

Oncology Haematology and Transplantation

Group leader

Briones Meijide, Javier (FGS)

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Researchers

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Rosal Muntadas-Prim, María Josefa (IR)

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Victoria Fraj, Sara (IR)



DESCRIPTION

The group develops translational and clinical research in the field of blood cancer and hematopoietic transplants, focusing on the prognostic impact of molecular markers in acute myeloid leukemia and lymphoma. The group is intensively focused on the study of innovative genetically modified T cells with antigen-specific chimeric receptors (CARs) and their clinical application in patients with haematological cancer.

The group also develops innovative strategies for allogeneic hematopoietic transplantations, including novel strategies for reducing graft-versus-host disease complications.

MAIN LINES OF RESEARCH

- Clinical trials with academic-developed CART cells for Hodgkin and B cell non-Hodgkin Lymphoma (Briones Meijide, Javier; Caballero González, Ana Carolina).
- Development of memory-enriched CART cells under GMP conditions for clinical application (Escribà García, Laura; Briones Meijide, Javier; Caballero González, Ana Carolina).
- Preclinical development of fourth-generation CART cells for hematological malignancies.

(Poyatos Dorado, Paula; Escribà García, Laura; Caballero González, Ana Carolina; Briones Meijide, Javier).

- Study of the prognostic value of clinical and biological parameters in acute myeloid leukemia. (Garrido Díaz, Ana; Sierra Gil, Jordi).
- Study of the molecular prognostic factors in lymphoma and chronic lymphocytic leukemia. (Caballero González, Ana Carolina; Arguello De Tomas, Miquel; Briones Meijide, Javier).
- Molecular studies of minimal residual disease (liquid biopsy) in lymphoid malignancies and myeloma. (Caballero González, Ana Carolina; Arguello De Tomas, Miquel; López Pardo, Jordi; Briones Meijide, Javier).
- Design of new modalities of allogeneic stem-cell transplantation. (Esquirol Sanfeliu, Albert; García Cadenas, Irene; Martíno Bofarull, Rodrigo).
- Innovative pharmacokinetic strategies for reducing hematopoietic transplantation complications. (García Cadenas, Irene; Esquirol Sanfeliu, Albert; Martíno Bofarull, Rodrigo).

SCIENTIFIC CHALLENGES

- Development of academic CAR-T cell therapies for Phase I/ II clinical trials for hematological malignancies.
- Development of novel CART cells (4th and 5th generation) with enhanced antitumor efficacy.
- Identify new prognostic parameters for risk and therapeutic stratification in leukemia and lymphoma.
- Molecular characterisation of acute myeloid leukemia and lymphoma for designing molecular-targeted precision therapies
- Establish Liquid biopsy for monitoring residual disease in acute leukemia, lymphoma and myeloma.
- Reduce toxicity and complications of allogeneic transplants. New conditioning treatments and strategies for monitoring targeted therapies for graft versus host disease.

ACTIVE & AWARDED GRANTS

- Briones Meijide, Javier/Sierra Gil, Jordi. RICORS TERAV. RD21/0017/0011. Instituto de Salud Carlos III (ISCIII). Duration: 2022-2024. 169.222,90 €
- Briones Meijide, Javier. TERAV+. RD24/0014/0036. Instituto de Salud Carlos III (ISCIII). Duration: 2025-2027. 224.001,25 €
- Briones Meijide, Javier. CAR T cells with costimulatory chimeric receptors for improving antitumor efficacy against Hodgkin lymphoma. GINJOL 2024-13-010. Fundació Institució dels Centres de Recerca de Catalunya (iCERCA). Duration: 2024-2025. 10.000,00 €
- Briones Meijide, Javier. Terapia con CART de cuarta generación con secreción de citoquinas con efecto dual. PI24/01917. Instituto de Salud Carlos III (ISCIII). Duration: 2024-2027. 121.250,00 €
- Briones Meijide, Javier. Accelerating Development and Improving Access to CAR and TCR-engineered T cell therapy. T2EVOLVE IMI2-RIA 945393-1. European Commission. Duration: 2021-2025. 271.370,00 €
- Sierra Gil, Jordi. Medicina Personalizada para la mejora del tratamiento de la Leucemia Mieloide Aguda: combinación de terapias de precisión con un nanoconjugado de auristatina dirigido a las células madre leucémicas. PI24/00013. Instituto de Salud Carlos III (ISCIII). Duration: 2024-2027. 252.500,00 €

DOCTORAL THESES DEFENDED

- Berengua Pereira, Carla. Aportación del cultivo virológico en la interpretación de las pruebas moleculares en dos modelos de infección respiratoria: Citomegalovirus y SARS-CoV-2. 26/02/2024. Universitat Autònoma de Barcelona. Supervisors: Marcos Maeso, Maria Ángeles; Martíno Bofarull, Rodrigo; Navarro Risueño, Ferran. <https://hdl.handle.net/10803/691629>

SCIENTIFIC PRODUCTION

- Abrisqueta P, García JA, Gutiérrez A, Hernández JA, Andreu R, Arguello M, Leiva C, López MD, Callejo A, Álvarez E, Loscertales J. Real-World Evidence on Adverse Events and Healthcare Resource Utilization in Patients with Chronic Lymphocytic Leukaemia in Spain Using Natural Language Processing: The SRealCLL Study. *Cancers*. 2024; 16(23):4004. DOI:10.3390/cancers16234004. PMID:39682190. IF:4,500 (Q1/3D). Document type: Article.
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