

## Haematological Diagnosis

### Group leader

Nomdedeu Guinot, Josep Francesc (FGS)

### Researchers

Blanco , Maria Laura (FGS)

Gonzalez Alvarez, Nuria (FGS)

Martinez Valverde, Clara Maria (FGS)

Pratcorona Canela, Marta (FGS)

Ramil López, Guillermo (IR)

Remacha Sevilla, Angel Francisco (FGS)

San Jose Alonso, Paula (FGS)

Sánchez García, Jana (FGS)

### Research Technicians

Brell Martinez, Albert (FGS)

Bussaglia Petrillo, Elena Mart (FGS)

Carricondo Morcillo, Maite (FGS)

Castellet Farrus, Helena (IR)

Espadaler Pare, Montserrat (FGS)

Fernández Rosales, Maria Nieves (FGS)

Fuentes Hernandez, Francisca (FGS)

Gine Vilalta, Anna (IR)

Martinez Sánchez, Elisabeth (FGS)

Ortin Quilez, Rosa (FGS)

Serra Ferrer, Marta (FGS)

Ubeda Rodenas, Jose (FGS)



### DESCRIPTION

The diagnostic hematology group's primary goal is to improve the characterization of hematologic disorders and contribute to better management of the patients, especially those with hematologic neoplasms. Our efforts focus on platform improvement (next-generation sequencing), multiparameter flow cytometry and molecular karyotyping, and unraveling the molecular mechanisms of leukemogenesis of selected genes (WT1, KMT2a, IdH1, and IdH2).

### MAIN LINES OF RESEARCH

- Predisposing alleles to myeloid neoplasms and leukemia genomics: Marta Pratcorona.
- WT1 biology and KMT2a molecular alterations: Josep Nomdedéu.
- Digital PCR utility in MRD studies: Josep Nomdedéu.

### SCIENTIFIC CHALLENGES

- To enlarge and refine NGS panels for covering all hematologic neoplasms.
- To improve genetic approaches to non-neoplastic disorders (algorithms based on hematologic findings).
- To validate bulk and scRNAseq approaches in leukemia diagnosis.
- To develop new platforms of MRD analysis in acute myeloid leukemia.

### DOCTORAL THESES DEFENDED

- Oñate Hospital, Guadalupe. Impacto de las co-mutaciones y la terapia dirigida en la leucemia



## 05.1.2 Oncohematologic Diseases Area

mieloide aguda con mutaciones. 20/10/2023. Universitat Autònoma de Barcelona. Supervisors: Sierra Gil, Jordi; Pratcorona Canela, Marta.

## SCIENTIFIC PRODUCTION

- Arguello M, Albiol N, Jara P, García I, Redondo S, Esquirol A, Novelli S, Saavedra S, Martino R, Nomdedeu J, Sierra J, Mora A, Moreno C. Evolution in the frontline treatment of patients with chronic lymphocytic leukemia: experience from one European center. *LEUKEMIA & LYMPHOMA*. 2023; 64(10). DOI:10.1080/10428194.2023.2232489. PMID:37452739. IF:2,600 (Q3/7D). Document type: Article.
- Castillo MI, Ribate VE, Muñoz CM, Santillana SG, Taboada SE, Casterá ME, Abinzano CMJ, Barranco IA, Nieto CR, Pampliega VM, Blanco ML, de Andrés ÁS, de Oteyza PJ, del Castillo BT, Font GI, Cayuela JA, Díez M, Sánchez AR, Vercet SC, Díaz TM, Grupo Español de Síndromes Mielodisplásicos (Incidence and prognostic impact of U2AF1 mutations and other gene alterations in myelodysplastic neoplasms with isolated 20q deletion. *Cancer Medicine*. 2023; 12(16)DOI:10.1002/cam4.6300. PMID:37403747. IF:4,000 (Q2/4D). Document type: Article.
- Marin O, Romero D, Rodríguez J, Distefano M, Lessi F, Aretini P, Liquori A, Castaño J, Kozyra E, Kotmayer L, Bueno C, Cervera J, Rodríguez JC, Nomdedeu JF, Murillo L, De Heredia CD, Pérez A, López F, Martínez C, Dorado N, Marco FM, Prósper F, Menéndez P, Valcárcel D, Ballestar E, Bödör C, Bigas A, Catalá A, Wlodarski MW, Giorgetti A. Epigenome profiling reveals aberrant DNA methylation signature in GATA2 deficiency. *HAEMATOLOGICA*. 2023; 108(9)DOI:10.3324/haematol.2022.282305. PMID:36815365. IF:10,100 (Q1/2D). Document type: Letter.
- Mosquera A, Perez M, Hernandez A, Gonzalez T, Arellano E, Martinez J, Villaverde A, Raya JM, Ayala R, Ferrer F, Fox ML, Velez P, Mora E, Xicoy B, Mata MI, García M, Angona A, Cuevas B, Senin MA, Ramirez A, Ramirez MJ, Perez R, de Villambrosia SG, Martinez C, Gomez MT, García C, Gasior M, Bellosillo B, Steegmann JL, Alvarez A, Hernandez JM, Hernandez JC, Spanish MPNGRP. Machine Learning Improves Risk Stratification in Myelofibrosis: An Analysis of the Spanish Registry of Myelofibrosis. *Hemasphere*. 2023; 7(1):e818. DOI:10.1097/HS9.0000000000000818. PMID:36570691. IF:6,600 (Q1/3D). Document type: Article.
- Mulet M, Osuna-Gómez R, Zamora C, Artesero I, Arús M, Vera-Artazcoz P, Cordón A, Vilalta N, San-José P, Abril A, Moliné A, Morán I, López-Contreras J, Vidal S. Dysregulated neutrophil extracellular traps formation in sepsis. *Immunology*. 2023; 170(3):374-387. DOI: 10.1111/imm.13676. PMID: 37381594. IF: 6,400 (Q2/3D). Document type: Article.
- Oñate G, Pratcorona M, Garrido A, Artigas A, Bataller A, Tormo M, Arnan M, Vives S, Coll R, Salamero O, Vall F, Sampol A, García A, Cervera M, Avila SG, Bargay J, Ortín X, Nomdedeu JF, Esteve J, Sierra J, Spanish Cooperative Study GRP. Survival improvement of patients with FLT3 mutated acute myeloid leukemia: results from a prospective 9 years cohort. *Blood Cancer Journal*. 2023; 13(1):69. DOI:10.1038/s41408-023-00839-1. PMID:37147301. IF:12,800 (Q1/1D). Document type: Article.
- Orgueira AM, Encinas MMP, Varela N, Mora E, Díaz M, Montoro MJ, Pomares H, Ramos F, Tormo M, Jerez A, Nomdedeu JF, Sánchez CD, Leonor A, Cárcel P, Romero MTC, Xicoy B, Rivero E, Barreto R, Díez M, Benlloch LE, Crucitti D, Valcárcel D. Machine Learning Improves Risk Stratification in Myelodysplastic Neoplasms: An Analysis of the Spanish Group of Myelodysplastic Syndromes. *Hemasphere*. 2023; 7(10):e961. DOI:10.1097/HS9.0000000000000961. PMID:37841754. IF:6,600 (Q1/3D). Document type: Article.