



Women and Perinatal Health

Coordinator

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FGS

Members

Cruz Lemini, Mónica C.	FGS	Peró García, Marta	FGS
Domínguez Gallardo, Carla	FGS	Polo Ramos, Ana María	FGS
Garrido Giménez, Carmen	FGS	Sánchez García, Olga	IR
López Vanegas, Santiago	IR	Trilla Sola, Cristina	FGS
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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.

• Maternal and fetal cardiovascular programming 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/PlGF 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: Obedia Alejos, Laura Gomilla, Anna Olivella, Juan Parra.
- Active collaboration with Puigvert Foundation: Carlos Dosouto, Susana Peon, M Jesús Saiz and Patricia Fernández-Llana.
- 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: 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. María Josa Ertija, Dra. Elisenda Moliner Calderón.
- Clinical Epidemiology and Healthcare Services: Dr. Xavier Bonfill
- Metabolic 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 Llorba, 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 Llorba.
- 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 Llorba.

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 Llorba, Carla Domínguez, Mónica Cruz-Lemini, Ana Polo and Olga Sánchez.
- Centro de Investigación Biomédica en Red en Enfermedades Raras (CIBERER). CB06/07/0027(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 Institute for Global Health (ISGlobal). Maternal, Child and Reproductive Health Initiative. 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" (PH19/00692). 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: Dadvant Payam; Assistant Research Professor, Barcelona Institute 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 public 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. sFit1/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 sFit1/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. PH19/00702. 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 Ramon 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:10.1080/136252187.2021.1891410. 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, Martí 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).

• Croveto F, Crispi F, LLurba 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, LLurba E, Kurka H, Guo G, Sillman J, Hund M, Marin AP. Gestational Age-Specific Reference Ranges for the sFIT-1/PIGF 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, LLurba 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, LLurba 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, Novos R, Motta G, LLurba 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, Martínez S, Domínguez C, Dienstmann R, Ruiz F, Cespedes MC, Penuelas 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, Domínguez C, Garrido C, Trilla C, Carreras F, Sionis A, Mora J, García A, Ordóñez 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, Trespidi 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. "115. El estudio de la reserva funcional ovárica 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/alacarta/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/alacarta/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-any-s-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=flvck6l0u2h3c>

<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 Pulvert. 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.

• Inducció 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.Goncá, L.Ribera, M. Valdés-Bango Curell, N.Masoller, R. Rodríguez, B. Herrero, E.Antofin, 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, Obdulía 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. Socías, 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 program, and Carmen medina, organization. Hospital de Sant Pau and Fundació Puigvert, 6/13-05-2021.

• I Jornada de Atenció Integral al parto de nalgas, acreditat 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 versió cefàlica externa", Carmen Medina, speaker.

• Workshop "Versió Cefàlica Externa" i Jornada de Atenció 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. Funció cardíaca fetal: tips & tricks (taller con escaneo en vivo)." Elisa Llurba and Mónica Cruz-Lemini. 36 Edició Nacional Formació SEGO. 19-22/10/2021.