1 Introduction

2 Executive summary

3 Research areas and groups

4 Associated clinicians

3.5.9 Human Genetic Variability

Publications: 5 | **Q1:** 2

COMPOSITION

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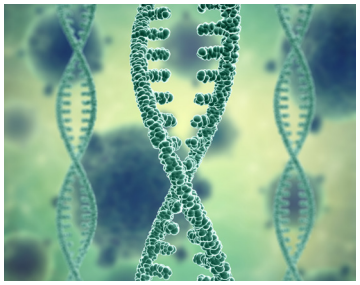
- **Beatriz Antón Pascual.** *Médico Adjunto en Oncología Médica. Hospital Universitario Doce de Octubre*
- **Alberto Carretero González.** *Facultativo especialista de área en Oncología Médica. Hospital Universitario de Getafe*
- **María Gaibar Alonso.** *Profesora titular. Universidad Camilo José Cela*
- **Diego Malón Jiménez.** *Médico Adjunto en Oncología Médica. Hospital Universitario de Fuenlabrada*
- **Apolonia Novillo Villajos.** *Profesora ayudante doctor. Universidad Complutense de Madrid*
- **José María Rodríguez Piñas.** *Profesor Adjunto. Universidad Europea de Madrid*
- **Alicia Romero Lorca.** *Catedrática de Bioquímica y Biología Molecular. Universidad Europea de Madrid*
- **David Sanz Rosa.** *Director de Investigación. Universidad Europea de Madrid*



STRATEGIC OBJETIVES

- The final objective of our group is to contribute to pharmacogenetics and precision medicine. We try to identify genetic biomarkers that could be used to predict who patients will have better response, benefit and outcome and lesser toxicity to specific drugs.

Planned Research Projects
- Genetic biomarkers of toxicity in oncological immunotherapy
- Genetic biomarkers of efficacy in oncological immunotherapy
- Worldwide genetic variability in polymorphisms associated with COVID severity

Transfer of Results
- Contributions in national and international congresses
- Publications in JCR journals

Training and education programme
- Students of medicine, nursery, etc, will be able to join to the group as PhD students

Dissemination
- Publications in JCR journals and national and international congresses
- Guides for physicians

Internationalization
- The team will call for European programs when specific programs related to our research will be opened. Gender Equality Quality Program: Gender equality is achieved in our group because women and men have the same conditions and opportunities to belong and to work with us.

RESEARCH LINES

- **Pharmacogenetics and cancer**
- Pharmacogenetics in breast cancer
- Pharmacogenetics in colorectal cancer
- Pharmacogenetics and immunotherapy
- **Genetic variability of human populations**

RESEARCH ACTIVITY

Final Degree Theses

- **Castro Sánchez KW.** Perfil mutacional de pole y sus implicaciones en inmunoterapia[dissertation]. Madrid: Universidad Complutense de Madrid: 2024(24/07/2024). Director: Novillo Villajos A

Publications

- **Esteban ME, Pino D, Romero-Lorca A, Novillo A, Gaibar M, Riancho JA, Rojas-Martínez A, Flores C, Lapunzina P, Carracedo A, Athanasiadis G, Fernández-Santander A.** Worldwide distribution of genetic factors related to severity of COVID-19 infection. Ann Hum Biol. 2024; 51(1): 2366248. Article. IF: 1.3; Q4
- **Fernández-Tocino M, Pun-Garcia A, Gómez M, Clemente-Moragón A, Oliver E, Villena-Gutierrez R, Trigo-Anca S, Díaz-Guerra A, Sanz-Rosa D, Prados B, del Campo L, Andrés V, Fuster V, de la Pompa JL, Cádiz L, Ibañez B.** β3-Adrenergic receptor overexpression in cardiomyocytes preconditions mitochondria to withstand ischemia-reperfusion injury. Basic Res Cardiol. 2024; 119(5): 773-94. Article. IF: 8.0; D1
- **Valdes-Devesa V, Sanz-Rosa D, Thuissard-Vasallo IJ, Andreu-Vázquez C, de la Cuesta RS.** Xenoestrogen concentration in women with endometriosis or leiomyomas: A case-control study. Plos One. 2024; 19(6): e0304766. Article. IF: 2.6; Q2
- **Díaz-Gavela AA, Peñalver ED, Sánchez-Garcia S, Pardo-Pérez E, Thuissard-Vasallo IJ, Andreu-Vázquez C, López MYM, Huertas MP, Guerrero-Gómez LL, Sanz-Rosa D, Lorenzo FC.** Hypofractionated whole breast IMRT with HDR brachytherapy boost in early-stage breast cancer: Long-term results from a single-center. Brachytherapy. 2024; 23(3): 342-54. Article. IF: 1.8; Q3
- **McLaughlin AM, Helland T, Klima F, Koolen SLW, van Schaik RHN, Mathijssen RHJ, Neven P, Swen JJ, Guchelaar HJ, Dalenc F, White-Koning M, Michelet R, Mikus G, Schroth W, Müdter T, Brauch H, Schwab M, Soiland H, Mellgren G, Thomas F, Kloft C, Hertz DL.** Nonlinear Mixed-Effects Model of Z-Endoxifen Concentrations in Tamoxifen-Treated Patients from the CEPAM Cohort. Clin Pharmacol Ther. 2024; 116(3): 690-702. Article. IF: 5.5; D1

Research projects

- **Antón Pascual B.** Evaluación del impacto de la práctica ejercicio físico en salud osteomuscular, emocional y tumoral en pacientes con tumores neuroendocrinos gastroenteropancreáticas u origen desconocido avanzados: FIT-NETs. NET España. 2023-2025. Managment centre: Hospital 12 de Octubre
- **Gaibar Alonso M.** Análisis de la expresión de microRNAs como posibles biomarcadores de toxicidad en inmunoterapia en cáncer genitourinario. Universidad Camilo Jose cela. 2024-2025. Managment centre: Universidad Camilo Jose Cela
- **Fernández-Santander A.** Estudio de polimorfimos de tipo SNP y CNV como posibles marcadores de toxicidad en inmunoterapia aplicada a tumores genitourinarios. FIBHULP. 2024-2025. Managment centre: IdiPAZ