

Molecular Pathology of Gynaecologic Cancer

Group leader

Lerma Puertas, Enrique (FGS)

Researchers

Bague Rosell, Silvia (FGS)

Espinosa Mariscal, Iñigo (FGS)

Fumagalli, Caterina (FGS)

Fuste Chimisana, Victoria (FGS)

Gallardo Alcañiz, Alberto (FGS)

López Vilaro, Laura (FGS)

Manzotti, Carolina (FGS)

Mozos Rocafort, Ana (FGS)

Orellana Fernández, Ruth (FGS)

Research Technicians

Catus Col, Lluís (FGS)

Clua Gonzalez, Agustín (FGS)

Ferre Figa, Malena (FGS)

Gonzalez Vidal, Alan (FGS)

Gutierrez Montalban, Raquel (FGS)



DESCRIPTION

The group is focused on molecular and translational research on breast and gynecological tumors. Our research seeks the applicability of the results in the field of biomedicine, in particular, in the development of methods that help and facilitate the diagnosis, prognosis, and treatment of breast and gynecological tumors.

MAIN LINES OF RESEARCH

- Pathogenic mechanisms of gynecological cancer (breast/endometrial/ovarian cancer).
- Molecular mechanisms of stromal response and immunosuppression in breast and endometrial cancer.
- Clinical application of prognostic factors in common cancers (breast, endometrial, ovarian, etc).
- Clinical application of tumor markers.
- Molecular biology of uterine and extra-uterine sarcomas.

SCIENTIFIC CHALLENGES

- Progress as a productive translational gynecological 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.

DOCTORAL THESES DEFENDED

- Bagué Rosell, Sílvia. Capacitat pronòstica de l'expressió de gens relacionats amb el metabolisme de la glucosa en el control local dels pacients



05.1.2 Oncohematologic Diseases Area

amb carcinoma de cap i coll. 17/02/2023. Universitat Autònoma de Barcelona. Supervisors: Avilés Jurado, Francesc Xavier; Camacho Perez de Madrid, Mercedes; León i Vintró, Xavier. <http://hdl.handle.net/10803/688678>

SCIENTIFIC PRODUCTION

- Álamo P, Parladé E, Favaro MTP, Gallardo A, Mendoza R, Ferreira LCS, Roher N, Manges R, Villaverde A, Vázquez E. Probing the Biosafety of Implantable Artificial Secretory Granules for the Sustained Release of Bioactive Proteins. *ACS Applied Materials & Interfaces*. 2023; 15(33). DOI:10.1021/acsami.3c08643. PMID:37614001. IF:9,500 (Q1/2D). Document type: Article.
- Álvarez Álvarez R, Manzano A, Agra Pujol C, Artigas Raventós V, Correa R, Cruz Jurado J, Fernández JA, García Del Muro X, Gonzalez JA, Hindi N, Lozano Lominchar P, Martínez-Trufero J, Méndez R, Muñoz M, Muñoz Casares C, Orbis Castellanos F, Orellana Fernández R, Paniagua González M, Redondo A, Valverde Morales C, Asencio JM. Updated Review and Clinical Recommendations for the Diagnosis and Treatment of Patients with Retroperitoneal Sarcoma by the Spanish Sarcoma Research Group (GEIS). *Cancers*. 2023; 15(12):3194. DOI: 10.3390/cancers15123194. PMID: 37370803. IF:5,200 (Q2/4D). Document type: Review.
- Álvarez R, Dols O, El Bounasri S, López L, Trujillo JC, Reyes D, Suárez X, Cortés E, Illa I, Gallardo E. Reduced Number of Thymoma CTLA4-Positive Cells Is Associated With a Higher Probability of Developing Myasthenia Gravis. *Neurology-Neuroimmunology & Neuroinflammation*. 2023; 10(2):e200085. DOI:10.1212/NXI.0000000000200085. PMID:36697230. IF:8,800 (Q1/1D). Document type: Article.
- Arqueros C, Salazar J, Gallardo A, Andrés M, Tibau A, Bell OL, Artigas A, Lasa A, Cajal T, Lerma E, Barnadas A. Secreted Protein Acidic and Rich in Cysteine (SPARC) Polymorphisms in Response to Neoadjuvant Chemotherapy in HER2-Negative Breast Cancer Patients. *Biomedicine*. 2023; 11(12):3231. DOI:10.3390/biomedicine11123231. PMID:38137452. IF:4,700 (Q1/3D). Document type: Article.
- Barca EG, Tomas L, Esteve A, Rodríguez M, Gato L, Alonso R, García AM, Cordoba R, Monter A, Bastos M, Burgues JMB, Sayas MJ, Alegria MCV, Sánchez JJ, Pellicer MR, Henriquez HDL, de Ona R, Cabezudo ME, Infante MS, Hernandez J, Sanz R, Blanco O, Mozos A, Climent F, Piris MA. Extranodal natural killer/T-cell lymphoma nasal type in a western population: Molecular profiling identifies new therapeutic targets. *AMERICAN JOURNAL OF HEMATOLOGY*. 2023; 98(6):E134-E138. DOI:10.1002/ajh.26904. PMID:36882876. IF:12,800 (Q1/1D). Document type: Letter.
- Barrabes C, Arandes J, Armillas L, Posada RA, Koptseva I, Fumagalli C, Pinol D, Salleras M. Sarcomatoid transformation of a basal cell carcinoma following treatment with hedgehog inhibitors. *BRITISH JOURNAL OF DERMATOLOGY*. 2023; 189(4)DOI:10.1093/bjd/ljad206. PMID:37378960. IF:10,300 (Q1/1D). Document type: Letter.
- Carmona E, Aguado M, Tubau C, Sánchez S, Mozos A, Sullivan I, Spertino J. Epidermolysis bullosa acquisita induced by atezolizumab. *JOURNAL DER DEUTSCHEN DERMATOLOGISCHEN GESELLSCHAFT*. 2023; DOI:10.1111/ddg.15203. PMID:37658659. IF:3,600 (Q1/3D). Document type: Letter.
- Cosio BG, Shafiek H, Iglesias A, Mosteiro M, Gonzalez A, Rodríguez M, García M, Busto E, Martin J, Mejías L, Benito A, López L, Gómez C. Validation of a Pathological Score for the Assessment of Bronchial Biopsies in Severe Uncontrolled Asthma: Beyond Blood Eosinophils. *ARCHIVOS DE BRONCONEUMOLOGIA*. 2023; 59(8)DOI:10.1016/j.arbres.2023.05.014. PMID:37414638. IF:8,000 (Q1/2D). Document type: Article.
- D'Angelo E, Espinosa I, Felicioni L, Buttitta F, Prat J. Ovarian high-grade serous carcinoma with transitional-like (SET) morphology: a homologous recombination-deficient tumor. *HUMAN PATHOLOGY*. 2023; 141DOI:10.1016/j.humpath.2023.08.010. PMID:37673346. IF:3,300 (Q2/5D). Document type: Article.
- Escuin D, López L, Bell O, Mora J, García B, Moral A, Clos M, Boronat L, Arqueros C, Barnadas A. Circulating miRNA Expression Is Inversely Correlated with Tumor Tissue or Sentinel Lymph Nodes in Estrogen Receptor-Positive Early Breast Cancer Patients. *INTERNATIONAL JOURNAL OF MOLECULAR SCIENCES*. 2023; 24(17):13293.



05.1.2 Oncohematologic Diseases Area

- DOI:10.3390/ijms241713293. PMID:37686099. IF:5,600 (Q1/3D). Document type: Article.
- Español P, Rovira R, Caruana P, Luna-Guibourg R, Soler C, Teixeira N, Rodríguez F, Gallardo A, Edwards M, Porta O, Gámez M, Sánchez O, Llubra E, Corchero JL, Céspedes MV. Dopamine receptors D1 and D2 show prognostic significance and potential therapeutic applications for endometrial cancer patients. *Gynecol Oncol.* 2023 ;176:25-35. DOI:10.1016/j.ygyno.2023.06.019. PMID: 37437489. IF: 4,700 (Q1/2D). Document Type: Article.
 - Espinosa I, D'Angelo E, De Brot L, Prat J. Malignant rhabdoid tumors of the vulva versus epithelioid sarcomas: a clinicopathologic, immunohistochemical, and molecular genetics study. *HUMAN PATHOLOGY.* 2023; 135. DOI:10.1016/j.humpath.2023.02.006. PMID:36863690. IF:3,300 (Q2/5D). Document type: Article.
 - Frezza AM, Stacchiotti S, Chibon F, Coindre JM, Italiano A, Romagnosa C, Bagué S, Dei AP, Braglia L, Palmerini E, Quagliuolo V, Broto JM, Pousa AL, Grignani G, Brunello A, Blay JY, Beveridge RD, Lugowska I, Lesluyes T, Maestro R, Merlo FD, Casali PG, Gronchi A. CINSARC in high-risk soft tissue sarcoma patients treated with neoadjuvant chemotherapy: Results from the ISG-STs 1001 study. *Cancer Medicine.* 2023; 12(2)DOI:10.1002/cam4.5015. PMID:35848358. IF:4,000 (Q2/4D). Document type: Article.
 - Fumagalli C, Orellana R, Ferre M, Gonzalez A, Catusus L, Vazquez T, Sebio A, López A, Llauger J, Peiro A, Antonescu CR. Expanding the molecular landscape of undifferentiated sarcomas of bone with a novel *EWSR1-SSX3* gene fusion. *GENES CHROMOSOMES & CANCER.* 2023; 63(1)DOI:10.1002/gcc.23215. PMID:38050902. IF:3,700 (Q2/4D). Document type: Article.
 - Gené M, Cuatrecasas M, Amat I, Veiga JA, Fernández MJ, Fusté V, Tarragona J, Jurado I, Fernández R, Martínez C, Alenda C, Zac C, Ortega de la Opra P, Fernández MT, Esteller M, Musulen E. Alterations in p53, Microsatellite Stability and Lack of MUC5AC Expression as Molecular Features of Colorectal Carcinoma Associated with Inflammatory Bowel Disease. *INTERNATIONAL JOURNAL OF MOLECULAR SCIENCES.* 2023; 24(10):8655. DOI:10.3390/ijms24108655. PMID:37240002. IF:5,600 (Q1/3D). Document type: Article.
 - León X, Bague S, Holgado A, Quer M, Terra X, Camacho M, Aviltés FX. Relationship between transcriptional expression of pyruvate dehydrogenase and local control of disease in patients with oral cavity carcinomas. *Acta Otorrinolaringologica Española.* 2023; 74(6)DOI:10.1016/j.otorri.2023.05.001. Document type: Article.
 - Martí D, Gougol A, Gomez C, Jamali A, Abo A, Morales D, Jimenez A, Burns K, Bawa A, Hernandez A, Pujol C, Alvarado E, Szafranska J, Chiu WK, Villagrana A, Ventura M, Gandicheruvu H, Lluch P, Chen HW, Rachakonda V, Duarte A, Batailler R. Prevalence and clinical impact of alcohol withdrawal syndrome in alcohol-associated hepatitis and the potential role of prophylaxis: a multinational, retrospective cohort study. *Eclinicalmedicine.* 2023; 61:102046. DOI:10.1016/j.eclinm.2023.102046. PMID:37415844. IF:15,100 (Q1/1D). Document type: Article.
 - Martínez C, Alba L, Carrasco LI, Serna N, Imedio L, Gallardo A, Casanova I, Unzueta U, Vazquez E, Mangues R, Villaverde A. Lymphocyte infiltration and antitumoral effect promoted by cytotoxic inflammatory proteins formulated as self-assembling, protein-only nanoparticles. *BIOMEDICINE & PHARMACOTHERAPY.* 2023; 164:114976. DOI:10.1016/j.biopha.2023.114976. PMID:37276641. IF:7,500 (Q1/1D). Document type: Article.
 - Medina E, García A, Gallardo A, Álamo P, Alba L, Unzueta U, Villaverde A, Vázquez E, Casanova I, Mangues R. Potent Anticancer Activity of CXCR4-Targeted Nanostructured Toxins in Aggressive Endometrial Cancer Models. *Cancers.* 2023; 15(1):85. DOI:10.3390/cancers15010085. PMID:36612081. IF:5,200 (Q2/3D). Document type: Article.
 - Navarro M, Estadella I, Benavente A, Orellana R, Petit A, Ferreres JC, Felipe A. The Phosphorylation of Kv1.3: A Modulatory Mechanism for a Multifunctional Ion Channel. *Cancers.* 2023; 15(10):2716. DOI:10.3390/cancers15102716. PMID:37345053. IF:5,200 (Q2/3D). Document type: Review.



05.1.2 Oncohematologic Diseases Area

- Nunez Y, García A, Falgas A, Serna N, Sánchez L, Garrido A, Sierra J, Gallardo A, Unzueta U, Vázquez E, Villaverde A, Mangues R, Casanova I. T22-PE24-H6 Nanotoxin Selectively Kills CXCR4-High Expressing AML Patient Cells In Vitro and Potently Blocks Dissemination In Vivo. *Pharmaceutics*. 2023; 15(3):727. DOI:10.3390/pharmaceutics15030727. PMID:36986589. IF:5,400 (Q1/2D). Document type: Article.
- Revilla G, Ruiz L, Vallverdu NF, Santamaria P, Morral A, Perez JI, Li CD, Fuste V, Lerma E, Corcoy R, Pitoia F, Escola JC, Mato E. Low-Density Lipoprotein Receptor Is a Key Driver of Aggressiveness in Thyroid Tumor Cells. *INTERNATIONAL JOURNAL OF MOLECULAR SCIENCES*. 2023; 24(13):11153. DOI:10.3390/ijms241311153. PMID:37446330. IF:5,600 (Q1/3D). Document type: Article.
- Rusiñol L, Mozos A, Yélamos O. Disseminated Monomorphic Pink Papules. *JAMA Dermatology*. 2023; 159(12)DOI:10.1001/jamadermatol.2023.3586. PMID:37938840. IF:10,900 (Q1/1D). Document type: Editorial Material.
- Sánchez L, Paul T, Martori C, Font J, Sanjurjo L, Aran G, Tellez E, Blanco J, Carrillo J, Ito M, Tuttolomondo M, Ditzel HJ, Fumagalli C, Tapia G, Sidorova J, Masnou H, Fernández MA, Lozano JJ, Vilaplana C, Rodríguez A, Armengol C, Villedor AF, Kremer L, Sarriasa MR. Macrophage CD5L is a target for cancer immunotherapy. *EBioMedicine*. 2023; 91:104555. DOI:10.1016/j.ebiom.2023.104555. PMID:37054630. IF:11,100 (Q1/1D). Document type: Article.
- Serret Miralles P, Orellana Fernández R, Parra Parente T, García-Chamón Brígido RB, Carrera Salas R. Tumor de células gigantes óseo en arco costal, tratado con denosumab. Reporte de un caso [Giant cell tumour of bone in the rib cage treated with denosumab. A case report]. *Rev Esp Patol*. 2023; 56(2):119-123. DOI: 10.1016/j.patol.2021.04.002. PMID: 37061238. Document type: Article.
- Voltà E, Alba L, Serna N, Casanova I, López H, Gallardo A, Sánchez A, Villaverde A, Unzueta U, Vázquez E, Mangues R. High-precision targeting and destruction of cancer-associated PDGFR-β(+) stromal fibroblasts through self-assembling, protein-only nanoparticles. *Acta Biomaterialia*. 2023; 170DOI:10.1016/j.actbio.2023.09.001. PMID:37683965. IF:9,700 (Q1/1D). Document type: Article.
- Zampacorta C, Pasciuto MP, Ferro B, Lucidi A, Maestro AS, Espinosa I, D'Angelo E, Prat J. Placental site trophoblastic tumor (PSTT): a case report and review of the literature. *Pathologica*. 2023; 115(2)DOI:10.32074/1591-951X-873. PMID:37114629. Collet R, Olmedo G, Ruiz I, Martinez A, Rodríguez B, Bernal S, Kulisevsky J, Pagonabarraga J. Late-Onset Beta-Propeller Protein-Associated Neurodegeneration: A Case Report. *Movement Disorders Clinical Practice*. 2023; 10(8). DOI:10.1002/mdc3.13811. PMID:37635772. IF:4,000 (Q2/4D). Document type: Review.