algaba F, Aron M, Baydar DE, Beltran AL, Brimo F, Cheville JC, Colecthia M, Comperat E, da IW, Delprado W, DeMarzo AM, Giannico GA, Gordetsky JB, Guo CC, Hansel DE, Hirsch MS, Huang JT, Humphrey PA, Jimenez RE, Khani F, Kong QN, Kryvenko ON, Kunju LP, Lal P, Latour M, Lotan T, Maclean F, Magi C, Mehra R, et al. The 2019 Genitourinary

Pathology Society (GUPS) White Paper on Contemporary Grading of Prostate Cancer. *ARCHIVES OF PATHOLOGY & LABORATORY MEDICINE*. 2021; 145(4). DOI:10.5858/arpa.2020-0015-RA. PMID:32589068. IF:5,534 (Q1/D2).

- Fine SW, Trpkov K, Amin MB, Algaba F, Aron M, Baydar DE, Beltran AL, Brimo F, Chevillat JC, Colecchia M, Comperat E, Costello T, da IW, Delprado W, DeMarzo AM, Giannico GA, Gordetsky JB, Guo CC, Hansel DE, Hirsch MS, Huang JT, Humphrey PA, Jimenez RE, Khani F, Kong MX, Kryvenko ON, Kunju LP, Lal P, Latour M, Lotan T, Maclean F, Magi C, et al. Practice patterns related to prostate cancer grading: results of a 2019 Genitourinary Pathology Society clinician survey. *UROLOGIC ONCOLOGY-SEMINARS AND ORIGINAL INVESTIGATIONS*. 2021; 39(5). DOI:10.1016/j.urolonc.2020.08.027. PMID:32948433. IF:3,498 (Q2/D4).
- Furlano M, Martínez V, Pybus M, Arce Y, Crespí J, Venegas MDP, Bullich G, Domingo A, Ayasreh N, Benito S, Lorente L, Ruíz P, Gonzalez VL, Arlandis R, Cabello E, Torres F, Guirado L, Ars E, Torra R. Clinical and Genetic Features of Autosomal Dominant Alport Syndrome: A Cohort Study. *AMERICAN JOURNAL OF KIDNEY DISEASES*. 2021;78(4):560-570.e1. DOI:10.1053/j.ajkd.2021.02.326. PMID: 33838161. IF:8,860 (Q1/D1).
- Gallioli A, Rivas JG, Larcher A, Breda A. Living Donor Robot-Assisted Kidney Transplantation: a New Standard of Care?. *Current Urology Reports*. 2021; 22(12):58. DOI:10.1007/s11934-021-01075-5. PMID:34913082. IF:3,092 (Q2/D5).
- Gallioli A, Territo A, Mercade A, Fontana M, Boissier R, Gaya JM, Emiliani E, Sanchez A, Martinez MJ, Palou J, Breda A. The Impact of Ureteroscopy following Computerized Tomography Urography in the Management of Upper Tract Urothelial Carcinoma. *JOURNAL OF UROLOGY*. 2021; 205(2). DOI:10.1097/JU.0000000000001370. PMID:32935620. IF:7,450 (Q1/D2).
- Garin O, Suarez JF, Guedea F, Pont A, Pardo Y, Goni A, Marino A, Hervas A, Herruzo I, Cabrera P, Sancho G, de Leon JP, Macias V, Gutierrez C, Castells M, Ferrer M. Comparative Effectiveness Research in Localized Prostate Cancer: A 10-Year Follow-up Cohort Study. *INTERNATIONAL JOURNAL OF RADIATION ONCOLOGY BIOLOGY PHYSICS*. 2021; 110(3). DOI:10.1016/j.ijrobp.2020.12.032. PMID:33388360. IF:7,038 (Q1/D1).
- Gontero P, Montanari E, Roupret M, Longo F, Stockley J, Kennedy A, Rodriguez O, McCracken SRC, Dudderidge T, Sieverink C, Vanié F, Allasia M, Witjes JA, Sylvester R, Colombel M, Palou J. Comparison of the performances of the ADXBLADDER test and urinary cytology in the follow-up of non-muscle-invasive bladder cancer: a blinded prospective multicentric study. *BJU International*. 2021;127(2):198-204. DOI:10.1111/bju.15194. PMID: 32745350. IF:5,588 (Q1/D2).
- Grammens J, Schechter MY, Desender L, Claeys T, Sinatti C, VandeWalle J, Vermassen F, Raes A, Vanpeteghem C, Prytula A, Silay MS, Breda A, Decaestecker K, Spinoit AF. Pediatric Challenges in Robot-Assisted Kidney Transplantation. *Frontiers in Surgery*. 2021; 8:649418. DOI:10.3389/fsurg.2021.649418. PMID:33842532. IF:2,718 (Q2/D5).

in Surgery. 2021; 8:649418. DOI:10.3389/fsurg.2021.649418. PMID:33842532. IF:2,718 (Q2/D5).

- Kanashiro A, Angerri O. Urinary pH relevance on urolithiasis management. *ARCHIVOS ESPAÑOLES DE UROLOGIA*. 2021; 74(1). PMID:33459626. IF:0,436 (Q4/D10).
- Krajewski W, Nowak L, Moschini M, Poletajew S, Chorbinska J, Necchi A, Montorsi F, Briganti A, Sanchez R, Shariat SF, Palou J, Babjuk M, Teoh JY, Soria F, Pradere B, Ornaghi PI, Pawlak A, Dembowski J, Zdrojowy R. Impact of Adjuvant Chemotherapy on Survival of Patients with Advanced Residual Disease at Radical Cystectomy following Neoadjuvant Chemotherapy: Systematic Review and Meta-Analysis. *Journal of Clinical Medicine*. 2021; 10(4):651. DOI:10.3390/jcm10040651. PMID:33567656. IF:4,241 (Q1/D3).
- Laukhtina E, Shim SR, Mori K, D'Andrea D, Soria F, Rajwa P, Mostafaei H, Comperat E, Cimadamore A, Moschini M, Teoh JYC, Enikeev D, Xylinas E, Lotan Y, Palou J, Gontero P, Babjuk M, Witjes JA, Kamat AM, Roupret M, Shariat SF, Pradere B. Diagnostic Accuracy of Novel Urinary Biomarker Tests in Non-muscle-invasive Bladder Cancer: A Systematic Review and Network Meta-analysis. *European Urology Oncology*. 2021; 4(6). DOI:10.1016/j.euo.2021.10.003. PMID:34753702. IF:7,479 (Q1/D1).
- Manzo BO, Alarcon P, Lozada E, Ojeda J, Morales C, Gokce MI, Chew B, Sepulveda F, Flores E, Morales I, Akpınar C, Emiliani E. A Novel Visual Grading for Ureteral Encrusted Stent Classification to Help Decide the Endourologic Treatment. *JOURNAL OF ENDOUROLOGY*. 2021; 35(9). DOI:10.1089/end.2020.1225. PMID:33730863. IF:2,942 (Q2/D5).
- Manzo BO, Torres JE, Cabrera JD, Lozada E, Emiliani E, Sepulveda F, Morales C, Morales I, Sanchez HM. Simplified biplanar (0-90 degrees) fluoroscopic puncture technique for percutaneous nephrolithotomy: the learning curve. *WORLD JOURNAL OF UROLOGY*. 2021; 39(9). DOI:10.1007/s00345-021-03669-7. PMID:33758960. IF:4,226 (Q1/D3).
- Marra G, Callaris G, Alessio P, Oderda M, Palou J, Joniau S, Piechaud T, Smelzo S, Morlacco A, Sharma V, Tilki D, Van der Poel H, Veerman H, Karnes RJ, Gontero P. Outcomes of Salvage Radical Prostatectomy for M0 Castration-resistant Recurrent Prostate Cancer: A Reasonable Option in the Era of New Antiandrogen Therapies?. *European Urology Focus*. 2021; 7(4). DOI:10.1016/j.euf.2020.04.005. PMID:32414618. IF:5,996 (Q1/D2).
- Marra G, Karnes RJ, Callaris G, Oderda M, Alessio P, Palazzetti A, Battaglia A, Pisano F, Munegato S, Munoz F, Filippini C, Ricardi U, Linares E, Sanchez R, Goonewardene S, Dasgupta P, Ben C, Popert R, Cahill D, Gillatt D, Persad R, Palou J, Joniau S, Smelzo S, Piechaud T, De la Taille A, Roupret M, Albisinni S, van R, Morlacco A, Vedit S, et al. Oncological outcomes of salvage radical prostatectomy for recurrent prostate cancer in the contemporary era: A multicenter retrospective study. *UROLOGIC ONCOLOGY-SEMINARS AND ORIGINAL INVESTIGATIONS*. 2021; 39(5). DOI:10.1016/j.urolonc.2020.11.002. PMID:33436329. IF:3,498 (Q2/D4).

- Mateu Arrom L, Gutierrez Ruiz C, Palou J, Errando-Smet C. Onabotulinumtoxin a injection with or without hydrodistension for treatment of bladder pain syndrome. *INTERNATIONAL UROGYNECOLOGY JOURNAL*. 2021;32(5):1213-1219. DOI:10.1007/s00192-020-04451-w. PMID: 32725367. IF:2,894 (Q2/D5).
- Mateu L, Gutierrez C, Redorta JP, Errando C. Pelvic Organ Prolapse Repair with Mesh: Description of Surgical Technique Using the Surelift(R) Anterior Repair System. *UROLOGIA INTERNATIONALIS*. 2021; 105(1-2). DOI:10.1159/000510530. PMID:33075779. IF:2,089 (Q3/D8).
- Mosquera L, Pietropaolo A, Brewin A, Madarriaga YQ, de Knecht EL, Jones P, Bujons A, Griffin S, Somani BK. Safety and Outcomes of using ureteric access sheath (UAS) for treatment of Pediatric renal stones: Outcomes from 2 tertiary endourology centers. *UROLOGY*. 2021; 157. DOI:10.1016/j.urology.2021.04.011. PMID:33891927. IF:2,649 (Q3/D6).
- Mosquera L, Pietropaolo A, Madarriaga YQ, de Knecht EL, Jones P, Tur AB, Griffin S, Somani BK. Is Flexible Ureteroscopy and Laser Lithotripsy the New Gold Standard for Pediatric Lower Pole Stones? Outcomes from Two Large European Tertiary Pediatric Endourology Centers. *JOURNAL OF ENDOUROLOGY*. 2021; 35(10). DOI:10.1089/end.2020.1123. PMID:34006145. IF:2,942 (Q2/D5).
- Mostafid H, Kamat AM, Daneshmand S, Palou J, Taylor JA, McKiernan J, Catto J, Babjuk M, Soloway M. Best Practices to Optimise Quality and Outcomes of Transurethral Resection of Bladder Tumours. *European Urology Oncology*. 2021; 4(1). DOI:10.1016/j.euo.2020.06.010. PMID:32684515. IF:7,479 (Q1/D1).
- Motta GL, Bujons A, Quiroz Y, Llorens E, Rosito TE. Assessment of sexual life in spina bifida patients: A survey among pediatric urologists. *Revista Internacional de Andrologia*. 2021; 19(4). DOI:10.1016/j.androl.2020.05.005. PMID:33388260. IF:1,063 (Q4/D10).
- Motta GL, Quiroz Y, Llorens E, Bujons A, Rosito TE. The impact of neurogenic bladder bowel dysfunction in the sexuality of female spina bifida patients. *Journal of Pediatric Urology*. 2021; 17(3). DOI:10.1016/j.jpuro.2021.01.016. PMID:33546979. IF:1,830 (Q3/D7).
- Musquera M, Peri L, Ajami T, Campi R, Tugcu V, Decaestecker K, Stockle M, Fornara P, Doumerc N, Vignes F, Barod R, Desender L, Territo A, Serni S, Vignolini G, Sahin S, Zeuschner P, Banga N, Breda A, Alcaraz A. Robot-assisted kidney transplantation: update from the European Robotic Urology Section (ERUS) series. *BJU International*. 2021;127(2):222-228. DOI:10.1111/bju.15199. PMID: 32770633. IF:5,588 (Q1/D2).
- Patschan O, Spiess PE, Thalmann GN, Redorta JP, Gakis G. Systematic Review of the Role of BCG in the Treatment of Urothelial Carcinoma of the Prostatic Urethra. *Bladder Cancer*. 2021; 7(2). DOI:10.3233/BLC-201516. IF:3,269 (Q2/D5).
- Pietropaolo A, Geraghty RM, Veeratterapillay R, Rogers A, Kallidonis P, Villa L, Boeri L, Montanari E, Atis G, Emiliani E, Sener TE, Al Jaafari F, Fitzpatrick J, Shaw M, Harding C, Somani BK. A Machine Learning Predictive Model for Post-Ureteroscopy Urosepsis Needing Intensive Care Unit Admission: A Case-Control YAU Endourology Study from Nine European Centres. *Journal of Clinical Medicine*. 2021; 10(17):3888. DOI:10.3390/jcm10173888. PMID:34501335. IF:4,241 (Q1/D3).
- Pisano F, Gontero P, Sylvester R, Joniau S, Serretta V, Larre S, Di S, van B, Witjes A, Grotenhuis A, Colombo R, Briganti A, Babjuk M, Soukup V, Malmstrom PU, Irani J, Malats N, Baniel J, Mano R, Cai T, Cha E, Ardelt P, Varkarakis J, Bartoletti R, Dalbagni G, Shariat SF, Xylinas E, Karnes RJ, Palou J. Risk factors for residual disease at re-TUR in a large cohort of T1G3 patients. *Actas Urologicas Espanolas*. 2021; 45(6). DOI:10.1016/j.acuro.2020.08.016. PMID:34147426. IF:0,994 (Q4/D9).
- Prudhomme T, Beauval JB, Lesourd M, Roumiguié M, Decaestecker K, Vignolini G, Campi R, Serni S, Territo A, Gausa L, Tugcu V, Sahin S, Alcaraz A, Musquera M, Stockle M, Janssen M, Fornara P, Mohammed N, Del Bello A, Kamar N, Sallusto F, Breda A, Doumerc N. Robotic-assisted kidney transplantation in obese recipients compared to non-obese recipients: the European experience. *WORLD JOURNAL OF UROLOGY*. 2021;39(4):1287-1298. DOI:10.1007/s00345-020-03309-6. PMID: 32562044. IF:4,226 (Q1/D3).
- Quiroz Y, Llorens E, Novoa R, Motta G, Llorba E, Porta O, Parra J, Ballarin J, Palou J, Bujons A. Pregnancy in Patients With Exstrophy-Epispadias Complex: Are Higher Rates of Complications and Spontaneous Abortion Inevitable?. *UROLOGY*. 2021; 154. DOI:10.1016/j.urology.2021.01.061. PMID:33662406. IF:2,649 (Q3/D6).
- Quiroz YY, Llorens E, Motta G, Bujons A. Autologous fat grafting with stem cell transplantation in an exstrophic patient. A case. *Journal of Pediatric Urology*. 2021; 17(1). DOI:10.1016/j.jpuro.2020.12.017. PMID:33390329. IF:1,830 (Q3/D7).
- Quiroz YY, Llorens E, Motta G, Tobia S, Bujons A. Ultra-mini Pcnl with clear Petra degrees suction-evacuation access sheath and warming irrigation fluid system (Rocamed (R)) for stone treatment in children. *Journal of Pediatric Urology*. 2021; 17(5). DOI:10.1016/j.jpuro.2021.01.048. PMID:34736727. IF:1,830 (Q3/D7).
- Rassweiler JJ, Pini G, Liatsikos F, Georgiev M, Roupert M, Breda A, Knoll T, Micali S, Stenzl A, Goezen AS, Yanev K, Rassweiler MC. COVID-19 in european urology Which lessons have we learned?. *UROLOGE*. 2021; 60(3). DOI:10.1007/s00120-021-01450-7. PMID:33559012. IF:0,639 (Q4/D10).
- Redorta JP, Sanguedolce F, Pardo GS, Romancik M, Vittori G, Minervini A, Di F, Lunik R, Colombo R, Serretta V, Cetinel B, Bini V, Corradengo D, Lazzeri M. Multicentre International Study for the Prevention with iAluRil of Radio-induced Cystitis (MISTIC): A Randomised Controlled Study. *European Urology Open Science*. 2021; 26. DOI:10.1016/j.euro.2021.01.016. PMID:34337507 (Q4/D10).

- Rivas JG, Somani B, Socarras MR, Marra G, Pearce I, Henningsohn L, Zondervan P, van der Poel H, Van H, N'Dow J, Liatsikos E, Palou J, Szendroi A. Essentials for Standardising the Undergraduate Urology Curriculum in Europe: Outcomes of a Delphi Consensus from the European School of Urology. *European Urology Open Science*. 2021; 33. DOI:10.1016/j.euros.2021.09.003. PMID:34738091 (Q4/D10).
- Roupret M, Babjuk M, Burger M, Capoun O, Cohen D, Comperat EM, Cowan NC, Dominguez JL, Gontero P, Mostafid AH, Palou J, Peyronnet B, Seisen T, Soukup V, Sylvester RJ, van BWG, Zigeuner R, Shariat SF. European Association of Urology Guidelines on Upper Urinary Tract Urothelial Carcinoma: 2020 Update. *EUROPEAN UROLOGY*. 2021; 79(1). DOI:10.1016/j.eururo.2020.05.042. PMID:32593530. IF:20,096 (Q1/D1).
- Rubio J, Algaba F, Gallardo E, Marcos JA, Climent MA, Maroto P, Arranz JA. Recent Advances in the Management of Patients with Non-Muscle-Invasive Bladder Cancer Using a Multidisciplinary Approach: Practical Recommendations from the Spanish Oncology Genitourinary (SOGUG) Working Group. *Cancers*. 2021; 13(19):4762. DOI:10.3390/cancers13194762. PMID:34638247. IF:6,639 (Q1/D3).
- Sabiote L, Llorens E, Quiroz Y, Sierra L, Palou J, Bujons A. Is Onabotulinum(1) Toxin-A Combined Injection in the Bowel Patch and the Bladder Remnant a Safe Alternative to Bladder Re-Augmentation?. *UROLOGY*. 2021; 157. DOI:10.1016/j.urology.2021.03.035. PMID:33848531. IF:2,649 (Q3/D6).
- Sanguedolce F, Fontana M, Turco M, Territo A, Lucena JB, Cortez JC, Vanacore D, Meneghetti J, Gallioli A, Gaya JM, Redorta JP, Breda A. Endoscopic Management of Upper Urinary Tract Urothelial Carcinoma: Oncologic Outcomes and Prognostic Factors in a Contemporary Cohort. *JOURNAL OF ENDOUROLOGY*. 2021; 35(11). DOI:10.1089/end.2021.0133. PMID:33971725. IF:2,942 (Q2/D5).
- Sanguedolce F, Pardo GS, Sanchez AM, Lucena JB, Pisano F, Cortez JC, Territo A, Perez JH, Sopena JG, Lopez CE, Breda A, Redorta JP. Radiation-induced haemorrhagic cystitis after prostate cancer radiotherapy: factors associated to hospitalization and treatment strategies. *Prostate International*. 2021; 9(1). DOI:10.1016/j.pnrl.2020.07.006. PMID:33912514. IF:2,286 (Q3/D7).
- Shore ND, Redorta JP, Robert G, Hutson TE, Cesari R, Hariharan S, Faba G, Briganti A, Steinberg GD. Non-muscle-invasive bladder cancer: An overview of potential new treatment options. *UROLOGIC ONCOLOGY-SEMINARS AND ORIGINAL INVESTIGATIONS*. 2021; 39(10). DOI:10.1016/j.urolonc.2021.05.015. PMID:34167873. IF:3,498 (Q2/D4).
- Somani B, Liatsikos E, Mottrie A, Gozen AS, Breda A, Knoll T, Bianchi G, Sarica K, Bedke J, Rassweiler J. Outcomes of EAU-endorsed Live Surgical Events over a 5-year Period (2015–2020) and Updated Guidelines from the EAU Live Surgery Committee. *EUROPEAN UROLOGY*. 2021; 80(5). DOI:10.1016/j.eururo.2021.04.037. PMID:34020827. IF:20,096 (Q1/D1).
- Stoots SJM, Geraghty R, Kamphuis GM, Jamnadass E, Henderickx MMEL, Ventimiglia E, Traxer O, Keller EX, DeConinck V, Talso M, Kallidonis P, Emiliani E, Bres-Niewada E, Karim SS, Picirilli A, Somani BK. Variations in the Mineral Content of Bottled “Still” Water Across Europe: Comparison of 182 Brands Across 10 Countries. *JOURNAL OF ENDOUROLOGY*. 2021;35(2):206–214. DOI:10.1089/end.2020.0677. PMID:32762257. IF:2,942 (Q2/D5).
- Stoots SJM, Kamphuis GM, Geraghty R, Vogt L, Henderickx M, Hameed BMZ, Ibrahim S, Pietropaolo A, Jamnadass E, Aljumaiah SM, Hamri SB, Ventimiglia E, Traxer O, Gauhar V, Keller EX, De Coninck V, Durutovic O, Gadzhiev NK, Dragos LB, Sener TE, Rukin N, Talso M, Kallidonis P, Emiliani E, Bres E, Scotland KB, Bhojani N, Vagionis A, Piccirilli A, Somani BK. Global Variations in the Mineral Content of Bottled Still and Sparkling Water and a Description of the Possible Impact on Nephrological and Urological Diseases. *Journal of Clinical Medicine*. 2021; 10(13):2807. DOI:10.3390/jcm10132807. PMID:34198985. IF:4,241 (Q1/D3).
- Sylvester RJ, Rodriguez O, Hernandez V, Turturica D, Bauerova L, Bruins HM, Brundl J, van der Kwast TH, Brisuda A, Rubio J, Seles M, Hentschel AE, Kusuma VRM, Huebner N, Cotte J, Mertens LS, Volanis D, Cussenot O, Henriquez JDS, de la Pena E, Pisano F, Pesl M, van der Heijden AG, Herdegen S, Zlotta AR, Hacek J, Calatrava A, et al. [Algaba F, Palou J]. European Association of Urology (EAU) Prognostic Factor Risk Groups for Non-muscle-invasive Bladder Cancer (NMIBC) Incorporating the WHO 2004/2016 and WHO 1973 Classification Systems for Grade: An Update from the EAU NMIBC Guidelines Panel. *EUROPEAN UROLOGY*. 2021; 79(4). DOI:10.1016/j.eururo.2020.12.033. PMID:33419683. IF:20,096 (Q1/D1).
- Territo A, Diana P, Gaya JM, Gallioli A, Piana A, Breda A. ROBOT-ASSISTED KIDNEY TRANSPLANTATION: STATE OF ART. *ARCHIVOS ESPAÑOLES DE UROLOGIA*. 2021; 74(10). PMID:34851312. IF:0,436 (Q4/D10).
- Territo A, Piana A, Fontana M, Diana P, Gallioli A, Gaya JM, Huguet J, Gavrilov P, Rodriguez O, Facundo C, Guirado L, Palou J, Mottrie A, Breda A. Step-by-step Development of a Cold Ischemia Device for Open and Robotic-assisted Renal Transplantation. *EUROPEAN UROLOGY*. 2021; 80(6). DOI:10.1016/j.eururo.2021.05.026. PMID:34059396. IF:20,096 (Q1/D1).
- Turco M, Huguet J, Territo A, Fontana M, Faba OR, Palou J, Breda A. OUTCOMES FOLLOWING SURGICAL MANAGEMENT OF ADRENOCORTICAL CARCINOMA: A SINGLE-CENTER EXPERIENCE. *ARCHIVOS ESPAÑOLES DE UROLOGIA*. 2021; 74(8). DOI:10.37554/en-20210206-3424-8. PMID:34605409. IF:0,436 (Q4/D10).
- Vallasciani S, Tur AB, Gatti J, Machado M, Cooper CS, Farrugia MK, Zhou HX, El Anbari M, Lopez PJ. Hydronephrosis Classifications: Has UTD Overtaken APD and SFU? A Worldwide Survey. *Frontiers in Pediatrics*. 2021; 9:646517. DOI:10.3389/fped.2021.646517. PMID:33912523. IF:3,418 (Q1/D2).

- Van BWG, Hentschel AE, Brundl J, Comperat EM, Hernandez V, Capoun O, Bruins HM, Cohen D, Roupert M, Shariat SF, Mostafid AH, Zigeuner R, Dominguez JL, Burger M, Soukup V, Gontero P, Palou J, van der Kwast TH, Babjuk M, Sylvester RJ, Multi N. Prognostic Value of the WHO1973 and WHO2004/2016 Classification Systems for Grade in Primary Ta/T1 Non-muscle-invasive Bladder Cancer: A Multicenter European Association of Urology Non-muscle-invasive Bladder Cancer Guidelines Panel Study. *European Urology Oncology*. 2021; 4(2). DOI:10.1016/j.euo.2020.12.002. PMID:33423944. IF:7,479 (Q1/D1).

- Veneziano D, Ploumidis A, Cleynenbreugel B, Gozen A, Palou J, Sarica K, Liatsikos E, Miano R, Ahmed K, Kamphuis G, Tokas T, Somani BK, ESU GRP. Development Methodology of the Novel Endoscopic Stone Treatment Step 2/A Training/Assessment Curriculum and a Roadmap on Developing Hands-on Training Curriculums in Future: An International Collaborative Work by European Association of Urology Sections. *JOURNAL OF ENDOUROLOGY*. 2021; 35(9). DOI:10.1089/end.2021.0040. PMID:34006138. IF:2,942 (Q2/D5).

- Vicentini FC, Mazzucchi E, Gökçe Mİ, Sofer M, Tanidir Y, Sener TE, de Souza Melo PA, Eisner B, Batter TH, Chi T, Armas-Phan M, Scoffone CM, Cracco CM, Perez BOM, Angerri O, Emiliani E, Maugeri O, Stern K, Batagello CA, Monga M. Percutaneous Nephrolithotomy in Horseshoe Kidneys: Results of a Multicentric Study. *JOURNAL OF ENDOUROLOGY*. 2021;35(7):979-984. DOI:10.1089/end.2020.0128. PMID: 32292038. IF:2,942 (Q2/D5).

Other scientific production

- Bertolo R, Campi R, Breda A, Minervini A, European A, EAU Robotic Urology S. Editorial Comment from Dr Bertolo et al. to Partial versus radical nephrectomy in clinical T2 renal masses. *INTERNATIONAL JOURNAL OF UROLOGY*. 2021; 28(11). DOI:10.1111/iju.14694. PMID:34519128. IF:3,369 (Q2/D4).

- Breda A, Territo A. Can the robotic approach replace open surgery in kidney transplantation? *WORLD JOURNAL OF UROLOGY*. 2021;39(9):3699-3700. DOI:10.1007/s00345-020-03312-x. PMID: 32556560. IF:4,226 (Q1/D3).

- Da Silva FC, Algaba F. Re: Report from the International Society of Urological Pathology (ISUP) Consultation Conference on Molecular Pathology of Urogenital Cancers. I. Molecular Biomarkers in Prostate Cancer. *EUROPEAN UROLOGY*. 2021; 79(2). PMID:33218825. IF:20,096 (Q1/D1).

- Emiliani E, Angerri O. High-power, High-frequency Ho:YAG Lasers Are Essential for Retrograde Intrarenal Surgery. *European Urology Focus*. 2021;7(1):3-4. DOI:10.1016/j.euf.2020.08.008. PMID: 32948503. IF:5,996 (Q1/D2).

- Fankhauser CD, Oldenburg J, Albers P, Algaba F, Bokemeyer C, Boormans JL, Fischer S, Fizazi K, Gremmels H, de Castro JM, Janisch F, Muilwijk T, Leao R, Nicol D, Nicolai N, Tandstad T, Laguna MP. Recommendations to Balance Benefits and Risks Of Thromboprophylaxis and to Avoid Central Venous-access

Devices During First-line Chemotherapy in Men with Metastatic Germ Cell Tumors: The European Association Of Urology Testicular Cancer Panel Position in 2021. *EUROPEAN UROLOGY*. 2021; 80(1). DOI:10.1016/j.eururo.2021.02.032. PMID:33722419. IF:20,096 (Q1/D1).

- Madarriaga YQ, Tur AB. Are the parents instead of the children the new patients in pediatrics? The shortcomings of telemedicine. *Journal of Pediatric Urology*. 2021; 17(2). DOI:10.1016/j.jpuro.2021.01.010. PMID:33583742. IF:1,830 (Q3/D7).

- Somani B, Brouwers T, Veneziano D, Gozen A, Ahmed K, Liatsikos E, Sarica K, Palou J, Rassweiler J, Biyani CS, de Oliveira TR, Mottrie A, Gallagher A, Breda A, van H, McIlhenney C, Sedelaar M, Puliatti S, Jain S, van R, van B. Standardization in Surgical Education (SISE): Development and Implementation of an Innovative Training Program for Urologic Surgery Residents and Trainers by the European School of Urology in Collaboration with the ESUT and EULIS Sections of the EAU. *EUROPEAN UROLOGY*. 2021; 79(3). DOI:10.1016/j.eururo.2020.12.003. PMID:33419680. IF:20,096 (Q1/D1).

- Subiela JD, Kanashiro A, Emiliani E, Angerri O. Response to Clayman re: "Systematic Review and Meta-Analysis Comparing Fluoroles Ureteroscopy and Conventional Ureteroscopy in the Management of Ureteral and Renal Stones". *JOURNAL OF ENDOUROLOGY*. 2021; 35(4). DOI:10.1089/end.2021.29109.jds. PMID:33769082. IF:2,942 (Q2/D5).

- Tur AB. Robotic Peritoneal Flap Revision of Gender Affirming Vaginoplasty: a Novel Technique for Treating Neovaginal Stenosis Abortion Inevitable? REPLY. *UROLOGY*. 2021; 154. DOI:10.1016/j.urology.2021.01.063. PMID:34389079. IF:2,649 (Q3/D6).

- Vigués F, Bonet X, Etcheverry B, Fiol M, Suárez-Novo JF, Breda A, Riera L; ERUS RAKT Group. Orthotopic robot-assisted kidney transplantation: first case report. *WORLD JOURNAL OF UROLOGY*. 2021;39(7):2811-2813. DOI:10.1007/s00345-020-03269-x. PMID: 32468111. IF:4,226 (Q1/D3).

Other publications

- Abreu D, Carvalhal G, Gueglio G, Tobia I, Garcia P, Zuniga A, Meza L, Bengio R, Scorticati C, Castillejos R, Rodriguez F, Autran AM, Gonzales C, Gadu J, Nolzco A, Ameri C, Zampolli H, Langenhin R, Muguruza D, Machado MT, Mingote P, Yandian J, Clavijo J, Nogueira L, Clark O, Secin F, Rovegno A, Vilas A, Barrios E, Decia R, Guimaraes G, et al. [Rodriguez O, Palou J]. Prognostic Factors in De Novo Metastatic Renal Cell Carcinoma: A Report From the Latin American Renal Cancer Group. *Jco Global Oncology*. 2021; D70I:10.1200/GO.20.00621. PMID:33974442.

- Addar A, Aljuhayman A, Ghazwani Y, Al Khayal A, Alasker A, Emiliani E, Bin S. Bilateral same session renal stone surgery tolerance and complications. *Urology Annals*. 2021; 13(4). DOI:10.4103/UA.UA_128_20. PMID:34759642.

- Algaba F. Criteria for an improved prognostic stratification in category pT renal carcinoma. *Revista Espanola De Patologia*. 2021; 54(3). DOI:10.1016/j.patol.2020.09.004. PMID:34175029.
- Bozzini G, Gastaldi C, Besana U, Calori A, Casellato S, Parma P, Pastore A, Macchi A, Breda A, Gozen A, Skolarikos A, Herrmann T, Scoffone C, Eissa A, Sighinolfi MC, Rocco B, Buizza C, Liatsikos E. Thulium-laser retrograde intra renal ablation of upper urinary tract transitional cell carcinoma: an ESUT Study. *Minerva Urology And Nephrology*. 2021; 73(1). DOI:10.23736/S0393-2249.20.03689-9. PMID:32026668.
- Esperto F, Pietropaolo A, Emiliani E, De Coninck V, Tailly T, Keller EX, Talso M, Tonyali S, Sener ET, Zeeshan BM, Usai P, Di V, Papalia R, Scarpa RM. From the Hippocratic oath to the stone center: how to deal with stone disease. *Minerva Urology And Nephrology*. 2021; 73(5). DOI:10.23736/S2724-6051.21.04722-4. PMID:34847649.
- Gallioli A, Pradere B, Albisinni S, Moschini M, European Assoc Urology A. Robot-assisted radical cystectomy: towards a future of sexual-sparing surgery?. *Minerva Urology And Nephrology*. 2021; 73(6). DOI:10.23736/S2724-6051.21.04824-2. PMID:35144367.
- Grosso AA, Sessa F, Campi R, Viola L, Polverino P, Crisci A, Salvi M, Liatsikos E, Feu OA, Di F, Tellini R, Traxer O, Cocci A, Mari A, Fiori C, Porpiglia F, Carini M, Tuccio A, Minervini A. Intraoperative and postoperative surgical complications after ureteroscopy, retrograde intrarenal surgery, and percutaneous nephrolithotomy: a systematic review. *Minerva Urology And Nephrology*. 2021; 73(3). DOI:10.23736/S2724-6051.21.04294-4. PMID:33887891.
- Keller EX, De Coninck V, Proietti S, Talso M, Emiliani E, Ploumidis A, Mantica G, Somani B, Traxer O, Scarpa RM, Esperto F. Prone versus supine percutaneous nephrolithotomy: a systematic review and meta-analysis of current literature. *Minerva Urology And Nephrology*. 2021; 73(1). DOI:10.23736/S0393-2249.20.03960-0. PMID:33016031.
- Manzo BO, Cabrera JD, Emiliani E, Sanchez HM, Eisner BH, Torres JE. Impact of the adherence to medical treatment on the main urinary metabolic disorders in patients with kidney stones. *Asian Journal Of Urology*. 2021; 8(3). DOI:10.1016/j.ajur.2020.07.002. PMID:34401334.
- Motta GL, Bujons A, Quiroz Y, Llorens E, Zancan M, Rosito TE. Sexuality of Female Spina Bifida Patients: Predictors of a Satisfactory Sexual Function. *Revista Brasileira De Ginecologia E Obstetricia*. 2021; 43(6). DOI:10.1055/s-0041-1732464. PMID:34318472.
- Rodríguez Sánchez L, Mottrie A, Graefen M, Cathelineau X, Breda A, Sanchez- Salas R. EAU Robotic Urology Section. Re: Evaluation of Patient- and Surgeon- specific Variations in Patient-reported Urinary Outcomes 3 Months After Radical Prostatectomy from a Statewide Improvement Collaborative. *Eur Urol*. 2021;80(2):258-259. DOI:10.1016/j.eururo.2021.04.006. PMID: 33895010.
- Stoots SJM, Geraghty R, Kamphuis GM, Jamnadass E, Henderickx M, Ventimiglia E, Traxer O, Keller EX, De Coninck V, Talso M, Kallidonis P, Emiliani E, Bres E, Karim SS, Piccirilli A, Vagionis A, Somani BK. Variations in the mineral content of bottled 'carbonated or sparkling' water across Europe: a comparison of 126 brands across 10 countries. *Central European Journal Of Urology*. 2021; 74(1). DOI:10.5173/ceju.2021.0331.R1. PMID:33976919.
- Territo A, Gallioli A, Meneghetti I, Fontana M, Huguet J, Palou J, Breda A. Diagnostic ureteroscopy for upper tract urothelial carcinoma: friend or foe?. *Arab Journal Of Urology*. 2021; 19(1). DOI:10.1080/2090598X.2021.1883810. PMID:33763248.
- Veneziano D, Patruno G, Talso M, Tokas T, Proietti S, Porreca A, Kamphuis G, Biyani S, Emiliani E, Cepeda M, de Mar LM, Miano R, Ferretti S, Macchione N, Kallidonis P, Montanari E, Tripepi G, Ploumidis A, Cacciamani G, Lima E, Somani B. Exploratory analysis on the usage of Pi-score algorithm over endoscopic stone treatment step 1 protocol. *Minerva Urology And Nephrology*. 2021; 73(5). DOI:10.23736/S2724-6051.20.03747-9. PMID:32748615.

Communication and dissemination activities

Outreach activities

- Radio program at Radio Estel. 1 hour radio program addressed to the general society with general information regarding different diseases. Topics are: "Làsers en urologia I" - Dr O. Angerri; "Làsers en urología II" - Dr O. Angerri; "Càncer de bufeta" I - Dr J. Palou; "Càncer de bufeta II" - Dr J. Palou; "Robòtica I" - Dr A. Breda; "Robòtica II" - Dr J. Palou; "Incontinència masculina - Dr C. Errando".
- Press: Siete días médicos. "La enuresis infantil no siempre se resuelve por sí sola". 26/05/2021
- Press: Ara. "A Puigvert vam ser pioners en desenvolupar un programa de donant viu". 06/2021
- Press: El Periodico. "De los Angeles a la Puigvert". 12/06/2021
- Press: Catalunya Press. "El 40% dels trasplantaments realitzats per Fundació Puigvert procedeixen d'un donant viu". 4/06/2021
- Media: Betevé. "Els beneficis del trasplantament amb òrgans de donants vius". 6/06/2021
- Press: La Vanguardia. "Recomiendan hacer revisión anual de la próstata a hombres de más de 50 años". 10/06/2021
- Media: COPE. "Fins un 40% dels trasplantaments renals de la Fundació Puigvert procedeix d'un donant viu". 15/06/2021

- Press: La Vanguardia. "Alberto Breda, elegido presidente de asociación europea de robótica urológica". 15/07/2021
- Press: The New Barcelona Post. "Alberto Breda presidirà la secció de cirurgia robòtica de l'Associació Europea d'Urologia". 15/07/2021
- Perss: La Razón. "Alberto Breda elegido para presidir la Sociedad Europea de Cirugía Robótica". 15/07/2021
- Press: Planta Doce. "EAU Robotic Urology renueva su presidencia de la mano de la Fundació Puigvert". 15/07/2021
- Press: El Diari de la Sanitat. "Robots al quiròfan: Més precisió en mans dels cirurgians". 19/07/2021
- Press: La Vanguardia: "La Fundació Puigvert presenta un canal de Youtube de patologías urogenitales". 14/05/2021
- Press: La Vanguardia: "Más de 800 urólogos asisten al 56 Curso de la Fundació Puigvert". 20/10/2021
- Press: Pharma Market. "Angelo Territo presidirá el nuevo Grupo de Trasplante Renal de la Young Academic Urologist (YAU) de EURO". 11/10/2021
- Press: La Razón. "La salud masculina está en crisis" 2/11/2021
- Press: La Vanguardia. "Organizan un curso para impulsar los trasplantes renales de donantes vivos". 22/11/2021
- Press: imMédico. "“Bigotes”, la apuesta de la Fundació Puigvert para revolucionar el panorama de la salud masculina". 2/11/2021
- Press: imMédico. "Se lanza el primer contenedor térmico para mantener el riñón en frío durante los trasplantes". 01/12/2021
- Press: La Vanguardia. "Inventan contenedor térmico para mantener riñón en frío durante trasplante". 01/12/2021
- Press: La Razón. "Nuestro invento permite mantener el riñón con un frío constante y uniforme durante el trasplante".
- Media: COPE. "Inventan un contenedor térmico para mantener el riñón frío durante trasplante".

Courses for physicians

- "Visión multidisciplinar del cáncer renal: de la enfermedad localizada al paciente metastásico" (Virtual). 4-11 March. Directors: J. Palou, A. Barnadas, A. Breda, P. Maroto.
- "Curso formativo para residentes en el manejo del cáncer de próstata" (Virtual). 18th March. Directors: J. Palou, JM. Gaya
- "Maneig des de l'atenció primària de la patologia urològica infantil. Cap a una atenció integrada i coordinada". 26th November. Directors: J. Palou, A. Bujons

Activities for urologists

- "Surgical immersions workshop. Course in renal uro-oncology" (Virtual). 19th April. Directors: J. Palou, A. Breda.

- "Explore models of treatment for upper tract urothelial carcinoma (UTUC)" (Virtual). 18th May, 15th November. Directors: J. Palou, A. Breda
- "Explore models of treatment for upper tract urothelial carcinoma (UTUC)" (Virtual) 15th June. Directors: J. Palou, A. Breda
- "“Explore models of endoscopic treatment for stone disease” (Virtual) 31st May. Directors: J. Palou, O. Angerri
- "Virtual medical expert training practical aspects and surgical tips in NMIBC management" 13th April, 16th November. Directors: J. Palou, A. Breda
- "56 Curso de urología de la Fundacio Puigvert. La urología del 2030" 20-22 October .Director: J. Palou

Participation of group members in National and International Events

- VIRTUAL ESU-ESOU MASTERCLASS ON NON-MUSCLE-INVASIVE BLADDER CANCER. On line, 4-5 February. J. Palou. Lecture: "Complications after RC and management, what to expect and how to prevent and solve".
- 6° CONGRESO DE LA SOCIEDAD ESPAÑOLA DE TRASPLANTE. On line, 12-14 February. A. Breda. Moderator: "Trasplante renal de donante vivo"
- I REUNIÓN NACIONAL VIRTUAL DEL GRUPO DE TRASPLANTE. On line, 10-12 March. A. Breda. Moderator: "Trasplante renal de donante vivo".
- ESU-ESOU MASTERCLASS ON MUSCLE-INVASIVE BLADDER CANCER. Amsterdam, 8-9 April. J. Palou. Lecture: Complications after RC and management, what to expect and how to prevent solve.
- XXX CONGRESO NACIONAL DE LA SEAP-IAP, XXV CONGRESO NACIONAL DE LA SEC. VI CONGRESO NACIONAL DE LA SEPAF. On line, 26-28 May. F. Algaba. Lecture: "Inmunohistoquímica básica para el diagnóstico actual del cáncer de riñón".
- ESU-ESUT MASTERCLASS ON UROLITHIASIS. Online, 18-19 June. O. Angerri. Lecture: "Lasers - optimal settings and tips: URS and PNL".
- MIPS 2021 . Online, 25-27 June. C. Errando. Lecture: "Artificial urinary sphincter".
- ESU COURSE ON PCNL, TIPS AND TRICKS IN COLLABORATION WITH THE IRAQI UROLOGY ASSOCIATION. Online, 2nd July. O. Angerri. Lecture: "Mini PCNL"
- 36th ANNUAL CONGRESS EAU21. Online, 8 -12 July. O. Angerri. Semi live surgery: "Endoscopic combined intrarenal surgery (ECIRS)".
- **A. Breda**
Lecture: "Robot-assisted kidney transplantation – Is it the way forward?"

Lecture: "Cases from the last EAU live surgery session"

Lecture: "Robotic assisted retroperitoneal partial nephrectomy RAPN (da Vinci Xi)"

Lecture: "Living donor nephrectomy: Technical alternatives"

Lecture: "Laparoscopic robotic-assisted."

Lecture: "Renal cancer"

Lecture: "Robotic kidney transplantation: Not fiction anymore"

Lecture: "Flexible ureterorenoscopy"

Lecture: "RAKT: What's new?"

Lecture: "Neoadjuvant"

• Bujons

Lecture: "Paediatric robotic surgery"

Lecture: "PNL"

• E. Emiliani

Semi live surgery: "Endoscopic combined intrarenal surgery (ECIRS)"

Lecture: "How to avoid complications during URS"

Lecture: "RIRS and endoscopes, reusable and single use"

Lecture: RIRS and special situations

• C. Errando

Lecture: "Trouble shooting in artificial urinary sphincter surgery"

• J. Palou

Lecture: "Discussant: Intravesical therapy"

Lecture: "Diagnosis NMIBC, including markers and innovations"

Lecture: "Complications during surgery and what to do: Obturator nerve contraction, intra and extraperitoneal perforation, bleeding etc."

Lecture: "How to deal with abnormal cytology including locations outside the bladder (UUT and urethra) and its limitations"

Lecture: "Complications of robot-assisted laparoscopic radical cystectomy (RARC)"

Lecture: "Office fulguration is safe, the patient will be spared from unnecessary anesthesia"

• O. Rodríguez Faba

Lecture: Con: "Open radical cystectomy and neobladder - still the gold standard surgery"

• AUA 2021. Online, 10-13 September. O. Angerri Lecture: "Optimal Laser technology for stone management"

• CURSO INTERNACIONAL RMmp Y CÁNCER DE PRÓSTATA TODO LO QUE EL RADÍOLOGO DEBE SABER PARA LA PRÁCTICA DIÁRIA. Online, 13th September. F. Algaba. Lecture: "Módulo 2: AP en Cáncer de Próstata".

• 5th JOINT MEETING OF ESPU-SPU. Online, 23-25 September. A. Bujons. Moderator: Communications session: "STONES 2".

• MEDITERRANEAN MINIMALLY INVASIVE SURGERY IN UROLOGY (MMISU2021). Alexandria (Egypt), 27-29 October. A. Bujons. Lecture: "Lasers".

• 11th INTERNATIONAL MEETING TECHNOLOGY & TRAINING IN ENDOUROLOGY. Torino (Italy), 10-12 November. E. Emiliani. Live surgery: "RIRS".

• ERUS-DRUS21: 18th MEETING OF THE EAU ROBOTIC UROLOGY SECTION IN CONJUNCTION WITH THE 13th MEETING OF THE GERMAN SOCIETY OF ROBOTIC UROLOGY. Dusseldorf (Germany), 11-13 November. A. Breda. Live Surgery: "RAPN (Broadcasted from OLV-Aalst)".

• J. Palou

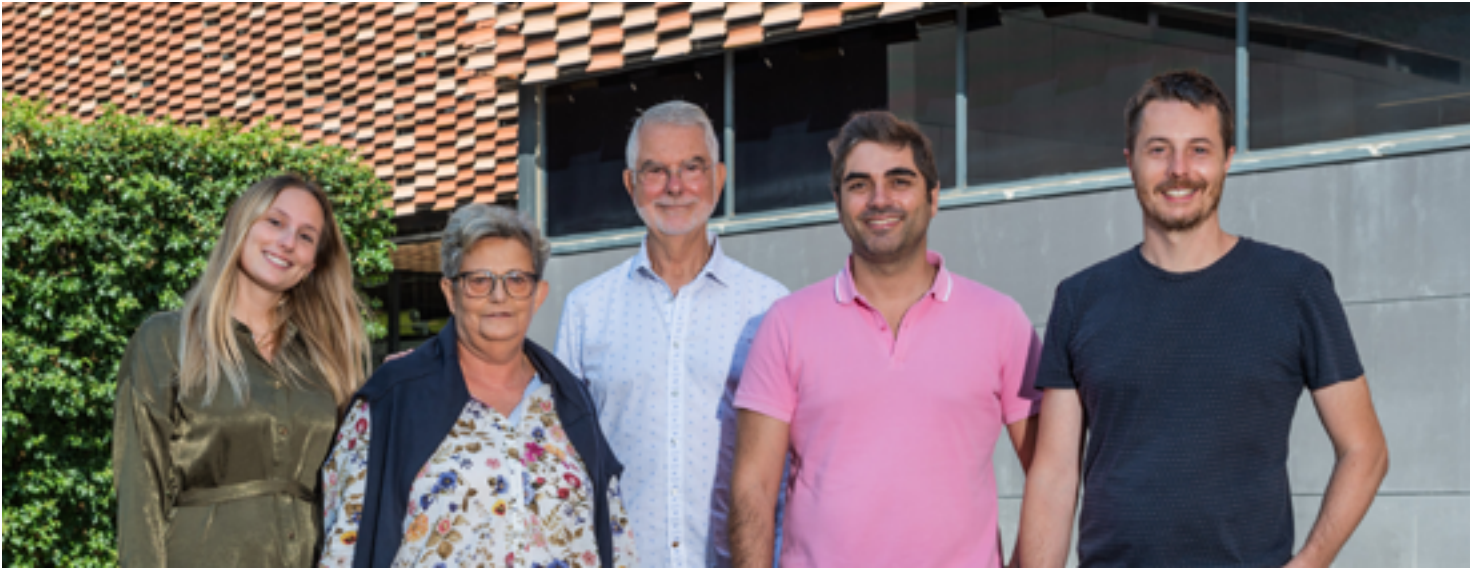
Lecture: "Changes in muscle invasive bladder cancer management over the last three decades"

Lecture: "Female cystectomy"

Lecture: "Extracorporeal urinary diversion"

• 13th EUROPEAN MULTIDISCIPLINARY CONGRESS ON UROLOGICAL CANCERS (EMUC21). Poster "The outcomes of active surveillance of prostate cancer in renal transplant patients: A propensity score matched comparison with a non-renal transplant cohort with prostate cancer". Soeterik, T1; Van Den Bergh, RCN1; Van Melick, HHE1; Soria, F2; Peretti, F2; Oderda M2; Dariane, C3; Timsit, M3; Brancherau, J4; Hedli, O5; Mesnard, B6; Tilki, D7; Kulkarni, M8; Kasivisvanathan, V9; Lebacle, C10; Rodríguez-Faba, O11; Breda, A11; Gandaglia, G12; Todeschini, P13; Biancone, L14; Gontero, P2; Marra, G2; Young Academic Urologists Prostate Cancer Working Party. 1St. Antonius Hospital, Dept. of Urology, Nieuwegein, The Netherlands, 2University of Turin and Città della Salute e della Scienza, Dept. of Surgical Sciences, Turin, Italy, 3Hôpital Européen Georges Pompidou, Dept. of Urology, Paris, France, 4CHU Nantes, Institut de Transplantation Urologie Néphrologie (ITUN), Nantes, France, 5CHU Nantes, Institut de Transplantation Urologie Néphrologie (ITUN), Nantes, France, 6CHU Nantes, Institut de Transplantation Urologie Néphrologie (ITUN), Nantes, France, 7University Hospital Hamburg-Eppendorf, Martini-Klinik Prostate Cancer Center, Hamburg, Germany, 8Guy's Hospital, Dept. of Urology, London, United Kingdom, 9University College London, Dept. of Urology, London, United Kingdom, 10Kremlin-Bicêtre Hospital, Dept. of Urology, Le Kremlin-Bicêtre, France, 11Fundacio Puigvert, Dept. of Urology, Barcelona, Spain, 12San Raffaele Hospital, Dept. of Urology, Milan, Italy, 13Sant'Orsola Malpighi Hospital, Dept. of Nephrology, Bologna, The Netherlands, 14University of Turin and Città della Salute e della Scienza, Dept. of Nephrology, Turin, Italy.

• XVI CONGRESO SINUG 2021. Málaga, 25-27 November. C. Errando. Lecture "¿Qué puede aportar el psicólogo en el abordaje del dolor pélvico crónico?".



Reproductive Health

Coordinator

Calaf Alsina, Joaquim UAB
jcalaf@santpau.cat

Members

Balcells Eichenberger, Laura	FGS	Muro Blanc, Patricia	FGS
Estadella Tarriel, Josep Ramon	FGS	Perello Capo, Josep	FGS
Guinot Gasull, Misericordia	FGS	Rams Llop, Noelia	FGS

Main lines of research

- The medical approach to hormonally induced or controlled gynaecological diseases: Endometriosis, fibroids, menstrual disorders.
- Explore non-contraceptive benefits of hormonal contraception.
- Develop tools for the early diagnosis and management of heavy menstrual bleeding.
- Polycystic Ovarian Syndrome, premature and normal menopause, amenorrhea.

Scientific Challenges

- To develop and test in the clinical settings easy tools to identify heavy menstrual bleeding.

- To evaluate the impact of the different contraceptive methods on the characteristics of menstruation.
- To evaluate the cost/benefit ratio of using non-surgical approaches for hormone-mediated organic gynecologic diseases.
- To build up a nationwide registry of Premature Ovarian insufficiency (POI).

Awards

- Best oral communication: J. Perelló Capó, J. Calaf Alsina, L. Martínez Vargas, N. Teixeira, N. Rams Llop. "Estudio piloto sobre la eficacia de NOMAC/E2 en el control clínico y ecográfico de la endometriosis". 15°
- Best oral communication: "Preliminary results from the Premature Ovarian Insufficiency (POI) database in Spain"

Balcells, L; Guinot, M; Muro, P; Robert, E; Tomás, J; Llana, P; Castro, A; Baquedano, L and investigators of the Premature Ovarian Insufficiency (iPOI) group en el 13th European Congress on Menopause and Andropause EMAS 2021 VIRTUAL. Advancing Healthy Menopause and Ageing.8 - 10 September 2021.

Scientific production

- Balcells L, Fabra P, Polo A, Calaf J. Putting reproductive rights into practice. The profile of the demand in a publicly sponsored ART program for single or female partner women in Catalonia. *EUROPEAN JOURNAL OF CONTRACEPTION AND REPRODUCTIVE HEALTH CARE*. 2021; 26(4). DOI:10.1080/13625187.2021.1891410. PMID:33724129. IF:1,848 (Q3/D8).
- Perello J, Tarruella JR, Calaf J. Heavy menstrual bleeding and its detection in clinical practice. *MEDICINA CLINICA*. 2021; 157(7). DOI:10.1016/j.medcli.2021.02.006. PMID:33840528. IF:1,725 (Q3/D7).

Other scientific production

- Balcells L, Guinot M, Muro P, Robert E, Tomás J, Llana P, Castro A, Baquedano L, investigators of the Premature Ovarian Insufficiency (iPOI) group. Preliminary results from the premature ovarian insufficiency (POI) database in Spain. Protocol code IIBSP health-IOP-2012-109. Clinical Trials.gov ID:NCT02068976. *Maturitas*. 2021 oct:75. IF 4,342 (Q1/D2).
- Muro P, Guinot M, Balcells L, Robert E, Roca B, Niguez I, Escamilla P, and investigators of the Premature Ovarian Insufficiency (iPOI) group. Evaluation of basal bone mineral density (BMD) in premature ovarian insufficiency (POI) patients. Preliminary results. (Protocol code IIBSP-IOP-2012-109. Clinical Trials.gov ID:NCT02068976). *Maturitas*. 2021 oct:76. IF 4,342 (Q1/D2).

Other publications

- Bailón Queiruga M, Blanch Fons L, Estadella Tarriell J, Vanrell Barbat C, Porta Roda O, Gich Saladich I, Simó González M. Outpatient Hysteroscopy for the Management of Intrauterine Disorders: Feasibility, Effectiveness and Safety For 3000 Cases. *World Journal of Gynecology & Women's Health*. 2021; 5(2). DOI:10.33552/WJGWH.2021.05.000608
- Lete I, Novalbos J, de la Viuda E, Lugo F, Herrero M, Obiol M, Perelló J, Sanchez R. Impact of the Lockdown Due to COVID-19 Pandemic in the Use of Combined Hormonal Oral Contraception in Spain - Results of a National Survey: Encovid. *Open Access Journal Of Contraception*. 2021; 12. DOI:10.2147/OAJC.S306580. PMID:34045908.

Communication and dissemination activities

- Aplicació i avaluació de la modalitat d'aula inversa a la assignatura d'obstetrícia i ginecologia al grau de medicina

Josep Estadella Tarriell, M^a Carmen Medina Mallén, J. J. Espinós Gómez. Experiències docents innovadores a la UAB, 2021, ISBN 978-84 490-9428-6, pàgs. 81-109.

- Balcells Eichenberger, L; Guinot Gasull, M.; Roca Comella, B. ; Tomás i Massaguer, J.; Niguez Sevilla, I. Resultados preliminares de la base de datos de Insuficiencia Ovárica Prematura (IOP) en España. Protocolo código IIBSP health-IOP- 2012-109. Clinical Trials.gov ID: NCT02068976)pag14 -15. Toko - Gin Pract 2021, Apr, ISSN: 0040-8867.
- Muro Blanc, P; Guinot Gasull M. Hacia una definición de la insuficiencia ovárica prematura (IOP) .pag 34-35 Toko - Gin Pract 2021, Apr ISSN: 0040-8867.

Communications in conferences

- Sara Marín, Josep Estadella, Josep Perelló, Marta Simó - Feasibility and patient satisfaction of the use of virtual reality during office hysteroscopy.
- Resultados Preliminares De La Base De Datos De Insuficiencia Ovárica Prematura (Iop) En España. Protocolo codigo IIBSP health-IOP- 2012-109 Clinical Trials.gov Id: Nct02068976) Balcells Eichenberger, Laura(1); Guinot Gasull, M.(2); Roca Cornella, B.(3); Tomás I Massaguer, J.(4); Niguez Sevilla, I. Congreso Nacional de Menopausia, Madrid, Apr 2021. Comunicación elevada a ponencia.
- Preliminary results from the premature ovarian insufficiency (POI) database in Spain. Protocol code IIBSP health-IOP-2012-109. Clinical Trials.gov ID:NCT02068976. Laura Balcells Eichenberger, Misericordia Guinot Gasull, Patricia Muro Blanc, Elisabet Robert Marchal, Jordi Tomás i Massaguer, Plácido Llana Coto, Ana Castro Perez, Laura Baquedano Mainar , investigators premature ovarian insufficiency (iPOI) . 13th European Congress on Menopause and Andropause EMAS 2021 VIRTUAL. Advancing Healthy Menopause and Ageing 8 - 10 September 2021.

• Evaluation of basal bone mineral density (BMD) in premature ovarian insufficiency (POI) patients. Preliminary results. (Protocol code IIBSP-IOP-2012-109. ClinicalTrials.gov ID:NCT02068976). Patricia MuroBlanc, Misericordia Guinot Gasull, Laura Balcells Eichenberger, Elisabet Robert Marcha, Beatriz Roca Comella,, Isabel Niguez Sevilla, Patricia Escamilla Galindo, Nicolas Mendoza Ladron de Quevara, investigators of the Premature Ovarian Insufficiency (iPOI) group .3th European Congress on Menopause and Andropause EMAS 2021 VIRTUAL. Advancing Healthy Menopause and Ageing.8 - 10 September 2021.

• Oral administration of sodium tungstate in healthy women of childbearing age is safe and well-tolerated. Results of two phase I studies of a drug in development to treat female infertility. Arbat A1, Coimbra J2, Molina P2 , Llorens M1, Torres R1, Perello J3, Moral-Blanch M1, Antonijoan RM^a 2, Calaf J3, Canals I1. ASRM 21th Annual Meeting October 17-20; 2021. Poster

- Sodium tungstate induces endometrial gene expression changes during the window of implantation in healthy

childbearing-aged women. Canals I1, Cotan D2, J Perelló3, Torres R1, Horcajadas JA2, Calaf J3, Arbat A1. ASRM 21th Annual Meeting October 17-20; 2021.

Talks

- GnRH antagonists' implications in the uterine fibroids management. ESGE 2021 (J. Estadella). Minimizando el impacto de la histeroscopia. Curso Internacional de cirugía ginecológica. Bellvitge 2021 (J. Estadella).
- Futuro de la anticoncepción. 74º Congreso de la SGOX 2021. J. Perello.
- ANTICONCEPCIÓN SIN ESTRÓGENO. ¿EL FUTURO? PAPEL DEL DIU. XXV Congreso SVC-EAE 2021. J. Perello.
- Ponencia: Beneficios del anillo vaginal vs la píldora. 43 congreso SEMERGEN. Zaragoza 2021. J. Perello.
- Ponencia: Endometriosis y anticoncepción. XV Congreso de la SEC. Burgos 2021. J. Perello.

- Ponencia: El futuro de la anticoncepción tras la era COVID19. "La SSyR en la era COVID19". XV Congreso de la SEC. Burgos 2021 J. Perelló.

- Ponencia: Hacia Una Definición De La IOP. Dra. .M. Guinot. Congreso Nacional de Menopausia Madrid, Apr 2021.

- Why talking about Estrogen in COCs? Congreso de la Sociedad Europea de Ginecología. 12 Nov 2021 Venecia. J. Calaf.

- Terapia secuencial en la osteoporosis de la menopausia. Congres AEEM Madrid 9 Abril. J. Calaf.

Outreach activities

- Tertulia FEEM sobre TH ¿son todas iguales? Joaquin Calaf, Borja Otero, Alejandra Herrero Muñoz. 3 Dec 2021.
- Tertulia Intergeneracional online de la FEEM sobre IOP. 8 May 2021. Dra. M. Guinot Gasull.
- Es el transplament d'úter la millor opció per la esterilitat per factor uterí ? Setmana Biennal Ciutat i Ciència Barcelona 11 June 2021. Dr. J. Calaf.



Radiation Oncology

Coordinator

Sancho Pardo, Gemma FGS
gsancho@santpau.cat

Members

Balart Serra, Josep	FGS	Montezuma Niño, Laura C.	FGS
Farre Bernardo, Nuria	FGS	Pedro Olive, Agustí	FGS
Isern Verdum, Josep	FGS	Rojas Cordero, Jady V.	FGS
Julia Sanahuja, Joan C.	FGS	Soto Cambres, Ana M.	FGS
Majercakova, Katarina	FGS	Vila Capel, Antoni	FGS
Mera Errasti, M. Arantzazu	FGS		

Main lines of research

- Radiation Therapy Based on PET/CT Functional Imaging of Tumours.
- Implementation of planning techniques for radiotherapy treatment with PET/CT for chest locations, head and neck and tumours squamous cell tumours.
- Image-guided radiotherapy and respiratory movement control.
- Hypofractionated intensity-modulated / arctherapy IGRT in prostate cancer.
- Oligometastases ablative radiotherapy

Scientific Challenges

- SBRT for Patients with Lung Cancer and with Oligometastases with the intention to increased the quality of life and avoid surgery.
- Stereotactic body radiotherapy techniques in radical treatment of patients with early-stage non-surgical lung cancer and selected patients with non-surgical oligometastatic.
- Vertebral SBRT for oligometastatic tumors.
- Stereotactic Radiation Therapy (SRT) for Brain Metastases.

- Radiotherapy treatment planning of prostate cancer using only magnetic resonance imaging

- Prostate SBRT

Collaborations

Collaborations with other IIB Sant Pau research groups

- Josep Balart. Member of the research team. PI17/00150 “Targeted nanotherapy and combined SBRT radiotherapy for selective elimination of cancer stem cells in pancreatic cancer” PI: M^a Virtudes Céspedes Navarro. Instituto de Salud Carlos III 2018-2021

- Doctoral Thesis: Generación de modelos en ratón de cáncer de páncreas con mayor eficiencia metastásica para el estudio de agentes antitumorales. Noa De la Fuente, PhD en CC. Morfológicas y Cirugía, UAB. 04/06/2021. Directors: Drs M^a Virtudes Céspedes and Vicente Artigas.

External collaborations

- Instituto Nacional de Cancerología de Colombia, research group of Dr Moreno-Acosta. “hTERT AND IGF1R INTERACTION IN COEXISTENCE WITH HPV SPECIES ALPHA 9 AND ITS POSSIBLE RELATIONSHIP WITH TREATMENT RESPONSE IN CERVICAL CANCER”

- HCP representative EURACAN en Sarcomas (inicio 2020) K. Majercakova

- Member of WP 5 de FOSTER (European Osteosarcoma Consortium) K. Majercakova

- Member of GEC ESTRO gyn, CI in the EMBRACE studies (studies to develop, perform and evaluate image guided radiotherapy and brachytherapy in cervix cancer) K. Majercakova

- Estudio GEIS 75 - Phase II multicohort trial of trabectedin and low-dose radiation therapy in advanced/metastatic sarcomas (SYNERGIAS), estudio multicéntrico. K.Majercakova (IP)

- FIS: Émbolos tumorales circulantes hcXCR4/Serpin E1 en el pronóstico de cáncer de cabeza y cuello. (start 2020). K Majercakova (IC)

- CLINICAL PROTOCOL CA20973L: A Phase 3, Randomized, Open Label Study to Compare Nivolumab plus Concurrent Chemoradiotherapy (CCRT) followed by Nivolumab plus Ipilimumab or Nivolumab plus CCRT Followed by Nivolumab vs CCRT followed by Durvalumab in Previously Untreated, Locally Advanced Non-small Cell Lung Cancer (LA NSCLC). (CheckMate 73L, CHECKpoint pathway and nivolumab clinical Trial Evaluation 73L). Promoter: Bristol-Myers Squibb Research and Development. Open: April/2019 - N Farré (IC)

- ETOP 14-18 CHES: A multicentre single arm phase II trial assessing the efficacy of immunotherapy, chemotherapy and stereotactic radiotherapy to metastases followed by definitive surgery or radiotherapy to the primary tumour, in patients with synchronous oligo-metastatic non-small cell lung cancer. Promoter: European Thoracic Oncology Platform (ETOP). Open: April/2019-N Farré (IC)

- A Phase III, Randomized, Placebo-controlled, Double-blind, Multi-center, International Study of Durvalumab Following Stereotactic Body Radiation Therapy (SBRT) for the Treatment of Patients with unresected Stage I/II, lymph-node negative Non-small Cell Lung Cancer (PACIFIC-4/RTOG 3515). Promoter: Astra-Zeneca. RTOG FOUNDATION. Open: Dec 2018-N Farré (IC)

- KEYNOTE-671: A phase III, randomized, double-blind trial of platinum doublet chemotherapy +/- pembrolizumab (MK-3475) as neoadjuvant/adjuvant therapy for participants with resectable stage IIB or IIIA non-small cell lung cancer (NSCLC). Promoter: MSD. Open: April 2018-N Farré (IC)

- A phase II trial of atezolizumab plus induction chemotherapy (CT) plus chemo-radiotherapy and atezolizumab maintenance therapy in non-resectable stage IIIA-IIIIB non-small cell lung cancer (NSCLC) patients. APOLLO: Atezolizumab plus induction chemotherapy plus CT-radiotherapy. Promoter: Fundación GCEP (Grupo Español de Cáncer de Pulmón). GCEP 20/08 . Sponsor: Roche. Open: 2021 N Farré (IC)

- Phase III study for evaluation of the diagnostic performance of [18F] CTT1057 PET imaging in patients with prostate cancer with rising PSA levels [biochemical recurrence (BCR)] (GuidePath). Clinical Trial Protocol CAAA405A12301. EUDRACT: 2020-003959-16. Promoter: Novartis. A Mera (IC)

- E2-RADlatE: EORTC-ESTRO RADiotherapy InfrAstrucTure for Europe EORTC protocol number: 1811. EORTC research project . Sub-study OligoCare:A pragmatic observational cohort study to evaluate radical radiotherapy for oligo-metastatic cancer patients (1822). IP: Matthias Guckenberger and Piet Ost. Site Activation 2021. G Sancho (IP Sant Pau)

- The TrueNTH Global Registry (2017-2019), an international strategy funded by the Movember Foundation. Prostate Cancer Outcomes Global Initiative to Compare and Reduce Variation in Localised Prostate Cancer (“PCO•CRV”). Promotor Movember. G Sancho (IP Sant Pau). This project is led by Dr Moteserrat Ferrer (Health Services Research Group IMIM (Hospital del Mar Medical Research Institute) - G Sancho (IC Sant Pau)

- Estudio multicéntrico de radioterapia postoperatoria hipofraccionada en pacientes diagnosticados de carcinoma de próstata: HYPOR-ES. Promotor: GICOR. Grupo de Investigación Clínica en Oncología Radioterápica). Activación: Mar 2019. G Sancho (PI Sant Pau).

• A Randomized, Double-blind, placebo-controlled Phase 3 study of JNJ-56021927 in subjects with high-risk localized prostate cancer receiving treatment with primary radiation therapy. EudraCT:2015-003007-38. G Sancho (IP Sant Pau).

Scientific production

• Amador M, Matias X, Sancho G, Martinez JC, de la Torre JC, Saiz AP, Garrido P, Garcia R, Rodriguez A, Paz L. Impact of the COVID-19 pandemic on the care of cancer patients in Spain. *ESMO Open*. 2021; 6(3):100157. DOI:10.1016/j.esmoop.2021.100157. PMID:34015642. IF:6,540 (Q1/D3).

• Campos FL, Pardo GS, Pijoan XM, Zilli T, Lorenzo FC, Moron AH. Is hypofractionation acceptable for prostate bed radiotherapy?. *UROLOGIC ONCOLOGY-SEMINARS AND ORIGINAL INVESTIGATIONS*. 2021; 39(6). DOI:10.1016/j.urolonc.2021.02.002. PMID:34049781. IF:3,498 (Q2/D4).

• De Dios NR, Counago F, Murcia M, Rico M, Calvo P, Samper P, Vallejo C, Luna J, Trueba I, Sotoca A, Cigarral C, Farre N, Manero RM, Duran X, Gispert JD, Sanchez G, Rognoni T, Torrente M, Capellades J, Jimenez M, Cabada T, Blanco M, Alonso A, Martinez J, Escribano J, Gonzalez B, Lopez JL. Randomized Phase III Trial of Prophylactic Cranial Irradiation With or Without Hippocampal Avoidance for Small-Cell Lung Cancer (PREMER): A GICOR-GOECF-SEOR Study. *JOURNAL OF CLINICAL ONCOLOGY*. 2021; 39(28). DOI:10.1200/JCO.21.00639. PMID:34379442. IF:44,544 (Q1/D1).

• Garin O, Suarez JF, Guedea F, Pont A, Pardo Y, Goni A, Marino A, Hervas A, Herruzo I, Cabrera P, Sancho G, de Leon JP, Macias V, Gutierrez C, Castells M, Ferrer M. Comparative Effectiveness Research in Localized Prostate Cancer: A 10-Year Follow-up Cohort Study. *INTERNATIONAL JOURNAL OF RADIATION ONCOLOGY BIOLOGY PHYSICS*. 2021; 110(3). DOI:10.1016/j.ijrobp.2020.12.032. PMID:33388360. IF:7,038 (Q1/D1).

• Lozano A, Marruecos J, Rubio J, Farre N, Gomez J, Morera R, Planas I, Lanza M, Vazquez MG, Cascallar L, Giral J, Escames G, Valenti V, Grima P, Bosser R, Tarrago C, Mesia R. Randomized placebo-controlled phase II trial of high-dose melatonin mucoadhesive oral gel for the prevention and treatment of oral mucositis in patients with head and neck cancer undergoing radiation therapy concurrent with systemic treatment. *Clinical & Translational Oncology*. 2021; 23(9). DOI:10.1007/s12094-021-02586-w. PMID:33738704. IF:3,405 (Q3/D7).

• Mahantshetty U, Banerjee S, Sturdza A, Kirisits C, Majercakova K, Schmid MP, Hande V, Potter R. Quantitative and qualitative application of clinical drawings for image-guided brachytherapy in cervical cancer patients. *Journal of Contemporary Brachytherapy*. 2021; 13(5). DOI:10.5114/jcb.2021.110273. PMID:34759975. IF:1,656 (Q4/D9).

• Marta GN, Ramiah D, Kaidar O, Kirby A, Coles C, Jagsi R, Hijal T, Sancho G, Zissiadis Y, Pignol JP, Ho AY, Cheng SHC, Offersen BV, Meattini I, Poortmans P. The Financial Impact on

Reimbursement of Moderately Hypofractionated Postoperative Radiation Therapy for Breast Cancer: An International Consortium Report. *CLINICAL ONCOLOGY*. 2021; 33(5). DOI:10.1016/j.clon.2020.12.008. PMID:33358283. IF:4,126 (Q3/D6).

• Martinez E, Garin O, Pardo Y, Fernandez P, Guix B, Gutierrez C, Boladeras A, Ferrer F, Hernandez T, Ayala A, Egiguren M, Fernandez G, Munoz V, Macias V, Pera J, Pont A, Ferrer M, Guedea F, Sancho G, Palou J, Multicentric Spanish Clinical GRP. Five-year quality of life in patients with high-risk localized prostate cancer treated with external beam radiotherapy alone versus external beam radiotherapy with high-dose-rate brachytherapy boost: a prospective multicenter study. *Journal of Contemporary Brachytherapy*. 2021; 13(1). DOI:10.5114/jcb.2021.103580. PMID:34025730. IF:1,656 (Q4/D9).

• Pötter R, Tanderup K, Schmid MP, Jürgenliemk-Schulz I, Haie-Meder C, Fokdal LU, Sturdza AE, Hoskin P, Mahantshetty U, Segedin B, Bruheim K, Huang F, Rai B, Cooper R, van der Steen-Banasik E, Van Limbergen E, Pieters BR, Tan LT, Nout RA, De Leeuw AAC, Ristl R, Petric P, Nesvacil N, Kirchheiner K, Kirisits C, Lindegaard JC, Chargari C, Dumas I, Lowe G, Swamidas J, Hudej R, Paulsen Hellebust T, Menon G, Oinam AS, Bownes P, Christiaens M, De Brabandere M, Janssen H, Oosterveld B, Koedooder K, Langeland Marthinsen AB, Sundset M, Whitney D, Ketelaars M, Lutgens LCHW, Reinniers B, Mora I, Villafranca E, Antal G, Hadjiev J, Bachand F, Batchelar D, Erickson B, Rownd J, Jacobson G, Kim Y, Anttila M, Palmgren JE, An J, Assenholt MS, Banerjee S, Bentzen S, Berger T, Dankulchai P, Diendorfer T, Dilworth I, Dimopoulos J, Dorr E, Ecker S, Federico M, Fidarova E, Fortin I, Georg P, Gora J, Hegazy N, Jastaniyah N, Jensen NBK, Liederer T, Majercakova K, Misimovic D, Motisi L, Najjari Jamal D, Nkiwane K, Schwartz-Vittrup A, Serban M, Smet S, Spampinato S, Trnkova P, Valgma M, Westerveld H, Wong JSY, Yoshida K. MRI-guided adaptive brachytherapy in locally advanced cervical cancer (EMBRACE-I): a multicentre prospective cohort study. *Lancet Oncology*. 2021;22(4):538-547. DOI: 10.1016/S1470-2045(20)30753-1. PMID: 33794207. IF:41,316 (Q1/D1).

• Provencio M, Majem M, Guirado M, Massuti B, de Las Penas R, Ortega AL, Domine M, Marse R, Sala MA, Paredes A, Moran T, Vazquez S, Coves J, Larriba JLG, Sanchez JM, Vicente D, Farre N, Fornos LF, Zapata I, Franco F, Serna R, Romero A, Isla D. Phase II clinical trial with metronomic oral vinorelbine and tri-weekly cisplatin as induction therapy, subsequently concomitant with radiotherapy (RT) in patients with locally advanced, unresectable, non-small cell lung cancer (NSCLC). Analysis of survival and value of ctDNA for patient selection. *LUNG CANCER*. 2021; 153. DOI:10.1016/j.lungcan.2021.01.005. PMID:33453470. IF:5,705 (Q1/D3).

• Sanguedolce F, Pardo GS, Sanchez AM, Lucena JB, Pisano F, Cortez JC, Territo A, Perez JH, Sopena JG, Lopez CE, Breda A, Redorta JP. Radiation-induced haemorrhagic cystitis after prostate cancer radiotherapy: factors associated to hospitalization and treatment strategies. *Prostate International*. 2021; 9(1). DOI:10.1016/j.pnii.2020.07.006. PMID:33912514. IF:2,286 (Q3/D7).

- Seppenwoolde Y, Majercakova K, Buschmann M, Dorr E, Sturdza AE, Schmid MP, Potter R, Georg D. Early morbidity and dose-volume effects in definitive radiochemotherapy for locally advanced cervical cancer: a prospective cohort study covering modern treatment techniques. *STRAHLENTHERAPIE UND ONKOLOGIE*. 2021; 197(6). DOI:10.1007/s00066-021-01781-6. PMID:33929558. IF:3,621 (Q2/D4).

- Zhao M, Sanz J, Rodríguez N, Foro P, Reig A, Membrive I, Li X, Huang Y, Montezuma L, Martínez A, Manuel A. Weekly radiotherapy in elderly breast cancer patients: a comparison between two hypofractionation schedules. *Clinical & Translational Oncology*. 2021;23(2):372-377. DOI:10.1007/s12094-020-02430-7. PMID: 32617869. IF:3,405 (Q3/D7).

Other scientific production

- Ots PMS, Ortuno JZ, Fernandez SP, Canellas EM, San Segundo CG, Vargas MC, Caballero B, Albiac MR, Masedo GV, Alvarez B, Villalba SR, Miguelanez TM, Garcia PD, Sancho G, Gomez LG, Tripero J, Osés MRR, Villoslada CI, Rodriguez A, Chust ML, Soler AF, Martin E, Macias VM, Sanchez CF, Moya LT, Lopez JF, Sole JM, Verdu MG, Flores MM, Wals A, Hernandez JE. Impact of covid-19 on patients in radiotherapy oncology departments in Spain. *RADIOTHERAPY AND ONCOLOGY*. 2021; 161. DOI:10.1016/j.radonc.2021.06.001. PMID:34118358. IF:6,280 (Q1/D2).

Other publications

- Balart J. Editorial group member for the Special Issue: "Applications of Nanoparticles in Tumor Therapy" in the Journal "*Biomolecule*". 2021 https://www.mdpi.com/journal/biomolecules/special_issues/applications_nanoparticles
- Farré N, Belda J, Guarino M, Tilea L, Cordero JVR, Martínez E. The current role of surgery and SBRT in early stage of small cell lung cancer. *Journal Of Clinical And Translational Research*. 2021; 7(1). PMID:34104807.
- Leon X, Garcia J, Farre N, Majercakova K, Aviles FX, Quer M, Camacho M. Predictive capacity of IL-8 expression in head and neck squamous carcinoma patients treated with radiotherapy or chemoradiotherapy. *Acta Otorrinolaringologica Espanola*. 2021; 72(6). DOI:10.1016/j.otorri.2020.05.003. PMID:32972719.
- Leon X, Garcia J, Lopez M, Farre N, Majercakova K, Gallego O, Lopez A, Quer M. Organ preservation after treatment with induction chemotherapy in patients with locally advanced carcinomas (T3-T4) of oral cavity and oropharynx. *Acta Otorrinolaringologica Espanola*. 2021; 72(1). DOI:10.1016/j.otorri.2020.01.001. PMID:32513455.
- Leon X, Montoro V, Garcia J, Lopez M, Farre N, Majercakova K, Gallego O, Lopez A, Quer M. Organ preservation in patients with advanced laryngeal tumours. Results of induction chemotherapy versus chemoradiotherapy in actual clinical practice. *Acta Otorrinolaringologica Espanola*. 2021; 72(3). DOI:10.1016/j.otorri.2020.02.007. PMID:32475610.

Books or chapters with ISBN

- Libro Blanco de la Oncología Radioterápica en España. SEOR 2021. ISBN: 978-84-09-33399-8.
- Capítulo 10. Cartera de Servicios de un Servicio de Oncología Radioterápica. Agustí Pedro Olive, Maria Arantzazu Mera Errasti, Clara Eito, Jacobo Palma, Jaime Pérez-Alija Fernández.
- Capítulo 11. Infraestructuras. Radioterapia externa: fotones/ electrones. J.Conde, G.Sancho, P.Celada, K.Majercakova, SEOR 2021.

Communication and dissemination activities

Communications in conferences National

- Impacto de la infección SARS-V0c en pacientes con cancer tratados con radioterapia. A.M.Soto Cambres, E.Otero Pla, M.A.Mera Errasti, N.Farré Bernadó, K.Majercakova, M.J.Fuentes Raspall, J.Balart Serra, A.Pedro Olivé, J.C Juliá Sanahuja, G.Sancho Pardo, 2ºcongreso nacional multidisciplinari Covid19 de las Sociedades Científicas de España, 12- 16.04.2021 (virtual)
- Stereotactic ablative radiation therapy for lung metastasis. Outcome by primary tumors, J.Rojas Cordero, G.Sancho Pardo, K.Majercakova, J.Balart Serra, P.Carrasco de Fez, N.Farré Bernadó, I.Congreso virtual Sociedad Española de Oncología Radioterápica,29-30.09. and 06- 07.10.21, e-poster
- Weekly radiation therapy for bladder cancer during the COVID-19 pandemic. Mera Errasti MA, Montezuma Niño LC, Soto Cambres AM, Artola Codina N, Otero Pla E, Gallego Franco P, Carrasco de Fez P, Sancho Pardo G. I.Congreso virtual Sociedad Española de Oncología Radioterápica,29-30.09. and 06- 07.10.21, e-poster.
- Weekly radiotherapy in older breast cancer patients: a comparison between two hypofractionation schedules. M. Zhao, J Sanz, N. Rodriguez, P. Foro, A. Reig, I. Membrive, X Li, Y. Huang, L. Montezuma, A. Martinez, A. Manuel. I Congreso virtual Sociedad Española de Oncología Radioterápica,29-30.09. and 06- 07.10.21, e-poster.
- Tratamiento mediante cirugía o radioterapia ablative estereotáctica de las metástasis pulmonares de cáncer colorectal oligometastásico. A. Piedra, A. Virgili, E. Martínez, N. Farré, J.C. Trujillo, J. Balart, A. Sebio, J. Szafranska, M. Aguado, P. Gallardo, D. Páez. SEOM virtual 2021. 18 – 22 Oct de 2021.

International

- Surgery and Stereotactic Ablative Body Radiotherapy for Colorectal Cancer Lung Oligometastases: one centre experience. Piedra A., Virgili A.C., Martinez E., Farre N., Trujillo J.C., Balart J., Sebio A., Szafranska J., Aguado M., Gallardo P., Paez D. ESMO 2021. 16-21 September 2021.

- Early Palliative Supportive Care within the Lung Cancer Committee (LCC). Fariñas-Balaguer O, Sullivan I, Majem M, Barba A, Torrego A, Pajares V, Martínez E, Trujillo JC, Lerma E, Gimenez A, Farré N, Martínez A, Burrel C, Carreras C, Barnadas A, Belda J. 17th World Congress of the European Association for Palliative Care, Helsinki 6–8 October 2021.
 - 10-Year Results of a Phase III Randomized Trial of High-Dose Radiotherapy and Risk-Adapted Androgen Deprivation in Localized Prostate Cancer. A. Zapatero, A. Guerrero Grande, X. Maldonado, A. Alvarez, C. Gonzalez San Segundo, M.A. Cabeza, J.M. Sole, A. Pedro Olive, F. Casas Duran, A. Boladeras, C. Martín de Vidales, M.L. Vázquez de la Torre, S. Varas, and F.A. Calvo. Proceedings of the ASTRO 63rd Annual Meeting 2021 111 (3Suppl): S77 (oral communication)
 - Prognostic value of testosterone following androgen deprivation and high-dose radiotherapy in prostate cancer. A. Zapatero, A. Guerrero, X. Maldonado, A. Alvarez, C. González San Segundo, M.A. Cabeza Rodríguez, C. Martín de Vidales, J.M. Sole, A. Pedro Olivé, F. Casas, A. Boladeras, M.L. Vázquez de la Torre, F.A. Calvo. Radiotherapy and Oncology 2021;161Supplement: S251–S25t (Oral communication)
- Courses, seminars and conferences**
- Hot topics en radioterapia externa y SBRT. G. Sancho. XIII Oncurology Forum. 22 i 29 January 2021. Virtual.
 - Cáncer de próstata cN1: Radioterapia + Supresión androgènica. G. Sancho. I Curso prostate cancer lives matters. 10–11 Mar 2021. Virtual
 - Utilización de nuevas imágenes moleculares en cáncer de próstata. Impacto clínico de la radioterapia pélvica en cáncer de próstata de alto riesgo. Radioterapia adyuvante/rescate +/- deprivación androgénica post-cirugía en cáncer de próstata. G. Sancho. Curso de formación multidisciplinar en cáncer de próstata. 30 March, 13 and 27 April 2021. Virtual
 - El tratamiento trimodal en MIBC: un recordatorio de qué debemos hacer y qué no debemos hacer. G. Sancho. II Curso anual de UC: terapias personalizadas emergentes en el manejo del carcinoma urotelial. 12–13 May 2021. Virtual
 - La radioterapia de próstata: ¿que hay de nuevo? 5La radioterapia de próstata: ¿que hay de nuevo? Dra. Gemma Sancho. Barcelona, 20 October 2021.
 - Tratamiento trimodal en los timomas y los Carcinomas tímicos. Papel de la Radioterapia. II Curso de Actualización en el diagnóstico y tratamiento de los Tumores Tímicos. Barcelona, 4 Mar 2021.
 - Desafíos de la Radioquimioterapia. Control y tolerabilidad. Compartiendo experiencias en la toma de decisiones pacientes CPNCP estadio III. CONOCE. Barcelona, 21 Apr 2021.
 - Sarcomas de partes blandas y óseos. A. Soto. Curso de Indicaciones Clínicas de la Oncología Radioterápica May 2021. Virtual.
 - Cardio-Oncología: Organització assistencial. Organització assistencial d' una Unitat multidisciplinar. 2º Congrés de la Societat Catalano-Balear d' Oncologia. Santa Coloma de Farnés. 30 Sep 2021. Moderadora de Taula.
 - Cáncer de pulmó estadi IV. Immunoteràpia i SBRT. N. Farré. XXVIII congrés GOCO (Grup oncològic catalano-occità). H. Germans Trias i Pujol. Barcelona, 26 Nov 2021.
 - The growing role of radiation therapy for thymic malignancies. J. Rojas. Fifth International Joint Meeting on Thoracic Surgery. 17–19 November 2021. Virtual
 - El Tratamiento paliativo de las metástasis óseas: Radioterapia. "Màster de cuidados paliatius de la SECPAL". Universitat Autònoma de Barcelona. Barcelona 09/04/2021.
- Outreach activities**
- Jornada dirigida a voluntaris de Catalunya Contra el Càncer. Jornada d'Avenços 2021: Mites sobre el càncer. Veritats i mentides sobre el càncer (Dr. Joan Albanell, Dra. Christelle Ferra i Dra. Gemma Sancho). Barcelona, 20 Nov 2021.
 - Ostomies. J Balart. <https://decisionscopartides.gencat.cat/ca/decidir-sobre/ostomies>



Locomotor System Research

Coordinator

Crusi Sererols, Xavier FGS
xcrusi@santpau.cat

Members

Aguilera Roig, Xavier	FGS	Gonzalez Rodriguez, Jose Carlos	FGS
Almenara Fernández, Marta	FGS	Gracia Alegria, Isidre	FGS
Álvarez Gómez, Carlos	FGS	Lamas Gomez, Claudia Maria	FGS
Bascuñana Ambros, Helena	FGS	Nadal Castells, Maria Josep	FGS
Carrera Fernandez, Ion	FGS	Peiro Ibañez, Ana	FGS
Cuartero Archs, Jordi	FGS	Pérez Romera, Ana Belén	FGS
De Caso Rodriguez, Julio	FGS	Velazquez Fragoso, Juan Jose	FGS
Gelber Ghertner, Pablo Eduard	FGS		

Main lines of research

Antiresorptives in Orthopedic and Trauma Surgery

Effect of zoledronic acid (Aclasta) on periprosthetic bone mineral density in patients undergoing total knee arthroplasty. Study approved by the HSCSP ethics committee and authorized by the Spanish Medicines and Health Products Agency (AEMPS) for the out-of-context indication of Aclasta.

Knee

• Haemostasis

• Blood loss control using tranexamic acid in primary prosthetic and knee revision surgery.

• Retrospective study of revision knee arthroplasty to compare the effects of intravenous tranexamic acid and normal haemostasis.

• Clinical trial comparing outcomes for intravenous tranexamic acid with fibrin glue (Tissucol) and normal haemostasis in primary knee prosthetic surgery.

• Observational study of blood loss in redon drainage over time in pertrochanteric hip fractures.

• Randomized multicenter parallel clinical trial in antiaggregated patients with proximal

fémur fracture that evaluates a strategy to shorten the time to surgery. AFFEct study.

• Cartilage

• Regeneration of cartilage defects using tissue engineering and a matrix seeded with characterized allogeneic chondrocytes.

• Prospective study on fresh osteochondral allograft transplantation. CT, MRI and clinical outcomes.

• Patella

• Prospective comparative study on patellar fractures. Metallic wiring versus suture fixation

• Meniscus

• Effect of normal and growth-factor-enriched cell cultures on the meniscal collagen network and glycosaminoglycan expression.

• In vitro experimental study of the feasibility of a polyurethane replacement meniscus pre-seeded with stem cells.

• Evolution of allogeneic meniscal transplants and relationship with extrusion.

Hip

• Coxarthrosis in young adults: etiological study of biomechanical factors.

• Biomechanics of coxarthrosis in young adults: finite element study.

• Influence of hip anatomy in early development of coxarthrosis: controlled, prospective radiographic study.

• Osteosynthesis with cannulated screws in non-displaced femoral neck fractures in elderly patients.

• Randomized clinical trial for capsular and rotator muscles suture in cemented bipolar hemiarthroplasties in patients with femur fracture

Foot and Ankle

• Ensayo clínico prospectivo aleatorizado para el tratamiento quirúrgico de las roturas del tendón de Aquiles: reparación con técnica mini invasiva vs tenorrafia abierta

Upper Limb

• Anatomical study of stabilizing ligaments in the trapeziometacarpal joint: the role played by dorsoradial and anterior oblique ligaments in Bennett and Rolando fractures.

• Surgical treatment of middle-third clavicle fractures in high-energy trauma in young patients.

• Retrospective study of the use of vascularized bone graft using the 1,2-ICSR artery in the revascularization of proximal pole necrosis in scaphoid pseudarthrosis.

Active grants

• PABLO EDUARD GELBER GHERTNER. Preservación en fresco de aloinjertos osteocondrales a 37°C.. PI18/01771. Instituto de Salud Carlos III. Duration 2019-2021. 57.000,00 €.

Note: Total amount granted to PI. It does not include indirect costs.

Doctoral theses

• Dr Isidro Angel Gracia Alegria, Estudi observacional, descriptiu i retrospectiu d'una cohort de 102 casos consecutius de sarcoma sinovial tractats a la Unitat de Cirurgia Ortopèdica Oncològica del Servei de Cirurgia Ortopèdica i Traumatologia de l'Hospital de Sant Pau entre els anys 1983 i 2016 (35 anys). Nov 2019- Nov 2021. Cum-Laude Mention. CLAUDIA MARIANA LAMAS GOMEZ, 09/06/2021.

Scientific production

• Anaya R, Rodriguez M, Millan A, Reguant F, Llorca J, Guilbert P, Ruiz A, Pantoja PE, Gil JM, Moral V, Merchán-Galvis A, Martínez-Zapata MJ, On Behalf Of The AFFEct Study Group. Early Surgery with Neuraxial Anaesthesia in Patients on Chronic Antiplatelet Therapy with a Proximal Femur Fracture: Multicentric Randomised Clinical Trial. *Journal of Clinical Medicine*. 2021;10(22):5371. DOI:10.3390/jcm10225371. PMID: 34830654. IF:4,241 (Q1/D3).

• Boluda J, Guimera V, Olias B, Renovell P, Carrera I, Herrera M, Pais JL. A proposal of a new algorithm for decision-making approaches in open reduction and internal fixation of complex tibial plateau fractures- SOTA algorithm (Spanish Orthopaedic Trauma Association) *. *INJURY-INTERNATIONAL JOURNAL OF THE CARE OF THE INJURED*. 2021; 52. DOI:10.1016/j.injury.2021.03.064. PMID:34011441. IF:2,586 (Q2/D4).

• Chahla J, Kunze KN, LaPrade RF, Getgood A, Cohen M, Gelber P, Barenus B, Pujol N, Leyes M, Akoto R, Fritsch B, Margheritini F, Rips L, Kautzner J, Duthon V, Togninalli D, Giacomo Z, Graveleau N, Zaffagnini S, Engbretsen L, Lind M, Maestu R, Von Bormann R, Brown C, Villascusa S, Monllau JC, Ferrer G, Menetrey J, Hantes M, Parker D, Lording T, et al. The posteromedial corner of the knee: an international expert consensus statement on diagnosis, classification, treatment, and rehabilitation. *KNEE SURGERY SPORTS TRAUMATOLOGY ARTHROSCOPY*. 2021;29(9):2976-2986. DOI:10.1007/s00167-020-06336-3. PMID: 33104867. IF:4,342 (Q1/D2).

• Gelber PE, Ramirez E, Grau A, Gonzalez A, Llauger J, Farinas O. A new computed tomography scoring system to assess osteochondral allograft transplantation for the knee: inter-observer and intra-observer agreement. *INTERNATIONAL*

ORTHOPAEDICS. 2021; 45(5). DOI:10.1007/s00264-020-04927-w. PMID:33416905. IF:3,075 (Q2/D3).

- Gelber PE, Torres R, Poggioli F, Perez D, Monllau JC. Polyurethane Meniscal Scaffold: Does Preoperative Remnant Meniscal Extrusion Have an Influence on Postoperative Extrusion and Knee Function?. *Journal of Knee Surgery*. 2021; 34(14). DOI:10.1055/s-0040-1710377. PMID:32450603. IF:2,757 (Q2/D5).
- Marot V, Sanchis-Alfonso V, Perelli S, Gelber PE, Sánchez Rábago CJ, Ginovart G, Monllau JC. Isolated reconstruction of medial patellofemoral ligament with an elastic femoral fixation leads to excellent clinical results. *KNEE SURGERY SPORTS TRAUMATOLOGY ARTHROSCOPY*. 2021;29(3):800-805. DOI:10.1007/s00167-020-06016-2. PMID: 32358632. IF:4,342 (Q1/D2).
- Martel L, Alonso A, Bascunana H, Diaz J, Llauger J, Nunez C, Montesinos P, Webb SM, Valassi E. Prevalence of sarcopenia after remission of hypercortisolism and its impact on HRQoL. *CLINICAL ENDOCRINOLOGY*. 2021; 95(5). DOI:10.1111/cen.14568. PMID:34323296. IF:3,478 (Q3/D7).
- Martel L, Alonso J, Bascunana H, Diaz J, Llauger J, Nunez C, Montesinos P, Webb SM, Valassi E. Intramuscular fatty infiltration and physical function in controlled acromegaly. *EUROPEAN JOURNAL OF ENDOCRINOLOGY*. 2021; 185(1). DOI:10.1530/EJE-21-0209. PMID:33950861. IF:6,664 (Q1/D2).
- Rivera A, Sanchez A, Luque S, Mur I, Puig L, Crusi X, Gonzalez JC, Sorli L, Gonzalez A, Horcajada JP, Navarro F, Benito N. Intraoperative Bacterial Contamination and Activity of Different Antimicrobial Prophylaxis Regimens in Primary Knee and Hip Replacement. *Antibiotics-Basel*. 2021; 10(1):18. DOI:10.3390/antibiotics10010018. PMID:33375415. IF:4,639 (Q2/D3).
- Toro A, Zuriarrain SW, Masdeu MG, Sayol RR, Billi AM, Carrera I, de Caso J. Risk factors for infection in fixation of distal tibia fractures *. *INJURY-INTERNATIONAL JOURNAL OF THE CARE OF THE INJURED*. 2021; 52. DOI:10.1016/j.injury.2021.02.085. PMID:33685643. IF:2,586 (Q2/D4).
- Vilchez HH, Escudero R, Fernandez M, Murillo O, Aunon A, Rodriguez D, Jover A, del Toro MD, Rico A, Falgueras L, Praena J, Guio L, Iribarren JA, Lora J, Benito N, Morata L, Ramirez A, Riera M, Mur I, Coll P, Crusi X, Soriano A. Prosthetic Shoulder Joint Infection by Cutibacterium acnes: Does Rifampin Improve Prognosis? A Retrospective, Multicenter, Observational Study. *Antibiotics-Basel*. 2021; 10(5):475. DOI:10.3390/antibiotics10050475. PMID:33919103. IF:4,639 (Q2/D3).

Books or chapters with ISBN

- Diagnòstic i Tractament de les Metàstasis Òssies (inclou versió digital). ISBN: 9788491107804-4 (versió impresa i versió digital) i ISBN: 9788491107804-4 (versió digital). Editorial Mèdica Panamericana: Buenos Aires. Bogotá. Madrid. Mèxic. Chapters:

- MANEIGS ESPECIALS SEGONS NEOPLÀSIA PRIMÀRIA: PRÒSTATA MAMA, TIROIDES, GENITAL, PULMÓ i GASTROINTESTINAL. (pag 253-265)

- MANEIGS ESPECIALS SEGONS NEOPLÀSIA PRIMÀRIA: ALTRES: MELANOMA, SARCOMES OSSI I SARCOMES DE PARTS TOVES (pag 277-285)

Communication and dissemination activities

Outreach activities

- 58 CONGRÉS SECOT PRESENCIAL SEVILLA (29 Set- 1 Oct 2021): Moderator/Speaer: I Gràcia. Taula LIVING (SECOT).-GEIS: El cirurgià ortopèdic oncològic i l'oncòleg medic: col·laboradors necessaris també en tumors musculoesquelètics benignes (tumor ossi de cèl·lules gegants de parts toves)
- I Curs de Formació en Tumors Mesenquimals i Sarcomes per a Residents de 5è any de l'AEC. Hospital de la Santa Creu i Sant Pau-Barcelona 21-22 Oct 2021. Title: Principis quirúrgics dels sarcomes no retroperitoneals (parlem de tumors ossi): Reseccions pelvianes grans per sarcomes ossi (Dr Gracia).
- XX Curs de Revisió en COT "Luis Munuera". Title: Presentació Casos Clínics Tumors: Sarcomes de parts toves. 5 May 2021 21.30 hores.
- **Teaching and surgery at:**
 - Hospital Infantil Sant Joan de Deu de Barcelona: Cirurgia de resecció tumoral en húmer proximal d'alta complexitat amb reconstrucció mitjançant sistema compost prostètic 2-9-2021
 - Hospital Comarcal de Berga. Cirurgia d'alta complexitat per a resecció tumoració parts toves cuixa 20-10-2021
 - Hospital Virgen de las Nieves de Granada: Cirurgia de resecció d'hemipelvis d'alta complexitat amb reconstrucció protètica 19-11-2021
 - Lecturer at 1r CURS BROGGI Tractament quirúrgic de fractures: 2021 (18-5-21). Title: Malaltia metastàsica de femur. Actitud terapèutica i gestos preventius. Dr Gracia. Mòdul 8: Tècniques quirúrgiques en fractures d' EEII. Moderator. Miquel Videla
 - Book presentation: DIAGNOSTICO Y TRATAMIENTO DE LAS METASTASIS OSEAS. 24-2-2021 20 a 21:30 h.
 - Tractament no quirúrgic de les lesions metastàsiques. Dr Antonio Fraguas. Centro Médico Teknon.
 - El proceso diagnóstico de la metástasis ósea. Dr Portabella. Centro Médico Teknon
 - Metàstasi vertebrals. Indicacions quirúrgiques. Dr Ramírez. Hospital Universitari Vall d'Hebrón, Barcelona.
 - Pròtesis i metástasis. Moderator: Dr Ernesto Guerra. Hospital Universitari Vall d'Hebrón, Barcelona – Experts panel: Dr Eduardo Ortiz. Hospital Universitario de La Paz, Madrid; Prof

Jose Casanova. Centro Hospitalario Universitario de Coimbra;
Dr I. Gracia. Hospital Sant Pau (Barcelona). Conclusions: Dr Joan
Minguell. Hospital Universitari Vall d'Hebrón, Barcelona.

- GEIS XIX INTERNATIONAL SYMPOSIUM 14th October 2021: 15:45-16:00 Updates in bone sarcoma surgery: Has functionality improved in the decade? Isidro Gracia, Hospital Sant Pau, Barcelona

- Spanish representative at EURO EWING CONSORTIUM: Dr Abigail Evans. Scientific Project Manager, EURO EWING Consortium.

- Active member of GEIS (Grup Espanyol de Recerca a Sarcomas). Working groups: Xarxa nacional, Sarcoma d' Ewing, Osteosarcoma i Condrosarcoma.

- **Congreso SECOT (Sociedad Española Cirugía Ortopédica y Traumatología) – Sevilla, Sep 2021.**

- Poster: "Fractura-luxación glenohumeral con lesión de Hill-Sachs invertida asociada.". Authors: Manel Fa, Alvaro Toro, Rafael Hernandez, Julio de Caso, Angélica Millán.

- Poster - "Fractura de Tillaux en el adulto: ¿hay consenso en su tratamiento?" Autores: Manel Fa, Joan Sugrañes, Mireia Gomez, Julio De Caso, Angelica Millan.

- Oral communication: "El Paciente politraumatizado en contexto de accidente laboral". Authors: Manel Fa, José Miguel Mata, Ion Carrera, Julio de Caso, Angelica Millán.

- XXXVII Curso Básico de Iniciación a la Microcirugía – Hospital Parc Taulí, Sabadell. 14, 15 y 16 Apr 2021. Dr Angélica Millán Billi, attendant.

- Curso Online Trauma School – Smith&Nephew. Feb 2021. Invited Speaker: Dr Angélica Millan. Title: "Cirugía Ortopédica para Principiantes"

- Curso AO Principios Básicos de Osteosíntesis. Alicante. Octubre, 2021. Talk: "Estabilidad relativa: biomecánicas, técnicas y curación ósea." Talk: "El uso de placas en la fijación de las fracturas".

- Dr Millán, lecturer and member in working groups, skill labs and practical exercises.



Pain and Neurosciences

Coordinator

Catala Puigbo, Elena FGS
ecatala@santpau.cat

Members

Díaz Jover, Rubén	FGS	Reuelta Rizo, Miren Eli.	FGS
Ferrandiz Mach, Marta	FGS	Rius Llorens, Maria Carmen	FGS
Genove Cortada, Maria Merce	FGS	Roses Álvarez, Laia	FGS
Melo Cruz, Martha Cristina	FGS	Santeularia Verges, Maria Teresa	FGS
Muñoz Hernandez, Isabel	FGS	Santos Vives, Alicia	IR
Parera Ruiz, Ana	FGS		

Main lines of research

- Involvement of brain areas and release of substances in acute and chronic neuropathic pain.
- Sleep disturbance on initiating systemic opioid treatment in patients with severe chronic pain and altered sleep patterns.
- Influence epidural corticosteroids treatment by different approach on the effectiveness of the radicular pain due to herniated lumbar disc.
- Profile in terms of demographics, comorbidities, kind of pain, physical and mental status and disability of patient.

- Look for a local and non pharmacological treatment for elderly patients with pain.

- Influence of Radiofrequency lesions in different procedures in patients with chronic pain

Scientific Challenges

- Establish the possible differences in brain area involvement between acute and chronic pain.
- Determine the extent of chronic pain according to the involvement of different brain areas and if these alterations can improve with the relief of pain.

- Determine whether the intensity of chronic neuropathic pain assessed by the patient is correlated with the patient's psychopathology, essentially anxiety, depression and catastrophizing.
- Determine the profile of patients who would benefit from treatment with major systemic opioids in relation to night rest and establish the recommendable opioid.
- Establish the recommended opioid dose to start a treatment and how to remove them.

Scientific production

- Calderon-Mediavilla M, Vila-Badia R, Dolz M, Butjosa A, Barajas A, Del Cacho N, Sánchez B, Pardo M, Baños I, Usall J, Ochoa S; GENIPE Group; PROFEP Group [Santos A, Nuñez C]. Depressive symptoms and their relationship with negative and other psychotic symptoms in early onset psychosis. *EUROPEAN CHILD & ADOLESCENT PSYCHIATRY*. 2021;30(9):1383-1390. DOI:10.1007/s00787-020-01618-0. PMID: 32865655. IF:4,785 (Q1/D1).
- De La Piscina IM, Najera NP, Rica I, Gaztambide S, Webb SM, Santos A, Moure MD, Fano MP, Hernandez MI, Chueca MJ, Hernandez LC, Soto A, Valdes N, Castano L, Hispanic A. Clinical and genetic characteristics in patients under 30 years with sporadic pituitary adenomas. *EUROPEAN JOURNAL OF ENDOCRINOLOGY*. 2021; 185(4). DOI:10.1530/EJE-21-0075. PMID:34313605. IF:6,664 (Q1/D2).
- Gil J, Marques M, Jorda M, Fajardo C, Garcia A, Sampedro M, Serra G, Salinas I, Blanco A, Valassi E, Sesmiolo G, Carrato C, Camara R, Lamas C, Casano P, Alvarez CV, Bernabeu I, Webb SM, Pico A, Marazuela M, Puig M, Santos A, Vida JI. Molecular determinants of enhanced response to somatostatin receptor ligands after debulking in large GH-producing adenomas. *CLINICAL ENDOCRINOLOGY*. 2021; 94(5). DOI:10.1111/cen.14339. PMID:32978826. IF:3,478 (Q3/D7).
- Koller T, Ruiz AP, Diaz M, Caro A. Role of fibrinogen concentrates for treatment of critical perioperative hemorrhage. *DRUGS OF TODAY*. 2021; 57(3). DOI:10.1358/dot.2021.57.3.3250287. PMID:33729219. IF:2,245 (Q4/D8).
- Lee RS, Zandi PP, Santos A, Aulinas A, Carey JL, Webb SM, McCaul ME, Resmini E, Wand GS. Cross-species Association Between Telomere Length and Glucocorticoid Exposure. *JOURNAL OF CLINICAL ENDOCRINOLOGY & METABOLISM*. 2021; 106(12). DOI:10.1210/clinem/dgab519. PMID:34265046. IF:5,958 (Q1/D2).
- Santos A, Webb SM, Resmini E. Psychological complications of Cushing's syndrome. *Current Opinion in Endocrinology Diabetes and Obesity*. 2021; 28(3). DOI:10.1097/MED.0000000000000633. PMID:33764929. IF:3,243 (Q3/D7).
- Webb SM, Kristensen J, Vitali D, van S, van C, Santos A, Nordenstrom A. EndoERN patient survey on their perception of health care experience and of unmet needs for rare endocrine diseases. *ENDOCRINE*. 2021; 71(3). DOI:10.1007/s12020-021-02625-0. PMID:33544353. IF:3,633 (Q3/D6).

Other publications

- Català E. La importància de la Evaluación del Dolor para un correcto tratamiento. *Dolor: Investigación Clínica & Terapéutica*. 2021;36(3):131.
- Ferrandiz M. Retos en la Evaluación del dolor neuropático. *Dolor: Investigación Clínica & Terapéutica*. 2021;36(3):136-142.
- Ferrandiz M. Signos de alarma en el dolor agudo-lumbalgia y criterios de derivación entre especialista y médico de asistencia primaria. *Dolor: Investigación Clínica & Terapéutica*. 2021;36(4):196-205.
- Genove M. Aspectos a evaluar en el paciente en tratamiento con opioides. *Dolor: Investigación Clínica & Terapéutica*. 2021;36(3):144-152.
- Melo M. Factores a evaluar en el paciente con lumbalgia y su correlación con las comorbilidades. *Dolor: Investigación Clínica & Terapéutica*. 2021;36(3):132-135.
- Roses L, Muñoz I. Evaluación del dolor postoperatorio, una herramienta imprescindible para el abordaje eficaz el dolor. *Dolor: Investigación Clínica & Terapéutica*. 2021;36(4):174-182.
- Santeularia T. Nuevas perspectivas en la evaluación del dolor. *Dolor: Investigación Clínica & Terapéutica*. 2021;36(4):169-173.
- Santos A, Rius C. La evaluación psicológica del paciente con dolor crónico. *Dolor: Investigación Clínica & Terapéutica*. 2021;36(3):153-159.
- Toral D, Genové M, Ferrándiz M, Núñez S, Català E. Dificultad en el manejo de altas dosis de opioides intraespinales tras retirada de implante intratecal por infección [Comunicación oral]. X Reunió d'Abordatge del Dolor per a Residents i Adjunts Joves. Societat Catalana de Dolor. 26 de Març 2021.
- Toral D; Genové M; Ferrándiz M; Núñez S; Català E. Dificultad en el manejo de altas dosis de opioides intraespinales tras retirada de implante intratecal por infección. *Dolor: Investigación Clínica & Terapéutica*. 2021;36(2):113-7.

Communication and dissemination activities

Courses and conferences

- Català E. ICH Good Clinical Practice E6 (R2). Score 100%. The Global Health Network. 3/11/2021.

- Roses L. ICH Good Clinical Practice E6 (R2). Score 100%. The Global Health Network. 3/11/2021.
- Diaz R. ICH Good Clinical Practice E6 (R2). Score 100%. The Global Health Network. 3/11/2021.
- Genové. ICH Good Clinical Practice E6 (R2). Score 100%. The Global Health Network. 3/11/2021.
- Ferrandiz M. Bases Anatómicas y Neurofisiológicas de la Transmisión del Dolor Sociedad Catalana de Anestesiología y Reanimación. 11 April 2021.
- Ferrandiz M. Moderadora de la Mesa Redonda “Lumbalgia en Atención Especializada” Reunión Monográfica sobre Lumbalgia. Abordaje Multidisciplinar. Sociedad Catalana de Dolor y Sociedad Balear del Dolor. 5 November 2021. Palma de Mallorca.
- Ferrandiz M. Fase de Prueba y Comienzo de tratamiento. Jornada Anual del GTSED de Neuromodulación y del GISED de Infusión Intratecal (Virtual). 20 May 2021.



Nursing Care Research

Coordinator

Mas Dalmau, Gemma
gmasd@santpau.cat

FGS

Members

Armora Verdú, Miriam

FGS

Ricart Basagaña, Maria Teresa

FGS

Berga Congost, Gemma

FGS

Roca Sarsanedas, Jaume

FGS

Cebria Morales, Maria Queralt

FGS

Romero Pastor, Mónica

FGS

Díez García, Cecilia

FGS

Sist Viaplana, Xènia

FGS

Fernández Sánchez, Susana

FGS

Valverde Bernal, Jonatan

FGS

Marquez López, Adrián

FGS

Vicente Pérez, Sílvia

FGS

Mateos Davila, Almudena

FGS

Villalobos Abello, Alba

FGS

Main lines of research

- Fall prevention and analysis of fall-related factors.
- Translation and validation of care evaluation questionnaires.
- Constipation and ageing.
- Quality of life related to nursing care.
- Development and application of health science methods: qualitative and quantitative methods, text analysis and discourse analysis.
- Patient satisfaction with nursing care.
- Attention to the family.
- Pain.

Scientific Challenges

- Strengthen implemented research lines and disseminate the results of active projects.
- Explore the impact of nursing care for patients, strategies for care improvement and the application of results in cure models.
- Improve the development and understanding of qualitative research in the context of the health sciences and disseminate qualitative methods and analyses of text and discourse as tools in health science research.
- Create the synergies necessary to consolidate the group's activities.

Collaborations

Collaborations with other IIB Sant Pau research groups

- Diez C (principal). La efectividad de la enfermera de anestesia en la consulta de preoperatorios: un estudio de cohortes prospectivo.
- Diez C (collaborator). Estudi FRAGILE.
- G. Mas (collaborator). Optimisation of antibiotic prescription in acute non-complicated respiratory tract infections in children: a multicenter factorial randomised controlled trial targeting health professionals and parents. La Marató de TV3 Grant.

External collaborations

- G. Berga. "Creación y estudio de las propiedades psicométricas de un nuevo instrumento (cuestionario) para medir el grado de adherencia a las conductas de autocuidado recomendadas y el cambio en el estilo de vida en pacientes que han padecido un síndrome coronario agudo." IIBSP-INT-2019-74. Universitat d'Infermeria de l'Hospital de Sant Pau and Hospital Clínic (IDIBAPS)
- G.Mas (collaborator). Impact of the implementation of Good Practices Guides on beliefs-attitudes and behavior in relation to Practice Based on Evidence and the perception of the nursing work environment (PR-259/18). COIB Grant. Collaboration with Mar Institute of Medical Research Foundation.

Active grants

- ADRIAN MARQUEZ LOPEZ. Desenvolupament i avaluació de l'impacte d'un llistat de verificació de seguretat adaptat a la cardiologia intervencionista. PR-235/17. Fundació Infermeria i Societat. Duration 2018-2021. 4.000,00 €.
- GEMMA BERGA CONGOST. Atención precoz en el diagnóstico de infarto agudo de miocardio: impacto de una intervención educativa y organizativa. SLT008/18/00052. Departament de Salut. Duration 2019-2021. 73.343,84 €.
- SILVIA VICENTE PEREZ. Swaddy.. FIPSE 3751-20. Fundació per la Innovació i la Prospectiva en Salut a Espanya. Duration 2020-2021. 30.000,00 €.

Note: Total amount granted to PI. It does not include indirect costs.

Other active grants

- G.Berga (principal), J.Valverde (collaborator). Atención precoz en el diagnóstico de Infarto Agudo de Miocardio: Impacto de una intervención educativa y organizativa. IIBSP-IAM-2015-84, IIBSP-IAM-2015-84v2. Universitat de barcelona. Thesis in progress.

- Márquez. CONTEXTUALIZACIÓN y EVALUACIÓN de INDICADORES de CALIDAD ASISTENCIAL de la "STRUCTURAL HEART NURSE" en ESPAÑA. Proyecto STAR NURSE. Thesis in progress.

- Mateos. Validación del protocolo del uso de la anticoagulación regional con citrato de Baxter en las técnicas de depuración extrarrenal continua en el paciente crítico. IIBSP-CIT-2019-34. Universitat de Barcelona. Thesis in progress.

- J. Roca. Evaluación de la efectividad del calor seco en las extravasaciones del contraste yodado. Universitat de Barcelona. Thesis in progress.

- M. Romero. Percepción del paciente crítico en relación al alta de la UCI. Universitat Rovira i Virgili. Thesis in progress.

- J. Valverde (principal), G.Berga (collaborator). Impacto de la consulta de enfermería de hemodinámica en los indicadores de calidad de los procedimientos valvulares percutáneos. IIBSP-CEH-2020-140. Thesis in progress.

- S. Vicente (principal). Efectivitat d'una intervenció per a la disminució del nivell de soroll a una Unitat de Cures Intensives Neonatals, Projecte 9-nat. IIBSP-NAT-2018-76.

Awards

- Cecilia Diez Garcia; Ignasi Gich Saladich; Ignasi Bolibar Ribas. La efectividad de la enfermera de anestesia en la consulta de preoperatorios: un estudio de cohortes prospectivo. XXI Jornades d'Anestesiologia en Infermeria. XV Congrés de la Societat Catalana d'Anestesiologia Reanimació i Teràpia del Dolor. Nov 2021. Barcelona. Best oral communication award
- Cecilia Diez Garcia; Adoracion Ibañez Lujan; Carmen Bello Sanchez; Rosa Mª Muñoz Albarracín. Prehabilitación: el papel de la enfermera en la optimización de los pacientes quirúrgicos. VI Jornades d'Infermeria: Fem Ponts Hospital de la Santa Creu i Sant Pau. Novembre 2021. Barcelona. Awarded presentation.
- Jonatan Valverde Bernal, Jose Martínez Pérez, Gemma Berga Congost, Núria Castelló Fosch, Lluís Asmarats, Josefina Martínez Soler, Carmen Moreno Arroyo. Awarded the best nursing research project at Coronary and Structural Course (CSC). Project: Impacto de la consulta de enfermería en los indicadores de calidad de los procedimientos valvulares percutáneos (coautora). Nov 2021.

Scientific production

- Congost GB, Brugaletta S, Bernal JV, Lopez AM, Gabalda JR, Garcia J, Campmany MP, Momblan M. The importance of organizational variables in treatment time for patients with ST-elevation acute myocardial infarction improve delays in

STEMI. *Australasian Emergency Care*. 2021; 24(2). DOI:10.1016/j.auec.2020.10.001. PMID:33199195. IF:1,283 (Q3/D8).

- Esteban-Sepúlveda S, Sesé-Abad A, Lacueva-Pérez L, Domingo-Pozo M, Alonso-Fernandez S, Aquilue-Ballarín M, Barcelo-Martínez AI, Cristobal-Dominguez E, Bujalance-Hoyos J, Dossantos-Sánchez C, Pascual-Pascual MA, García-Arteaga E, Galisteo-Gimenez M, Mas-Dalmau G, Heredia-Reina MP, Roca-Martí S, Riart MP, Albornos-Muñoz L, et al. Impact of the implementation of best practice guidelines on nurse's evidence-based practice and on nurses' work environment: Research protocol. *JOURNAL OF ADVANCED NURSING*. 2021;77(1):448-460. DOI:10.1111/jan.14598. PMID: 33058281. IF:3,187 (Q1/D1).

- Martí MD, Lazaro GG, Juncal RC, Paredes SP, Diez C. Occupational Diseases and Perceived Health in Operating Room Nurses: A Multicenter Cross-Sectional Observational Study. *INQUIRY-THE JOURNAL OF HEALTH CARE ORGANIZATION PROVISION AND FINANCING*. 2021; 58:00469580211060774. DOI:10.1177/00469580211060774. PMID:34961339. IF:1,730 (Q4/D9).

- Mas G, Lopez CV, Gorrotxategi PG, Prendes EA, Ramos OE, Duran TV, Alonso M, Viana MPC, Bada TM, Fernandez M, Hernandez A, Ortiz LM, Little P, Abad MD, Alonso P, DAP GRP. Delayed Antibiotic Prescription for Children With Respiratory Infections: A Randomized Trial. *PEDIATRICS*. 2021; 147(3):e20201323. DOI:10.1542/peds.2020-1323. PMID:33574163. IF:7,124 (Q1/D1).

- Stuart B, Hounkpatin H, Becque T, Yao GQ, Zhu SH, Alonso P, Altiner A, Arroll B, Bohning D, Bostock J, Bucher HC, Chao J, de la Poza M, Francis N, Gillespie D, Hay AD, Kenealy T, Loffler C, McCormick DP, Mas G, Munoz L, Samuel K, Moore M, Little P. Delayed antibiotic prescribing for respiratory tract infections: individual patient data meta-analysis. *BMJ-British Medical Journal*. 2021; 373:n808. DOI:10.1136/bmj.n808. PMID:33910882. IF:39,890 (Q1/D1).

Other publications

- Martínez-Pérez J, Valverde-Bernal J, Castelló-Fosch N. ANULOPLASTIA TRICUSPÍDEA PERCUTÁNEA CON DISPOSITIVO CARDIOBAND®. *Enferm Cardiol*. 2021; 28 (84):49-51. <https://www.enfermeriaencardiologia.com/wp-content/uploads/ART-7-84IC02.pdf>.

- SEC Working Group for the ESC Guidelines for the Management of Acute Corona 2020, Expert Reviewers for the ESC Guidelines for the Management of Acute Coronar 2020, SEC Working Group for the ESC guidelines for the management of acute corona 2020, Expert reviewers for the ESC guidelines for the management of acute coronar 2020, SEC C; Sambola A, Andrea R, Ariza A, Berga G, Cid B, López de Sa E, Martínez M, Moreno R, Ojeda S, Sanchis J, Huelmos A, Jiménez P, Juárez M, Asenjo RM, Pedreira M, Rodríguez O, Roldán I, Romaguera R, Avanzas P, Berga G, Boraita A, Bueno H, Calvo D, Campuzano R, Delgado V, Dos L, Ferreira I, Gómez JJ, Pascual D, Sambola A, Viana A,

Ferreiro JL, Alfonso F. Comments on the 2020 ESC guidelines for the management of acute coronary syndromes in patients presenting without persistent ST-segment elevation. *Revista Espanola De Cardiologia (english Ed.)*. 2021; 74(6). DOI:10.1016/j.rec.2020.12.018. PMID:33775589.

- SEC Working Group for the ESC Guidelines for the Management of Atrial Fibr 2020, Expert Reviewers for the ESC Guidelines for the Management of Atrial Fibr 2020, Working Group for the ESC guidelines for the management of atrial fibrillat 2020, Expert reviewers for the ESC guidelines for the management of atrial fibr 2020, SEC C, Arbelo E, Arribas F, Cosín J, Gámez JM, Jiménez J, Juárez M, Marín F, Pérez S, Pérez PJ, Alonso C, Ariza A, Atienza F, Barrios V, Benito B, Bertomeu V, Escobar C, López de Sá E, Martín A, Martín R, Pachón M, Pombo M, Avanzas P, Berga G, Boraita A, Bueno H, Calvo D, Campuzano R, et al. Comments on the 2020 ESC/EACTS guidelines for the management of atrial fibrillation. *Revista Espanola De Cardiologia (english Ed.)*. 2021; 74(5). DOI:10.1016/j.rec.2020.11.023. PMID:33736964.

- SEC Working Group for the ESC Guidelines on Sports Cardiology and Exercise 2020, Expert Reviewers for the ESC Guidelines on Sports Cardiology and Exercise i 2020, Working Group for the ESC guidelines on sports cardiology and exercise in 2020, Expert reviewers for the ESC guidelines on sports cardiology and exercise in pa , SEC C, Adamuz C, Alcocer M, Carro A, Díaz L, Heredia JR, Madaria Z, Masiá MD, Rossi M, Sánchez M, Trias de Bes J, Azcárate P, Barriales R, Benito B, Calvo F, Fuertes Á, de la Guía F, Martínez A, Martínez J, Moñivas V, Peiró E, Vera TR, de la Rosa A, Avanzas P, Berga G, Boraita A, Bueno H, Calvo D, et al. Comments on the 2020 ESC guidelines on sports cardiology and exercise in patients with cardiovascular disease. *Revista Espanola De Cardiologia (english Ed.)*. 2021; 74(6). DOI:10.1016/j.rec.2021.03.002. PMID:33773942.

- SEC Working Group for the ESC 2020 Guidelines for the Management of Adult Congenital Heart disease, Expert Reviewers for the ESC Guidelines for the Management of Adult Congenital Heart Disease and SEC Guidelines Committee, Spanish Society of Cardiology Working Group for the ESC 2020 Guidelines on the Management of Dyslipidemias, Expert reviewers for the ESC 2020 Guidelines for the Management of Adult Congenital Heart Disease, Guidelines Committee of the Spanish Cardiology Society, Dos L, Rueda Soriano J, Ávila P, Escribano P, Garrido-Lestache Rodríguez-Monte ME, González AE, Martínez Bendayan I, Montserrat S, Gallego P, Alonso R, Martínez Momblán MA, García Orta R, Oliver Ruiz JM, Peinado Peinado R, Cano Pérez O, Gutiérrez Larraya F, González A, Méndez I, Lázaro Salvador M, AvanzasP, Berga G, Boraita A, Bueno H, Calvo D, Campuzano R, et al. Comments on the 2020 ESC guidelines for the management of adult congenital heart disease. *Revista Espanola De Cardiologia (english Ed.)*. 2021;74(5):371-377. English, Spanish. DOI:10.1016/j.rec.2020.11.025. PMID: 33771487.

Books or chapters with ISBN

- Alba Villalobos Abelló. Capítulo XIX: “*Cardiopatía isquémica y actividad sexual. Visión del paciente tras haber sufrido un evento coronario isquémico*” del libro “Educación en sexología y sexualidad humana”. RCA Grupo Editor S.L. ISBN 978-84-1320-920-0 (3ª Edición). April 2021.

Communication and dissemination activities

Oral communications

- Armora M, Tarifa M, Jimenez M, Vallespin M, Serra M, Villamor A. Vivencia de los profesionales de enfermería del turno de noche durante la pandemia de covid19. ICN Congress. Nursing Around the World. 2-4 Nov 2021.
- Alatabi S, Alejandro F, Armora M. Experiencia de las enfermeras especialistas en salud mental durante la pandemia de COVID19 en la sala de hospitalización de agudos del hospital de la Santa Creu i Sant Pau de Barcelona. ICN Congress. Nursing Around the World. 2-4 Nov 2021.
- Gemma Berga Congost, Salvatore Brugaletta, Jonatan Valverde Bernal, Adrian Márquez López, Judit Ruiz Gabalda, Joan Garcia-Picart, Mireia Puig Campmany, Mª Antonia Martínez Momblán. Predictores de retraso en el tiempo entre la llegada a urgencias- balón en pacientes con infarto agudo de miocardio con elevación del ST, tratados en un centro con capacidad de angioplastia primaria. Congreso SEC 2021, el Congreso de la Salud Cardiovascular, de la Sociedad Española de Cardiología y la Asociación Española de Enfermería en Cardiología. Zaragoza, Oct 2021.
- Gemma Berga Congost, Mª Antonia Martínez Momblán, Jonatan Valverde Bernal, Adrian Márquez López, Judit Ruiz Gabalda, Joan Garcia-Picart, Mireia Puig Campmany, Salvatore Brugaletta. Influència del gènere i l'edat en el diagnòstic i tractament de l'infart agut de miocardi de pacients ingressats a urgències. VI Jornades d'infermeria. Hospital de la Santa Creu i Sant Pau, Barcelona. Nov de 2021.
- Cecilia Diez Garcia; Ignasi Gich Saladich; Ignasi Bolibar Ribas. La efectividad de la enfermera de anestesia en la consulta de preoperatorios: un estudio de cohortes prospectivo. XXI Jornades d'Anestesiologia en Infermeria. XV Congrès de la Societat Catalana d'Anestesiologia Reanimació i Teràpia del Dolor. Nov 2021. Barcelona. Best Oral Communication Award.
- Cecilia Diez Garcia; Adoracion Ibañez Lujan; Carmen Bello Sanchez; Rosa Mª Muñoz Albarracín. Prehabilitación: el papel de la enfermera en la optimización de los pacientes quirúrgicos. VI Jornades d'Infermeria: Fem Ponts Hospital de la Santa Creu i Sant Pau. Nov 2021. Barcelona. Presentació premiada.
- A. Márquez. Desarrollo e implementación de la Structural Heart Disease Nurse Coordinator como nuevo rol de Enfermería en cardiología en España. Proyecto STAR-Nurse.

- J. Valverde. Coordinació d'infermeria de patologia valvular: Experiència després d'un any de la seva creació”. VI Jornades d'Infermeria de l'Hospital de la Santa Creu i Sant Pau. Barcelona. 2021
- Montserrat Estévez Atienza, Judit Garcia Gil, Alba Villalobos Abelló. Síndromes geriàtrics en l'ancià fràgil hospitalitzat com a predictors de pèrdua funcional i mort. Cas clínic” VI Jornades d'Infermeria. Hospital de Sant Pau. Nov 2021.
- Marta Píriz Marabajan, Susana Serrano Condal, Marina Brugué Godó, Alba Villalobos Abelló, Maria Lacueva Abad, Nerea Roch Villaverde, Ana Cortes Palacios, Engracia Fernandez Piqueras, Joaquin López-Contreras González. Impacte del projecte Flebitis Zero a l'Hospital de Sant Pau”. VI Jornades d'Infermeria. Hospital de Sant Pau. Nov 2021.
- S. Vicente. Implementació d'una intervenció per a la disminució del nivell de soroll a la Unitat de Cures Intensives Neonatals. projecte 9-nat. VI Jornades d'Infermeria. Hospital de Sant Pau. Nov 2021.

Posters

- Martinez P, Armora M, Forero C, Alvarez S, Fuster P, Monforte C, Masia. Linfedema secundario al cáncer de mama: factores de riesgo y modelo predictivo. 5o Congreso Español de la Mama. 15 Reunión SETS. 17 Congreso SEDIM. 39 Congreso SESPM. 22-23 Oct 2021. Edición online.
- Gemma Berga Congost, Salvatore Brugaletta, Jonatan Valverde Bernal, Adrian Márquez López, Judit Ruiz Gabalda, Joan Garcia-Picart, Mireia Puig Campmany, Mª Antonia Martínez Momblán. Predictors of delay in door-to-balloon time in STEMI patients, treated in centers capable in primary PCI. Association of Cardiovascular Nursing and Allied Professions of European Society of Cardiology. EuroHeartCare 2021. June 2021.
- Valverde Bernal J, Ruiz Gabalda J, Berga Congost G, Delgado Sánchez FJ. Impact on the quality of life after mitral clip implantation. Association of Cardiovascular Nursing and Allied Professions of European Society of Cardiology. EuroHeartCare 2021. June 2021.
- Gemma Berga Congost, Jonatan Valverde Bernal, Núria Castelló Fosch, Judit Ruiz Gabalda, Maria Lacueva Abad, Estefania Fernández Peregrina, Xavier Millán Álvarez. Do all patients treated with Mitraclip need to be admitted to ICU? 44th World Hospital Congress. Barcelona. Nov 2021.
- Gemma Mas Dalmau, Xènia Sist Viaplana, Ascensión García Mantas, Meritxell Cucala Rovira, Laia Lacueva Pérez, Silvia Esteban Sepúlveda. Beliefs, attitudes and behavior on evidence-based nursing. 44th World Hospital Congress. November 2021. Barcelona
- Adrián Márquez, Maika peñalba, Ascensión García, Marga Esteve. Measuring nursing care quality indicators during the second and third wave of Coronavirus in a tertiary level hospital. November 2021. Barcelona

- Alba Villalobos Abelló, Irene Valls Moreno, Margarita Casanovas Daufi, Núria Guàrdia i Mila, Montserrat Estévez Atienza. Liderazgo de la enfermera en los cuidados de las lesiones a pesar de las adversidades. VI Jornadas d'Infermeria. Hospital de Sant Pau. Nov 2021. Barcelona.

- Montse Estévez Atienza, Judit Garcia Gil, Alba Villalobos Abelló. Liderazgo de la enfermera en los cuidados de las lesiones a pesar de las adversidades" y "Síndromes geriátricos en el anciano frágil hospitalizado como predictores de pérdida funcional y muerte. Caso clínico". XXVII Congreso Nacional de la SEEGG. April 2021.

Talks

- Armora M. "PreparatB" APP mòbil per millorar la preparació preoperatòria. XXXIII Congrés SCCOT i IV Congrés SICOT. 17-18 June 2021. Barcelona.

- Berga G. Sesión Reorganización de servicios en época de pandemia: Reorganización, gestión y adaptación de los servicios de cardiología en tiempos de COVID-19. 2º Congreso nacional multidisciplinar COVID-19 de las Sociedades Científicas de España. Abril 2021.

- Berga G. Com ha afectat la COVID a la nostra pràctica clínica. 33è Congrés de la Societat Catalana de Cardiologia. Sep 2021.

- Berga G. Influencia de la edad y el género en el diagnóstico y tratamiento del IAMCEST. Congreso SEC 2021, el Congreso de la Salud Cardiovascular, de la Sociedad Española de Cardiología y la Asociación Española de Enfermería en Cardiología. Zaragoza, Oct 2021.

- Mateos A. Validación del protocolo del uso de la anticoagulación regional con citrato de Baxter en las técnicas de depuración extrarrenal continua en el paciente crítico. Recerca infermera en temps de pandèmia. Universitat de Barcelona. Dec 2021.

- Valverde J. "Consulta post" en "Mesa Redonda: TAVI NURSE, de la teoría a la práctica". 32º Congreso de la Asociación de Cardiología Intervencionista. Málaga. 2021

- J. Valverde. "Liderando la investigación cardiovascular" en el "Simposio Liderazgo enfermero en otros ámbitos de actuación". Congreso SEC de la Salud Cardiovascular 21. Zaragoza. 2021

- S. Vicente. Implementació d'una intervenció per a la disminució del nivell de soroll a la Unitat de Cures Intensives Neonatals. projecte 9-nat. Taula rodona del VIII Congreso de la Sociedad Española de Enfermería Neonatal: Proyecto 9-nat. 28 Oct. Virtual.

- S. Vicente. Implementació d'una intervenció per a la disminució del nivell de soroll a la Unitat de Cures Intensives Neonatals. projecte 9-nat. Sessió webinar de NADOCAT per l'Associació "Iniciativa Catalana per l'assistència integral del nadó i la família" 28 May 2021.

Outreach activities

- M. Armora. Talk at Centre Civic Guinardó and Centre Civic Navas. Per a preparar-te pel dia de la teva operació utilitzaries una aplicació de mòbil?. IIB Sant Pau, Ajuntament de Barcelona and Centre Civic Guinardo. March and November 2021.

- X Sist. Talk at Centre Civic Guinardó and Centre Civic Navas. Caminem per un envelliment més actiu. IIB Sant Pau, Ajuntament de Barcelona and Centre Cívica Guinardó. June and October 2021



Cardiac Surgery

Coordinator

Ginel Iglesias, Antonino FGS
 aginel@santpau.cat

Members

Casellas Casanovas, Sandra	FGS	Rosello Diez, Elena	FGS
Ginel Iglesias, Antonino	FGS	Taurón Ferrer, Manel	FGS

Main lines of research

- Off-pump coronary artery by-pass grafting surgery.
- Mitral repair surgery.
- Aorta pathology: aortic root surgery, aortic arch surgery (hybrid techniques)
- Follow-up of sutureless aortic valve prosthesis: Perceval S.
- Follow-up of surgical check-list implementation.
- Risk scores.
- Cardiac protection: Del Nido cardioplegia
- Mini-invasive techniques: mini-sternotomy, mini-thoracotomy, MIDCABG surgery
- Total arterial graft revascularization
- New valvular transcatheter prosthesis: TAVI transaxillary approach (Portico), TAVI transapical approach (Accurate).
- Aortic valve repair

Scientific Challenges

- Consolidation as a research group in different cardiac surgery-related fields, specific sutureless valve prosthesis, radial artery in myocardial revascularization, Different TAVI approach...
- Participation in the assessment and validation of new products employed in cardiac surgery: haemostatics, sutures...
- Collaboration with different national and international research teams involved in our lines of study: epicardic fat study (Endocrinology), calcium channels in auricular myocytes (ICCV).

Collaborations

External collaborations

- Department of Cardiac Surgery. Hospital Juan Canalejo. A Coruña.

- EUI (Escola Universitària d'Infermeria): collaborator teacher: Elena Roselló
 - Master in Surgical nursing.
 - Master in Nursing care for people with heart diseases.
- Registro ESPAMACS
- Complejo Hospitalario Universitario A Coruña

Other active grants

- Elena Roselló (PI). Cardiac surgery outcomes in blood-transfusion acceptors and non-acceptors: a retrospective cohort study. Code: IIBSP-TRA-2020-36. Started in 2018.
- Manel Tauron (PI): "Ensayo clínico aleatorizado, abierto y multicéntrico para comparar la eficacia y seguridad de la cardioplegia Buckberg vs Del Nido en sustitución valvular aórtica aislada". Code: IIBSP-CAR-2018-71. Started in 2019.
- Manel Tauron (CI). Mecanismos que involucran a los receptores NR4A y a LOX en la calcificación cardiovascular: estableciendo las bases de nuevas estrategias terapéuticas. Code RTI2018-094727-B-100. Collaboration with Atherosclerosis and vascular biology Group (PI: José Martínez). Started in 2019.
- José Montiel (PI): "Estudio de la permeabilidad a largo plazo de la arteria radial como injerto en cirugía de revascularización miocárdica usando tomografía por multidetectores (TACMD)". Code: IIBSP-PAR-2019-76". Started in 2020.
- Elena Roselló (PI). Registro PERCEVAL. Registro de implante de prótesis aórtica Perceval en pacientes menores de 75 años: estudio observacional. Code: PCVL7521. Promotor: Complejo Hospitalario Universitario A Coruña. Started in 2021.
- Manel Tauron (PI). PremiCron Suture for Cardiac Valve Repair (PremiValve). ClinicalTrials.gov Identifier: NCT04096859. Duration: 2019-2022.
- Elena Roselló (PI). Levosimendán preoperatorio en cirugía coronaria con disfunción ventricular severa: ¿tiene sentido?". Code: IIBSP-LEV-2020-153. Duration: 2020-2021.

Scientific production

- Arbelo E, Angera I, Trucco E, Rivas N, Guerra JM, Bisbal F, Jauregui M, Valles E, Martin G, Sbraga F, Tolosana JM, Linhart M, Francisco J, Montiel J, Pereferrer D, Menendez D, Jimenez J, Elamrani A, Borrás R, Dallaglio PD, Benito E, Santos A, Rodriguez E, Sarrias A, Gonzalez CE, Marti J, Cabrera S, Mont L. Reduction in new cardiac electronic device implantations in Catalonia during COVID-19. *EUROPACE*. 2021; 23(3). DOI:10.1093/europace/euab011. PMID:33595062. IF:5,214 (Q2/D3).
- Baghai M, Glauber M, Fontaine R, Castillo JC, Walker AH, Livi U, Montiel J, Royse A, Bisleri G, Pacini D, Argano V, Roumy A, Asimakopoulos G, Solinas M, SURE I. Clinical outcomes

after implantation of a sutureless aortic bioprosthesis with concomitant mitral valve surgery: the SURE-AVR registry. *Journal of Cardiothoracic Surgery*. 2021; 16(1):154. DOI:10.1186/s13019-021-01523-w. PMID:34053453. IF:1,637 (Q3/D8).

- Godoy-Marín H, Duroux R, Jacobson KA, Soler C, Colino-Lage H, Jiménez-Sábado V, Montiel J, Hove-Madsen L, Ciruela F. Adenosine A2A Receptors Are Upregulated in Peripheral Blood Mononuclear Cells from Atrial Fibrillation Patients. *INTERNATIONAL JOURNAL OF MOLECULAR SCIENCES*. 2021;22(7):3467. DOI:10.3390/ijms22073467. PMID: 33801676. IF:5,923 (Q1/D3).
- Rosello E, Hove L, Perez V, Munoz C, Artigas V, Padro JM, Dominguez E. Mitochondrial genetic effect on atrial fibrillation: A case-control study. *MITOCHONDRION*. 2021; 56. DOI:10.1016/j.mito.2020.11.007. PMID:33171269. IF:4,160 (Q2/D4).

Other publications

- Rosello E, Astrosa E, Casellas S, Tauron M, Galan J, Ginel A, Montiel J. Preoperative levosimendan in coronary surgery with severe ventricular dysfunction: does it make sense?. *Cirugia Cardiovascular*. 2021; 28(3). DOI:10.1016/j.circv.2020.10.013.

Communication and dissemination activities

Conferences

- Póster: "Reconstrucción 3D como soporte en el trasplante de cardiopatía congénita compleja". L. Corominas, M. Molina, M. Tauron, A. Moustafa, E. Roselló, S. Casellas, P. Castro-Cuba, J. Hernández, V. Mescola, V. Brossa, J. Montiel, A. Ginel. Congreso SEC. October 2021.

Courses

- Curso de ECMO. Hospital de la Santa Creu I Sant Pau: 2 internal editions and 1 external edition (Vall d'Hebrón). Coord: Manel Tauron.
- "Cardioplejia y Protección miocárdica. ¿Existe la estrategia perfecta?". Curso de actualización en Cirugía Cardiovascular. SECCE-Fundación Cirugía y Corazón. October 2021. Manel Tauron.
- "Reparación mitral: técnicas sobre cuerdas". Curso de simulación de cirugía mitral (Organizador: H. Germans Trias i Pujol). November 2021. Manel Tauron

07.4

Research Support and Management

Clinical Research Area



Centre for Drug Research (CIM Sant Pau)

Coordinator

Rosa M^a Antonijoan
rantonjoana@santpau.cat

Staff:**Research staff**

M^a Rosa Ballester
Jimena Coimbra
Joan Martínez
Pol Molina Perelló
Montserrat Puntès
Sandra Giménez

Nursing staff

Maite Garrido
David Martínez
Maribel Martínez
Marta Castillo

Logistic support

Judit Claramunt
Sara Mora
Susana Clos
Sonia Coma
Consuelo García
Pura Martínez

Data management

Ignasi Gich
M^a Ángeles Funes
Ana Gomis
Esteve Mercader

Functions

CIM conducts clinical drug trials and/or clinical research in compliance with methodological, ethical and legal requirements in the context of international GCP guidelines.

Research as a business unit

- Phase I clinical trials (of no therapeutic interest for participants) in special populations and healthy volunteers (bioequivalence, tolerability, pharmacokinetics and pharmacodynamics, first administration in humans).
- Collaboration with HSCSP researchers in conducting phase II, III and IV clinical trials.

Research in Neuropsychopharmacology

- Evaluation of the effects of psychotropic drugs and other substances active in the central nervous system on the sleep-wake cycle: Studies of effects during wakefulness (behavioural safety).
- Studies of effects during wakefulness (behavioural safety).
- Studies of effects on sleep quality and architecture.

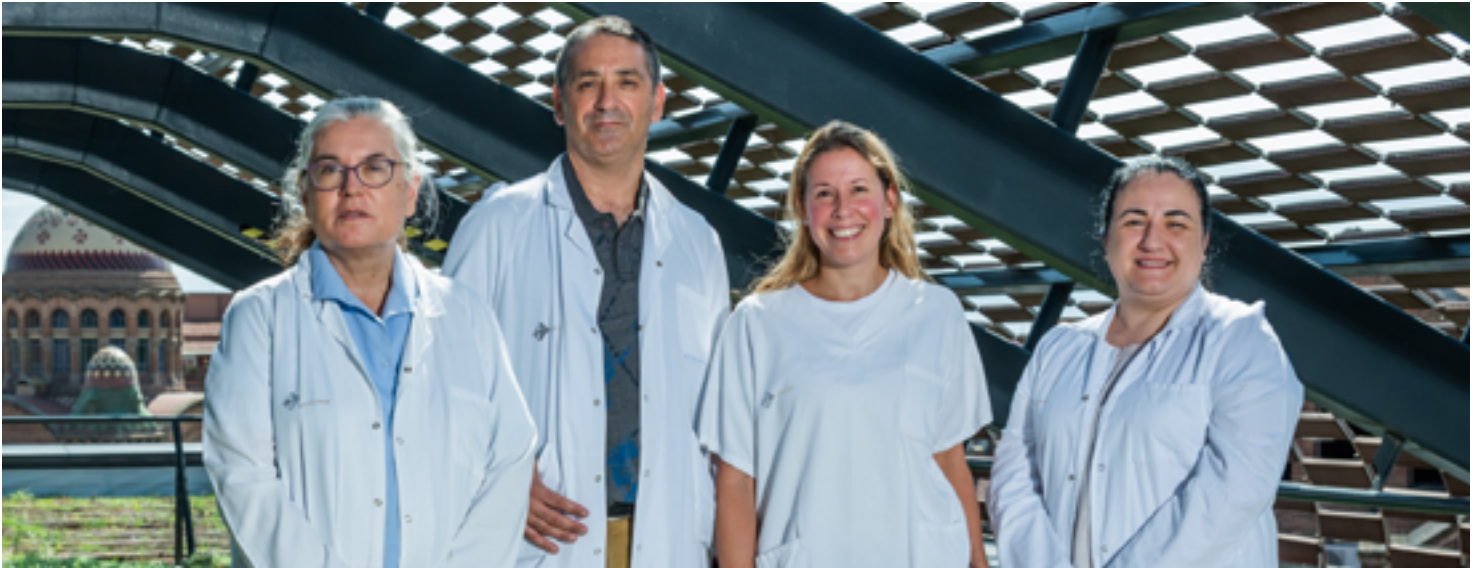
Facilities

Care area

- Admissions, with 24 beds (in four modules) that allow 100% continuous visual control and two beds for polysomnography studies.
- Outpatient area, with four single rooms equipped for medical, physical and neuropsychological and psychomotor performance testing.
- Rest and services area: showers, toilets, kitchen, diningroom, leisure room.
- Restricted area for drug storage and for the processing and storage of biological samples.

Data management and processing area

- Five computerized offices to carry out non-experimental clinical trial activities.
- Monitors' area.
- Temporary documentation archive.



Clinical Trial Documentation Management (AGDAG)

Manager

Rosa M. Antonijoan
rantonijoana@santpau.cat

Coordinator

Montserrat Ruiz
mruizb@santpau.cat

Staff

Elisenda Brunet
M. Àngels Piera

Functions

- Manage and supervise all documentation associated with active clinical trials in the experimental phase and destruction of documentation for terminated clinical trials located in the external archive.
- Store the supplies until the end of the studies, when they are destroyed or recycled.
- Oversee and manage documentation of completed trials for the Centre for Drug Research (CIM)
- Maintain and update the clinical workstation database and manage clinical studies.
- Manage restricted access by clinical trial monitors to the clinical workstation.
- Supervise data processing and management.
- Coordinate researchers and monitors; draw up agendas for meetings and study monitoring.
- Provide logistical support to the cold area and the clinical materials store associated with clinical trials in the experimental phase.
- Ship biological samples to central laboratory services.

Facilities

Several areas have been designated to implement these functions:

- Head office and administration area.
- Data processing and management area.
- Clinical trial monitoring meeting rooms.
- Documentation filing area.
- Cold room.
- Archive



Clinical Research and Clinical Trials Unit (UICEC)

Coordinator

Claudia E. Delgado
cdelgadoe@santpau.cat

Responsible

Rosa M^a Antonijoan
rantonijoana@santpau.cat

Staff

Yaira Mathison
Johan Ayala
Jordi Peri

Functions

The Central Clinical Research and Clinical Trials Unit (UICEC Sant Pau) provides comprehensive support to researchers in the development of independent research projects (not sponsored by the pharmaceutical industry) on the methodological, regulatory, administrative, economic and practical aspects, subject to compliance with the ethical, good clinical practice and legislation.

UICEC Sant Pau is part of the Spanish Clinical Research Network (SCReN), a functional organization network to support the conduction of multi-center clinical trials and participates in the SCReN Platform (Spanish Clinical Research Network ISCIII)

Knowledge Management

- One-stop information for independent research group projects.
- Comprehensive assessment and project coordination.
- Point of communication between researchers and technical units.
- Pharmacovigilance activities for trials including drugs or medical devices.
- **Knowledge management:**
- Study of dimensionality and feasibility of projects.
- Identification of each project needs.

- Advice on the preparation of documentation: protocol, annexes, monitoring report, final report.
- Advice on the submission of documentation to Spanish Agency for Medicines and Medical Devices (AEMPS), Clinical Research Ethics Committee (CEIC), Autonomous Communities (CCAA) and other relevant authorities.
- Advice on project registration in public databases.
- Identification of spinoff projects.
- Advice on the presentation of research results.

Methodological and statistical support

- Advice on study design.
- Data entry.
- Data processing.
- Development of statistical reports.
- Electronic CRFs validation and management.
- Documentation and reports.

Documentation, archiving, monitoring and follow-up

- Support in document creation: EudraCT form and annexes/ application forms / evaluation forms follow form.

- Support in the processing of initial applications, clarifications and amendments: AEMPS, CEIC, other health authorities regarding clinical trials, and other post-authorization studies.
- Comprehensive monitoring of clinical trials and observational studies.
- Management of initial, follow-up and final reports.
- Development and file custody promoter (Master File), file preparation investigator.
- Other communications to CEIC, autonomous communities and competent authorities.

Management and financial management

- Management of clinical trials contracts with participating centers.
- Management of collaboration agreements with laboratories/ companies for funding.
- Management of clinical trial-related contracts (CRO's, E-CRDs, statistics, etc.). Management of clinical trial-related client and supplier invoices.
- Management of clinical trial insurance policies.
- Preparation of financial reports for the submission of studies to ethics committees.
- Management of payment of fees to the competent authorities.



Ethics Committee for Investigation with Medical Products (CEIm)

President

Dr Antonio López Pousa. Physician.
Specialist in Medical Oncology

Vice-president

Dr Gerard Urrútia Cuchí. Physician.
Specialist in Epidemiology

Secretary

Dr Milagros Alonso Martínez. Physician.
Specialist in Clinical Pharmacology

Members

- Mrs Ester Amado Guirado.
- Mrs Ester Bajo Aràambarri.
- Mrs Núria Alberich Margalef.
- Dr Clàudia Erika Delgado.
- Dr Xavier León Vintró.
- Dr Indalecio Morán Chorro.
- Mrs Estela Moreno Martínez.
- Dr Robert Belvís Nieto.
- Mr Miguel Àngel Viciano Rodríguez.
- Mrs Marta Pujol Benaiges.

The Ethics Committee for research with medicinal products (CEIm) is an independent body which, in accordance with the corresponding legal provisions, ensures that the rights, safety and wellbeing of clinical trial subjects are protected. The CEIm provides public assurance of that protection by reviewing and approving clinical trial protocols and the methods used to collect and document the informed consent of the subjects and by ensuring the suitability of investigators, facilities and materials.

Functions

To assess the methodological, ethical and legal aspects of:

- Clinical trials with medicines and medical products

- Observational studies
- Pharmacodynamic and pharmacogenetic studies
- Studies evaluating psychological treatments and surgical procedures.
- Studies involving invasive procedures and the use of health data (medical records and biological samples).

• To evaluate amendments and modifications to projects approved by the CEIC.

- To track and monitor clinical trials with drugs and clinical research with medical products.



CEIm Technical Office

Coordinator

Milagros Alonso
E-mail: MAlonsoMa@santpau.cat

Administrative Staff

Robert Caballero
Marisol Mogollón

The CEIm secretariat is responsible for assessing methodological, ethical, legal and other information regarding research projects listed in the agenda of CEIC meetings, and also for advising HSCSP and HSCSP-IR researchers on the preparation and presentation of clinical research projects.

Functions

- To receive, register and validate documentation regarding clinical research projects submitted to the CEIm for evaluation.
- To prepare and send calls for meetings, the agenda and copies of the summary of protocols, patient information sheets and informed consent forms to all CEIm members.
- To prepare and present a description of the projects listed in the meeting agenda, the corresponding methodological, ethical and legal analyses and any other relevant information to the CEIm.
- To act as a point of reference in communication with researchers, sponsors, management/medical management and health authorities on all matters related to evaluated research projects and the operations of the CEIm.
- To prepare and sign CEIm reports and communicate decisions to sponsors and researchers.
- To prepare the minutes of meetings and distribute them on schedule to CEIm members.
- To manage documentation on CEIm operations and activities and on evaluated research projects.
- To process agreements regarding clinical trials to be performed in the HSCSP.
- To certify the actions of the CEIm.
- To prepare the annual CEIm report.
- To ensure compliance with Standard Operating Procedures (SOPs).

Research and Innovation Management Area



Innovation and Technology Transfer Unit

Manager

Míriam Ors
mors@santpau.cat

Strategic Innovation Manager

Jana Iscla

Tech Transfer and Innovation Managers

Daniel Callao
Natalia Ichaso
Alba Arroyes

The Innovation and Technology Transfer Unit promotes an entrepreneurial and innovative culture among the health professionals at the hospital, and transfers its knowledge towards the business sector.

The main objective of the unit is to foster a culture based on open innovation and cooperation in R&D, with a straight focus towards market and internationalization.

Our innovation model aims to facilitate the innovation generated by Sant Pau's professionals, to improve the translational ability of the centre, thereby strengthening its excellence and contributing to its economic sustainability.

The Innovation and Tech Transfer Unit of the Institute provides the following range of services:

- Management of the technological innovation developed by the Institute, from ideas uptake to its transfer to the market once converted into products or services.
- To facilitate technological collaboration between our research groups and industry.
- To support funding for technology development projects.
- Management of the Institute's intellectual property.
- To support the creation of spin-offs and start-ups.
- Perform technology vigilance (TV) to know the state-of-the-art and to be aware of market trends. This knowledge allows us to analyze, value and make decisions with less risk and to anticipate changes.



National Projects Unit

Coordinator

Fabiola Fernández
ffernandezh@santpau.cat

Staff

Eva José
Eva de la Vara
Amanda García

Eva Vicente
Marta Lorente
Eva Garcia

Functions

- Search and broadcast of public and private national funding, broadcast, assessment and review for the success of the application submission, send applications, register and monitoring until its resolution.
- Registration of granted projects, economic monitoring of projects and agreements, costs validation (concept/balance), preparing annual and final reports, manage incidences, interlocutor with official institutions.
- Activity reports: scientific report, Board, Direction and others.
- Internal and external audits from different financial institutions.
- Researchers: meetings for starting and managing projects.
- Interaction with different transversal areas to implement the regulations of the calls.



International Projects Unit

Coordinator

Noemi Carranza
ncarranza@santpau.cat

Staff

Declan de la Fuente

Functions

- Search and broadcast of public and private international funding, broadcast, assessment and review for the success of the application submission, send applications, register and monitoring until its resolution.
- Registration of granted projects, economic monitoring of international projects and agreements, costs validation (concept/balance), preparing annual and final reports, manage incidences, interlocutor with official institutions.
- Activity reports: scientific report, Board, Direction and others.
- Internal and external audits from different financial institutions.
- Researchers: meetings for starting and managing projects.
- Interaction with different transversal areas to implement the regulations of the calls.



Knowledge Management Unit

Coordinator

Montserrat Campmany
mcampmany@santpau.cat

Staff

Cati Pérez
Neus Milan

Functions

- Design mechanisms and implement tools for the collection and organization of data and information to feed decision making.
- Manage and transform information and data to contribute to the fulfillment of objectives and strategies.
- Advise on bibliometrics, scientific publications and open access.
- Respond to external requests for data and information (statistical surveys, SIRECS, etc).
- Implement policies to improve information systems.
- Develop new indicators of use for the institution.
- Update research group staff details on the intranet.



Quality Assurance Unit

Coordinator

Marta Mitjà
mmitja@santpau.cat

Staff

Agostina Robledo
Jordina Pasqual

Functions

- Establish mechanisms to assess Quality and Best Scientific Practices at IIB Sant Pau, promoting continuous improvement and excellence goals.
- Establishment and monitoring of IIB Sant Pau's Quality Assurance Program.
- Implement and follow-up of the Integrated Management System, including the establishment of improvement policies under the following standards:
 - Good Manufacturing Practices, specific to Advanced Therapy Medicinal Products, at the Clean Room.
 - Good Clinical Practices, at CIM Sant Pau Phase I Unit
 - Good Clinical Practices, at Medical Oncology Phase I Unit.
 - ISO 9001, Quality Management System, at Scientific and Technical Services.
 - UNE 166002, R+D+i Management System, at Innovation and Transference Unit.
 - Good Laboratory Practices.
- Perform internal audits:
 - Batch documentation of Advanced Therapy Medicinal Products.
 - Clinical Trial protocols, data bases, experimental phases, installations, processes and final reports.
 - Scientific and Technical Services.
 - Suppliers.
- Coordinate, oversee and follow up of the external Inspections /audits from:
 - Public Administration (ex: Generalitat, Española de Medicamentos y Productos Sanitarios ...).
 - Clinical Trial Promoters.
 - Certification Entities.
- Provide support for Quality Management System's design and implementation in other areas.
- Coordinate the ISO Quality Committee and the Good Manufacturing Practices Committee.
- Quality Management in the different stages of Advanced Therapy Medicinal Product's production.
- Provide support at design stage of the new IR-HSCSP Clean Room.

Administration Management Area



Finance Unit

Manager

Laura San Martin
lsanmartins@santpau.cat

Staff

Accounting

Soraya González
Anna Espallargas

Income and Treasury

Sandra Parera
Esther Andrés
Núria Vanaclocha
Núria García

Expenses and Purchase

Lorena Bustamante
Héctor Sánchez
Meritxell Criado
Sara Díaz
Grace Careaga

The Financial Unit is in charge of the institutional treasury and the financial and accounting management of the institute. As well as the management of own income and expenses and their accounting record. The unit supports research groups in the financial control of their accounts.

Functions

- Manage accounts and fiscal matters; design, administer and control budget-related issues; manage and monitor financial and material resources.

- Management of public body funding requirements: fulfil obligations imposed by government and official regional and state entities; ensure compliance with current fiscal, financial, labour and legal regulations and with HSCSP Research Institute-IIB Sant Pau management policies.

- Administration and management of activities, providing management support for research groups in different areas; project management, invoicing, control and monitoring of projects, general administration, management of services.



Legal Advice and Public Procurement Unit

Coordinator

Silvia Ribas
sribas@santpau.cat

Staff

Lourdes Gaig
Uxue Moreno
Maria Rull

Functions

The Legal Advice and Public Procurement Unit of IR Sant Pau is responsible for overseeing and supporting the institute in all its areas, in order to ensure the correct compliance with established legal regulations, offering advice both at a preventive and resolute level, in all branches of public and private law (civil, commercial, administrative, labor law, criminal compliance, the transparency law, etc.).

With regard to the General Data Protection Regulation (GDPR), the unit ensures correct data processing, both, internal and external, and validates the functions of the protection delegate.

The legal unit is also responsible for contracting works, services and supplies required by the foundation, in accordance with the procedures and regulation of the Public Sector Contracts Act.



Human Resources Unit

Coordinator

Ruth Acosta
racosta@santpau.cat

Staff

Gisele Domenech
Mireia Ventura

Functions

The HR Unit manages all processes related to human resources at IIB Sant Pau. It provides support and services to IIB Sant Pau employees and research groups in all issues related to the employee life cycle. These services include:

- Recruitment and contracting
- Onboarding, training and development
- Payroll, compensation and benefits
- Training and development
- etc.

The unit, which has been created in 2021, is also developing and implementing IIB Sant Pau HR policies. It also contributes to the implementation of the Human Resources Strategy for Researchers (HRS4R) in the institute.



Executive Secretariat

Coordinator

Eva Sanfeliu
esanfeliu@santpau.cat

Staff

Carina Mussuto
cmussuto@santpau.cat
gestioviatgesir@santpau.cat
IR_Estudiants@santpau.cat

Our team of executive secretaries provide high-level administrative support and assistance to the management team and other administrative and research staff.

In addition to managing and maintenance of executive's agendas and plan meetings, appointments, conferences, etc, they also act as interlocutor for any requirement from our trustees. The team proactively prepare the documentation for the Board of Trustees meetings or other meetings with relevant

stakeholders, handling all arrangements that may result from their interaction (prioritizing requests, IIB Sant Pau representative signatures of agreements, clinical trials, fundraising, dealing with multiple institutional emails, etc...)

The office manages as well all IIB Sant Pau travels to Congresses, meetings, etc... and handles all related with students (PhD, master, etc...) with national or international Universities and/or institutions



General Services

Coordinator

Javier Crespo
jcrespo@santpau.cat

Staff

Pau Escartín
Cristina Garcia
Laura Rios
Josep Moreno

Functions

The General Services Unit is responsible for the structural maintenance of the building and facilities. It supports the administrative structure, manages the warehouse and the reception.

Functions

- Building management.
- Maintenance of the building and equipment.
- Reception and access control.
- Warehouse
- Supply personal protective equipment to IIB Sant Pau staff.
- Booking of meeting rooms
- Overseeing cleaning services and treatment of waste.



Communications Area

Coordinator

Laia Cendrós
lcendros@santpau.cat

Fundraising

Paola Grommes

UCC+i

M^a José Bartolomé

Teaching

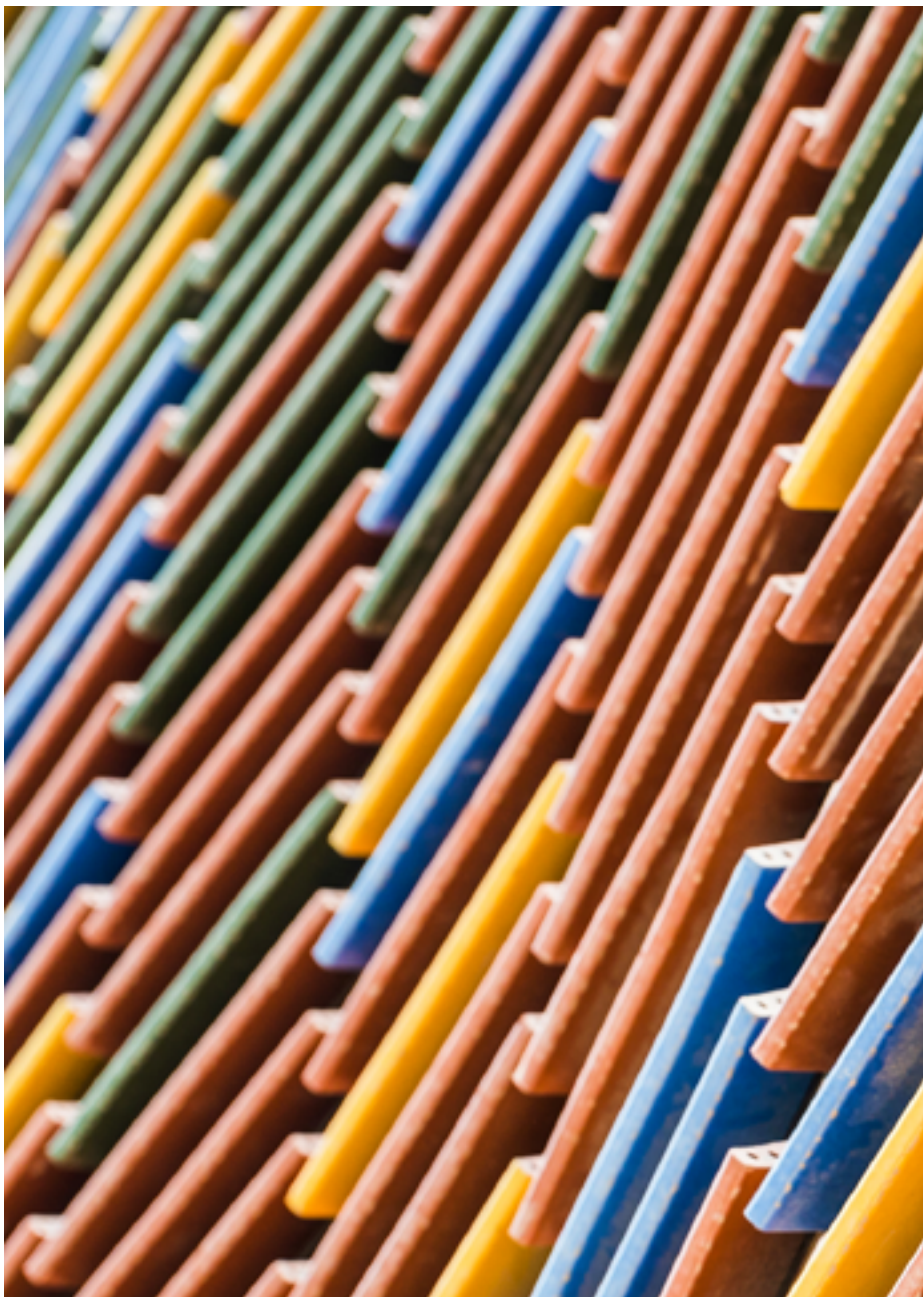
Mònica Velasco

The Communications and Stakeholders Relations Area was created in 2021 to increase the institute's reputation and visibility as well as to strengthen and build new relations with key stakeholders.

The Communications Unit communicates and disseminates IIB Sant Pau's cutting-edge research and innovation activities at national and international level. Through a breath of activities and projects, the unit engages with the public and different stakeholders to promote public engagement and to raise awareness about biomedical and health research.

The Communications Unit is an accredited Unit of Scientific Culture and Innovation (UCC+i) by the Spanish Foundation for Science and Technology (FECYT). It is member of the [Scientific Culture and Innovation Units Network](#), which includes the main agents for the dissemination of science and innovation in Spain.

The Unit is responsible for corporate image, media relations, public engagement, science education, internal communication, fundraising and teaching technical secretariat.



Acknowledgements

We thank the support of the board of trustees and other governing bodies, entities, organisations and companies that trusted us and financed our research. We also thank all the citizens and patient's associations who generously contribute through their private donations but, more important, by helping us in our mission while contributing to make our research projects possible and meaningful.



Sant Quintí, 77-79. 08041 Barcelona
www.recercasantpau.cat

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Institut de Recerca Hospital de Sant Pau

