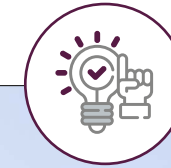


SCIENTIFIC REPORT 2023







1

Introduction



**Dr. Rafael
Pérez-Santamarina Feijóo**
Managing Director of HULP
Chairman of the Board of
FIBHULP

This year, 2024, we are celebrating the 60th anniversary of La Paz University Hospital. For 60 years, we have been at the forefront of healthcare in Madrid, Spain, Europe, and the world. We have become a benchmark in patient care, research, and quality. Maintaining this standard year after year is no easy task—it is a monumental effort by thousands of professionals who give their best every day to achieve the highest level of excellence, never losing sight of a fundamental concept for us: the humanization of care. We never forget that the patient is at the center and the motivation behind everything we do.

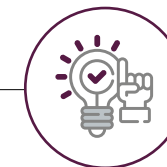
La Paz is a comprehensive center, both in terms of healthcare and other complementary areas. We are a university hospital with over 700 individuals in training each year. Furthermore, we are the most chosen hospital in Spain by students for their specialization, and we are

often the top choice for those with the highest scores in the MIR, EIR, FIR, etc. However, without a doubt, the cornerstone of our institution is research. We could not be a leading center without also being a top-level research institution.

This brings me to another reason for celebration in 2024: our Research Institute, IdiPAZ, is turning 15 years old. It has become a benchmark in biomedical research in Spain. The global impact factor surpasses its own records year after year, a clear indicator of the institute's excellent position in clinical-translational research. This year alone, it has published over 1,200 articles and conducted 420 clinical trials. I take particular pride in knowing that we have one of the most powerful research centers in our country, and that our professionals have the infrastructure and network that support and drive the research dimension of healthcare.

After 60 years of the hospital and 15 years of the Institute, we look to the future with enthusiasm, firmly committed to remaining at the forefront of healthcare and research. State-of-the-art medical technology and translational research are two fundamental pillars of the hospital's future.

Moreover, the renovation of the hospital complex is an essential part of our future plans. This will elevate the hospital to new heights, both technologically and in terms of care and science. The City of Health project, already underway with an investment of 1 billion euros, will create the most modern and innovative biomedical campus in Europe. This will allow our hospital to continue being one of the best in the world, thanks to our focus on specialization, innovation, and research. The new research facilities will make IdiPAZ one of the most advanced scientific centers, fostering collaboration between healthcare, scientific, and university professionals.



1. Introduction

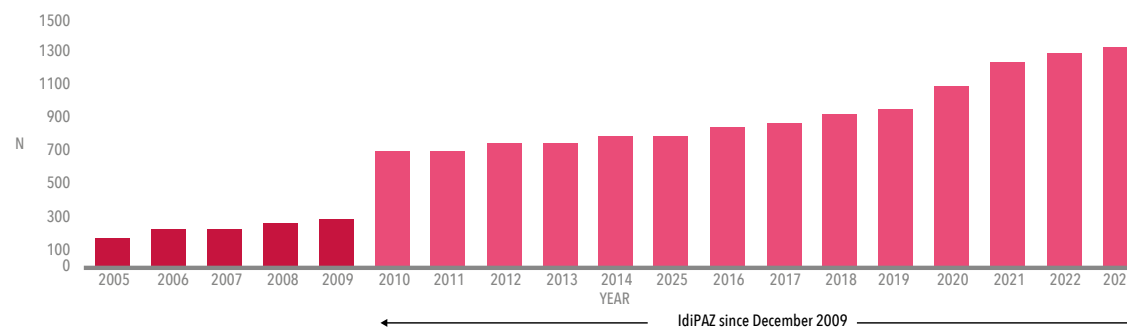
1

Introduction



Dr. José Luis López-Sendón Henstchel
 Scientific Director of IdiPAZ

Number of original research publications in indexed journals*



* Indexed journals, excluding reviews and letters to editor <https://www.idipaz.es/PaginaDinamica.aspx?IdPag=549&Lang=EN>

Celebrating 15 years

The **Hospital Universitario La Paz Institute for Health Research (IdiPAZ)** was founded 15 years ago and completely changed the scientific impact of the Hospital. The scientific productivity progressively increased through the years (www.idipaz.es/PaginaDinamica.aspx?IdPag=549&Lang=EN). This can be attributed to an increase research activity and the incorporation of new partners. In addition, a systematic central review of PubMed publications helps to identify non reported publications by the institute investigators and could explain the sudden increase of original publications since 2010. Of note, a significant number of publications do not include the appropriate IdiPAZ affiliation. Remember, if you are working at one of the IdiPAZ Institutions you are a member of IdiPAZ, even if you do not belong to any of the 60 research groups. The correct affiliation of research publications is crucial for international benchmarking. Please and thanks, be proud to belong to IdiPAZ.

The 2023 scientific report includes a myriad of activities, accreditations, details of research groups, names of investigators, research lines, research networks, working groups, detailed publications, awards, administrative achievements and more; you name it. You can find the details and compare the evolution through these 15 years in the IdiPAZ website (<https://www.idipaz.es>). Next year, perusal of the information will be easier. The IdiPAZ web site is currently being re-structured and will be dynamic, offering the information in a timely manner.

Certainly, the most important impact of IdiPAZ was the progressive change in the attitude of the hospital staff towards clinical and basic research, including medical directors, physicians, basic researchers, nurses, administrative and nonmedical personal. Right now, research is effectively considered as an important activity in a university hospital, along with patient care and teaching. In the future, I sincerely hope that all IdiPAZ investigators will be proud to belong to the institute, not only the hospital or the university.

This change in attitude is also reflected the growing number of the Institute working groups. Want to belong, just say it. New ideas are always welcome

The future ahead

Truly, the future could not be more exciting. Both La Paz Hospital and the Universidad Autonoma de Madrid will very soon start a process of total remodeling of the hospital and the Medicine Campus (www.comunidad.madrid/hospital/lapaz/ciudadanos/ciudad-salud) breaking physical and functional barriers, sharing common buildings for teaching and research and making closer and stronger than ever the relationship between the two institutions. A true mind reformer process itself that certainly requires open minded people working as a team. This will be the pathway to become part of the elite of best hospitals and medical universities. The process will take a few years with many inconveniences, but the regard will be immense also for the other IdiPAZ institutions and UAM affiliated hospitals. This opportunity simply cannot be missed.

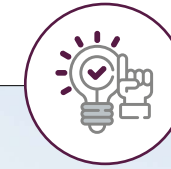
Farewell

This will be my last year as Scientific Director of the IdiPAZ Research Institute. I take this opportunity to give my most sincere thanks to the so many people that worked together and discussed and/or supported my opinions: the scientific subdirector, the external and internal scientific committees, the other institutions belonging to IdiPAZ, the directors of the hospital, the researchers and ... of course everyone at FIBHUP, and indispensable partner and a true "Pepito Grillo" for IdiPAZ and really committed to help everyone to navigate through the complicated administrative pathways of research.

I have no doubt that the new Scientific Director will lead IdiPAZ to new heights with more success than ever before, keeping the principles of teamwork within the institutions, basic and clinical research and improving international relationships.

Thanks, and forgive my mistakes. I received more than I gave.

José López-Sendón
 Scientific Director



1. Introduction

1

Introduction

Mission

To become a research institute that develops multidisciplinary biomedical research in the prioritized areas and with cutting-edge technology. Promoting collaboration with internationally renowned centers, and oriented to the translation of knowledge to clinical practice and the improvement of patients' health.

Vision

To become a benchmark in translational biomedical research of excellence both nationally and internationally, committed to the health of patients.

Values

- Public engagement
- Continuous improvement through quality fostering
- Orientation towards excellence
- Sense of belonging to the organization
- International vocation
- Leadership in innovation and transfer
- Focus on sustainability
- Encouragement of cooperation and the establishment of alliances.
- Commitment to diversity and equal opportunities



2 Executive summary



2.1 Global Analysis

- 2.1.1. Scientific Analysis
- 2.1.2. Annual Accounts



2.2 Research Structure



2.3 Training Report and Teaching

- 2.3.1. Doctoral Theses
- 2.3.2. Master Theses
- 2.3.3. Final Degree Theses
- 2.3.4. Scientific Training Plan
- 2.3.5. Science and Society-Scientific Outreach Initiatives



2.4 Innovation and Transfer Activities

- 2.4.1. Innovation and Transfer Activities
- 2.4.2. Patents and trademarks



2 Executive summary



2.5 Quality Committee



2.6 Platforms

- 2.6.1. Biobank
- 2.6.2. Biostatistic
- 2.6.3. Experimental Surgery
- 2.6.4. Documentalist
- 2.6.5. UICEC
- 2.6.6. Internationalisation
- 2.6.7. Flow Cytometry Laboratory
- 2.6.8. Cell Culture Laboratory
- 2.6.9. Molecular Imaging and Immunohistochemistry
- 2.6.10. Radioisotope Unit
- 2.6.11. BSL2-Virology Laboratory
- 2.6.12. Sequencing Platform
- 2.6.13. Bioinformatics Service
- 2.6.14. Pain Platform
- 2.6.15. Food, Nutrition and Health
- 2.6.16. Simulation Platform (CEASEC)
- 2.6.17. Tissue Engineering and 3D Printing Platform



2.7 Mentor and Pre-Mentor Program



2.8 Scientific Production



2.9 CIBERs and RETICs



2.10 Communication and Public Engagement



2.11 Responsible Research and Innovation



2.1 Global Analysis



2.1.1 Scientific analysis

In 2023, the scientific production of IdiPAZ included more than 1,500 publications, and almost 43% of the publications (682) are IdiPAZ own documents, so the author the first, the last or the corresponding author of the publication is a researcher of the institute. The original articles and reviews articles by IdiPAZ researchers overcome 1,300 more than 50% in the quartile 1 and more than 17% of then published in journal of the first decile of their subject area.

2023	Total	%Q1	%D1
Publications	1.581	48,77	17,77
Owned Publications	682	38,86	8,80
Un-owned Publications	899	56,28	24,58
Originals	1.221	48,57	18,01
Owned Originals	466	36,70	8,15
Un-owned Originals	755	55,89	24,11
*JCR Indexed Articles and Reviews	1.332	50,53	17,78
Owned JCR Indexed Articles and Reviews	521	39,92	8,87
Un-owned JCR Indexed Articles and Reviews	811	57,34	24,29

*JCR Indexed

IdiPAZ researchers evidenced their participation in national and international scientific networks, with almost 85% of the total documents published in collaboration (84.88%). Regarding collaborative publications, more than 55% were national collaboration (55.37%) and almost 45% international collaboration (44.63%). Internal collaboration between IdiPAZ research groups is reflected in the publications signed by several IdiPAZ groups. These publications account for around 17% of the documents (16.89%). In terms of articles and reviews, the percentage of intra-institute publications accounts for 40% of the total (40.04%).

2023	Total	% National Collaboration	% International Collaboration
Collaborative Publications	1.342	55,37	44,63
Owned Collaborative Publications	443	63,88	36,12
Un-owned Collaborative Publications	899	51,17	48,83
Collaborative Originals	1.078	54,64	45,36
Owned Collaborative Originals	323	64,09	35,91
Un-owned Collaborative Originals	755	50,60	49,40
*Collaborative JCR Indexed Articles and Reviews	1.177	54,29	45,71
Owned Collaborative JCR Indexed Articles and Reviews	366	63,11	36,89
Un-owned Collaborative JCR Indexed Articles and Reviews	811	50,31	49,69

*JCR Indexed

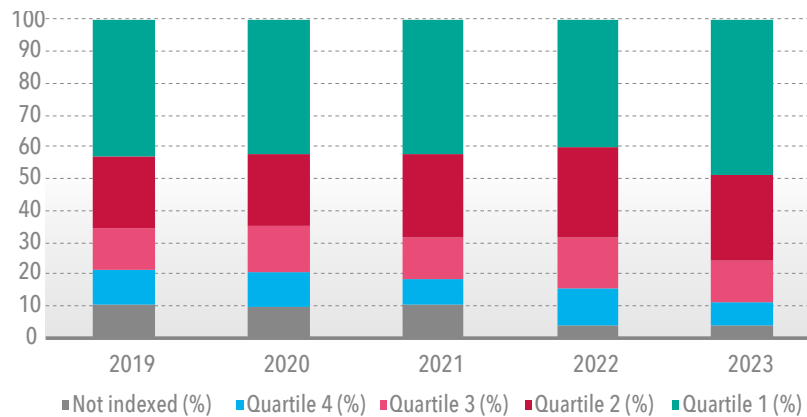
2023	Total	% Intra-Institute Documents
Intra-Institute Publications	633	40,04
Owned Intra-Institute Publications	339	53,55
Un-owned Intra-Institute Publications	294	46,45
Intra-Institute Originals	498	31,50
Owned Intra-Institute Original	251	50,40
Un-owned Intra-Institute Original	247	49,60
Intra-Institute JCR Indexed Articles and Reviews	540	34,16
Owned Intra-Institute JCR Indexed Articles and Reviews	273	50,56
Un-owned Intra-Institute JCR Indexed Articles and Reviews	267	49,44

*JCR Indexed

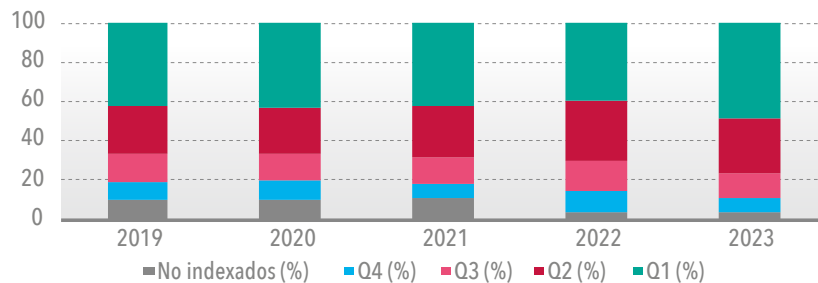


In the year 2023, the production of scientific activity has been maintained with respect to the growth of previous years. The importance of the work of our researchers can be seen in the fact that almost half of the documents have been published (48.77%) in the most relevant journals of their thematic category.

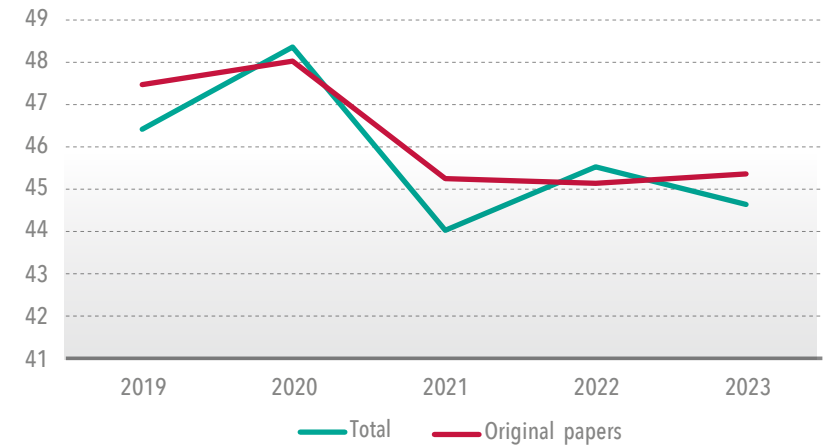
Distribution of publications by quartile 2019-2023



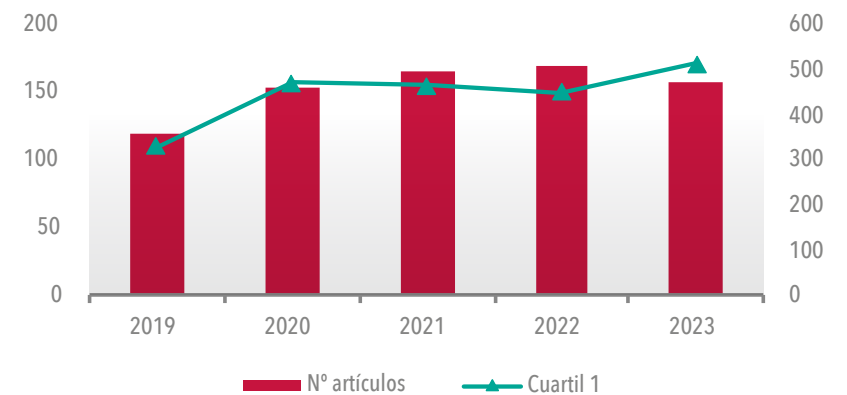
Distribution of originals by quartile 2019-2023



Papers with international collaboration between 2019-2023



Owned originals between 2019-2023



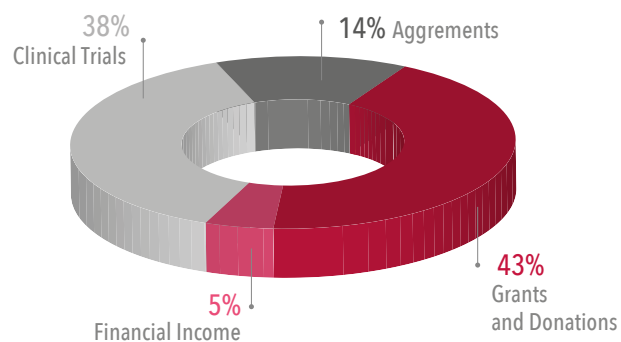


2.1.2 Annual Accounts

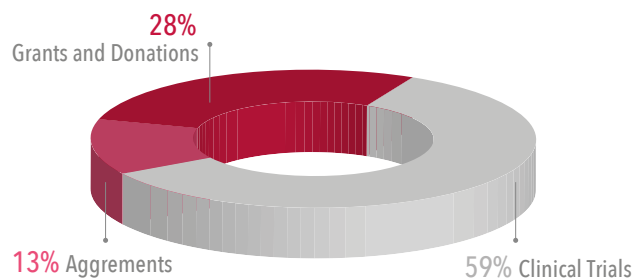
In accordance with the Law 19/2013, of December 9th, of transparency, access to public information and good governance, the Foundation for Biomedical Research of La Paz University Hospital (FIBHULP) makes their information public, with the objective of guaranteeing institutional transparency:

<http://www.idipaz.es/PaginaDinamica.aspx?IdPag=550&Lang=ES>

Economic Income 2023



Economic Income overhead 2023



	2022	2023
INCOME	23.800.714,85	27.735.115,89
Grants	7.443.728,48	11.126.922,81
Corporate collaboration agreements and sponsorships	3.648.875,97	3.237.114,69
Grants and other private research projects	786.218,94	942.750,64
Scientific research (clinical trials, collaborations...)	11.057.226,70	11.028.187,17
Financial Income	851.345,00	1.386.600,68
Positive exchange rate differences	13.319,76	1.014,87
Extraordinary income	0,00	12.525,03

	2022	2023
COSTS	23.631.099,92	27.659.385,83
Monetary aid and other	606.203,76	352.817,22
Operating consumption	1.205.464,69	1.726.050,44
Leases and royalties	5.997,83	14.674,50
Repair and maintenance	3.855,63	2.405,38
Professional Services	2.205.175,05	2.860.613,27
Other expenses	3.108.059,08	3.743.698,09
Other taxes	3.670,02	12.216,30
Wages and salaries	7.276.475,05	8.545.325,48
Social charges	2.297.539,06	2.639.470,67
Compensations	55.117,28	22.930,55
Amortization of fixed assets	1.537.817,17	3.295.334,88
Provisions (Provision - Excess)	5.004.290,90	4.187.988,01
Financial expenses	209.178,44	118.974,92
Negative exchange differences	1.369,63	45.368,89
Refund of grants, donations and legacies	110.526,33	91.517,23
R&D expenses	360,00	0,00
SURPLUS FOR THE FINANCIAL YEAR	169.614,93	75.730,06



In 2023, the foundation –FIBHULP- received a Nominative Transfer of the *Consejería de Sanidad de la Comunidad de Madrid* in favor of charging the 312D program “Biomedical Research Foundations”, to fund the following items:

- Researchers and personal of support of the I3, I3SNS, Miguel Servet I, Miguel Servet II, Río Hortega, Sara Borrell, Juan de la Cierva, Marie Skłodowska-Curie, and Juan Rodés Programs.
- Intensification Programs of health professionals.
- Activities of promotion and dissemination research and scientific culture.
- Accreditations of the research activity.
- Support to the Technical Units or Platforms for Research and Management of R+D+i

During the year 2023, IdiPAZ has signed with private public entities the numbers of contracts detailed below:

Agreements: 81
Service contracts: 18
Sponsorship contracts: 52
Training contracts: 11

The main entities with which these contracts have been signed are:

Organization	N° Agreements
AJL Ophthalmic S.A.	1
Alcon Healthcare S.A.	1
Alexion Pharma Spain S.L	2
Alk-Abello S.A.	1
Almirall S.A.	1
Astellas Pharma S.A.	3
Astrazeneca Farmaceutica Spain S.A.	6
Baxter S.L.	1
Bayer Hispania S.L.	2
Biocryst España S.L	1
Bioprojet España S.L.U.	1
Boehringer Ingelheim España S.A.	1
Cepheid Iberia S.L.U	1
Consortio Centro de Investigación Biomédica en Red	1
Euromedice Ciencias Medica S.L.	1
European Association Of Neurosurgical Societies	1
Fundación UNIR	1
Glaxosmithkline S.A.	3
GP Pharm S.A.	1
Grunenthal Pharma S.A	1
Imperial College of Science, Technology and Medicine	1
Ipsen Pharma S. A.	5
Italfármaco S.A	1
LFB Bioterapias Hispania S.L.	1
Mediwound Germany GMBH	1
Medtronic Ibérica S.A.	1
Merck Sharp and Dohme de España S.A.	2

Organization	N° Agreements
Mindray Medical España	1
Neos New Born Solutions S.L.	1
New York University School of Medicine	1
Nikkiso Belgium BV	1
Novartis Farmaceutica S.A.	4
Novo Nordisk Farmacéutica do Brasil Ltda	1
Novo Nordisk Pharma S.A.	1
Omnix Pharma S.L	2
Organon Salud S.L.	1
Otsuka Pharmaceutical S.A.	2
Pfizer S.L.U.	1
PTC Therapeutics Spain S.L	1
Publicidad Permanyer S.L.	1
Recordati España S.L.	1
Roche Farma S.A.	4
Sandoz Farmacéutica S.A.	1
Sanidad y Ediciones S.L.	2
Sanofi Aventis S.A	1
Springer Healthcare Ibérica S.L.U.	1
Stryker Iberia S.L.	1
Takeda Farmacéutica España S.A.	2
Techdow Pharma Italy S.R.L.	1
Teva Pharma S.L.U.	1
Thermo Fisher Diagnostics S.L.U	1
UCB Pharma S.A.	1
Venter Pharma S.L.	1
Werfen España S.A.U.	2



2.2 Research Structure



Scientific Director

José Luis López-Sendón Hentschel

Scientific Assistant Director

Eduardo López-Collazo

Technical Assistant Director

Paloma Gómez Campelo

GOVERNING COUNCIL

Chairman

Laura Gutiérrez Barreno. *Vice-Minister of Health of the Community of Madrid. Deputy*

Vice chair

Amaya Mendikoetxea Pelayo. *Chancellor of UAM*

Members

Rafael Pérez-Santamarina Feijóo. *Presidente*

Francisco García Río *FIBHULP Patron*

Rodolfo Álvarez-Sala Walther. *FIBHULP Patron*

José Luis López-Sendón Hentschel. *Scientific Director of IdiPAZ. FIBHULP Patron*

Almudena Castro Conde. *FIBHULP Patron*

Alicia Portas Martínez. *FIBHULP Patron*

Antonio Pérez Martínez. *FIBHULP Patron*

Javier de Castro Carpeño. *FIBHULP Patron*

Inmaculada Ibáñez de Cáceres. *FIBHULP Patron*

Alicia Hernández Gutierrez. *FIBHULP Patron*

Exuperio Díez Tejedor. *HULP Representative*

Susana Noval Martín. *HULP Representative*

Paloma Gómez Campelo. *HULP Representative*

Pilar López García. *UAM Representative*

José Manuel González Sancho. *UAM Representative*

Zita Quintela González. *Gerente HUG*

Rosa Carmen Fernández Lobato. *HUG Representative*

Esther López García. *UAM Representative*

David Sanz Rosa. *UE Representative*

Secretary

Ana Coloma Zapatero. *Director of FIBHULP*

EXECUTIVE COMMITTEE

Chairman

Rafael Pérez-Santamarina Feijóo. *Chairman of the Board of FIBHULP; permanent delegation to Rodolfo Álvarez-Sala Walther.*

Members:

José Luis López-Sendón Hentschel. *Scientific Director of IdiPAZ*

Eduardo López Collazo. *Scientific Assistant Director of IdiPAZ. Established Research Representative*

Francisco García Río. *HULP Representative*

Exuperio Díez Tejedor. *HULP Representative*

Paloma Gómez Campelo. *Technical Assistant Director*

Pilar López García. *UAM Dean*

Francisco Arnalich Fernández. *UAM Representative*

Zita Quintela González. *Gerente HUG*

Rosa Carmen Fernández Lobato. *HUG Representative*

David Sanz Rosa. *UE Representative*

Secretary:

Ana Coloma Zapatero. *Director of FIBHULP*





EXTERNAL SCIENTIFIC COMMITTEE



Juan Tamargo Menéndez. Professor. Institute of Pharmacology and Toxicology, Spanish National Research Council (CSIC)- Complutense University of Madrid. Madrid.



Joaquín Arribas López. Director of Research at Parc de Salut Mar (PS-MAR) and director of the Institut Hospital del Mar d'Investigacions Mèdiques (IMIM), as well as ICREA research professor at the Vall d'Hebron Institut d'Oncologia (VHIO) Barcelona. Chairman of the Technical Committee on Cancer Screening Health Research Fund (FIS). Institute of Health Carlos III.



Jacinta Cecilia Bustamante. Associate Professor. Paris Descartes University, Laboratory of Human Genetics of Infectious diseases (INSERM U980), Imagine Institut. Center for the Study of Primary Immunodeficiencies, Necker Enfants-Malades Hospital. Paris.



Isabel Fabregat Romero. Research Group Coordinator. Centre d'Oncologia Molecular. L'Hospitalet, Barcelona IDIBELL- Bellvitge Biomedical Research Institute. Barcelona.



Juan Pedro Bolaños Hernández. Departament of Biochemistry and Molecular Biology. University of Salamanca. Institute of Functional Biology and Genomics. Salamanca.



Santiago Rodríguez de Córdoba. Professor. Cellular and Molecular Medicine Department. Center of Biological Research. CSIC. Madrid.



Pablo Pelegrin Vivancos. Scientific Assistant Director. Principal Investigator in Group: Digestive Surgery, Endocrine and Abdominal Organ Transplantation. Virgen de la Arrixaca Biosanitary Research Institute. Murcia.



Elisa Martí Gorostiza. Head researcher of Development of the Spinal Cord in health and disease. Instituto de Biología Molecular de Barcelona (CSIC). Barcelona. Stanley Thomas. Chair of the Department of Neurology at UCLA: Neurologist and neuroscientist in the Department of Neurology at the Geffen School of Medicine at UCLA.



Asuncion Mejias. Principal investigator in the Center for Vaccines and Immunity at The Research Institute at Nationwide Children's Hospital. Professor of Pediatrics at The Ohio State University College of Medicine and faculty from the Division of Pediatric Infectious Diseases.



Judith Hochman. Director of the Cardiovascular Research Institute at New York University (NYU).



Jean-Claude Tardif Cardiologist, Montreal Heart Institute, Canada. Director, Research Chair, Canada Research Chair in Translational and Personalized Medicine. Professor of Medicine Montreal Heart Institute, University of Montreal, Canada. Director, Montreal Heart Institute Research Centre, Montreal Heart Institute, Canada



Sonia Villapol Assistant Professor of Neurosurgery. Department of Neurosurgery, Institute of Academic Medicine, Houston Methodist Research Institute, Houston, TX. Assistant Professor of Neuroscience. Department of Neuroscience in Neurological Surgery, Weill Cornell Medical College, NY.



ANIMAL WELFARE ORGAN

Carmen Fernández Criado. *Director of the Veterinary Office of the Faculty of Medicine of the UAM. Specialist in Animal Health and Welfare as external consultant*
 Fernando Carceller Benito. *Physician of Neurosurgery Service of the HULP and researcher of the IdiPAZ Group 'Neurology and Cerebrovascular Diseases' Group of IdiPAZ*
 Nuria Vilaboa Díaz. *Researcher at IdiPAZ. Internal Advisor*
 Carlota Largo Aramburu. *Head of the Animal Facility of the Experimental Surgery Service of the HULP as a specialist in Animal Health and Welfare*

TECHNICAL SECRETARY

Mercedes Ruiz Balibrea

INTERNAL SCIENTIFIC COMMITTEE

Chairman

José Luis López-Sendón Henstchel. *Scientific Director*

Secretary

Nora Butta Coll. *HULP representative*

Members

Eduardo López Collazo. *Scientific Assistant Director*
 Paloma Gómez Campelo. *Technical Assistant Director*
 Javier de Castro Carpeño. *Innovation Support Unit Coordinator*
 José Jonay Ojeda Feo. *Quality Comitee Coordinator*
 Bárbara Martínez de Miguel. *Training Comitee Coordinator*

Member by Hospital Universitario La Paz:

Fernando Martín Sánchez
 María Fe Bravo Ortiz
 José Ignacio Bernardino de la Serna
 Alberto Borobia Pérez
 Nora Butta Coll
 María Fernández Velasco
 Blanca Fuentes Gimeno
 María Gutiérrez Fernández

Alicia Hernández Gutiérrez
 Esther Pérez David
 Ana Sastre Perona
 Nuria Vilaboa Díaz
 Jesús Mingorance Cruz

Pre-doctoral representatives

Enrique Alfaro García
 Javier Pozo Novoa

Members by Universidad Autónoma de Madrid

Francisco Arnalich Fernández
 Gemma Domínguez Muñoz
 Concepción Peiró Vallejo
 Belén Pérez González
 María Carmen Sellán Soto

Members by Hospital Universitario de Getafe

Joaquín Alonso Martín
 Raquel Herrero Hernández
 Javier Sánchez-Rubio Ferrández

Members by Universidad Europea de Madrid

David Sanz Rosa

IdiPAZ Board of Directors

José Luis López-Sendón. *Scientific Director*
 Eduardo López Collazo. *IdiPAZ/FIBHULP*
 Ana Coloma. *IdiPAZ/FIBHULP*
 Paloma Gómez Campelo. *IdiPAZ/FIBHULP*
 Daniel Jaque. *IdiPAZ/UAM*
 Carlos Sánchez Ferrer. *IdiPAZ/UAM*
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 Nora Butta Coll. *IdiPAZ/FIBHULP*
 Susana Reverter. *IdiPAZ/HULP*
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 Patricia Rodríguez Lega. *IdiPAZ/HUG*
 David Sanz Rosa. *IdiPAZ/UE*
 Oscar García López. *IdiPAZ/UE*

Research Areas Working Group

José Luis López-Sendón. *Scientific Director*
 Paloma Gómez Campelo. *Technical Assistant Director*
 Eduardo López Collazo. *Scientific Assistant Director/ Infectious Diseases and Immunity Area Coordinador*
 Cristina Calvo Rey. *Maternity and Pediatric Area Coordinator*
 Antonio Pérez Martínez. *Maternity and Pediatric Area Coordinator*
 María Fernández Velasco. *Cardiovascular Area Coordinator*
 Raúl Moreno Gómez. *Cardiovascular Area Coordinator*
 Exuperio Díez Tejedor. *Neurosciences Area Coordinator*
 Nuria Vilaboa Díaz. *Surgery, Transplant and Health Technologies Area Coordinator*
 Javier de Castro Carpeño. *Cancer and Human Molecular Genetics Area Coordinator*
 Inmaculada Ibáñez Cáceres. *Cancer and Human Molecular Genetics Area Coordinator*
 Francisco García Río. *Large System Pathologies Area Coordinator*

Infrastructure Equipment and Human Resorces Working

José Luis López-Sendón. *Scientific Director*
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Evaristo Moliné Jorques. *Patient representative*

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Technical Secretary

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Sol de Gracia García. *Administrative Assistant*

María Isabel Arribas Álvarez. *Administrative*

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Aitana López Redondo. *FIBHULP Representative*

Daniel Quijada Alcón. *FIBHULP Representative*

Santiago Rello Varona. *FIBHULP Representative*

Andrea Martínez Feijoo. *Journalist and HULP*

Communication Office Director

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Ana Sastre Perona. *FIBHULP Representative*

Gema Vallés Pérez. *FIBHULP Representative*



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EQUALITY, DIVERSITY AND CONFLICT RESOLUTION COMMISSION

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- Paloma Gómez Campelo. *FIBHULP representative*
- Aitana López Redondo. *FIBHULP representative*
- Nuria Vilaboa Díaz. *Employee's representative of FIBHULP*
- Juan Ángel Fresno Vara. *Employee's representative of FIBHULP*
- Sara García Barcenilla. *Employees's representative*

23th July of 2019, we decided to join as the Equality and Diversity Committee in the Foundation for Bio-medical Research of La Paz University Hospital (FIB-

HULP) because we think it is important to improve equality in the community respecting the differences, and to contribute to their promotion in science.

In a short period, this committee has achieved significant results:

- Protocol for the prevention of and action against discriminatory harassment, moral and sexual harassment and harassment based on gender
- II Equality and Diversity Plan (2022-2026)
- I Equality and Diversity Plan (2020-2024)
- Preventing and dealing with situations of internal conflict, violence and harassment in Bio-medical Research Foundations
- Action Protocol for the prevention, detection and action in situations of harassment due to sexual orientation, gender identity, gender expression or sexual characteristics in the Bio-medical Research Foundations of the health institutions attached to the SERMAS.

In addition, in December 2019, FIBHULP/IdiPAZ



signed the diversity charter, the initiative of the *Fundación Diversidad* - of the European Institute of Diversity Management and the Alares Foundation with the support of the Spanish Ministry of Equal Opportunities, added at the European diversity Charter.



By signing this document, IdiPAZ/FIBHULP assumes the guidelines of its Decalogue of principles:

1. To sensitize employees in line with the values of equal opportunities and respect for diversity.
2. To advance in the construction of a diverse workforce
3. To promote the inclusion in the workplace
4. To consider policies to promote diversity in the workplace
5. To promote of work-life balance for employees
6. Recognition of the diversity of clients
7. To communicate the compromise around these principles to the employees.
8. To communicate the compromise around these principles to the suppliers.
9. To communicate the compromise around these principles to the public administrations, business organizations, trade unions and other stakeholders.
10. To highlighting activities in support of non-discrimination -and their results- in its Annual Report.



COMMISSION FOR HUMANIZATION AND SOCIAL AND SCIENTIFIC RESPONSIBILITY

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Paloma Gómez Campelo. *Deputy Director of IdiPAZ - CSR, SDGs and Agenda 2030 Coordinator of IdiPAZ/FIBHULP*

Vice President

Manuel Arellano Armisen. *Second Vice-President of the Platform of Patients' Organizations, Vice-President of the ALCER National Federation and member of the Board of the European Patients' Forum.*

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 María Quintanar Jaime. *FIBHULP Human Resources Department - Head of CSR of IdiPAZ/FIBHULP*
 Ana Cristina García Álvarez. *Deputy Director of continuity of Care representative of the HULP Humanitazation Commission*
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 Shona Brown. *British embassy representative*

Secretary

Aitana López Redondo. *Responsible for SDGs and Agenda 2030 at IdiPAZ/FIBHULP*

Contact

RSC@idipaz.es



IdiPAZ/FIBHULP has the certification of Corporate Social Responsibility through the IQNet SR10 standard, within the Integrated Management System of the Hospital Universitario La Paz.

In addition, we are working on joining the commitment to the Sustainable Development Goals defined by the United Nations, which includes 17 goals and 169 targets, including new areas such as climate change, economic inequality, innovation, sustainable consumption, peace and justice, among other priorities. To this end, we are working to establish a model that includes the SDGs and we have defined a survey to establish those aspects that are most relevant to our institution.

Thereby, we are immersed in a process of integration of the Sustainable Development Goals and that is why, through the Commission for Social and Scientific Responsibility of IdiPAZ, we have launched the project.

HEALTH AND SAFETY COMMITTEE

Compostion

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 Sara Fernández Morata. *FIBHULP Representative*
 Estela Sánchez Simón. *FIBHULP Representative*
 Laura Saldaña Quero. *Risk Prevention Delegate/Secretary*
 Berta Rodés Soldevilla. *Risk Prevention Delegate*
 F. G. G. *Prevention delegate*

Labour Risk Prevention of IdiPAZ

Aitana López Redondo. *Head of Labour Risk Prevention*
 Sergio Palomero Lorente. *Prevention Technician*
 Sonsoles Bedia Olmeda. *Prevention Technician*

External Prevention Service

Olivia Barcón Minchán
External prevention technician: EMESA Prevención

Contact

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Ángel Campos Barros

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Secretary

Juan Ángel Fresno Vara



RESEARCH AREAS

Neurosciences Area

Coordinator: Exuperio Díez Tejedor

Psychiatry and Mental Health

Director: María Fe Bravo Ortiz

Neurology and Cerebrovascular Diseases

Directors: Exuperio Díez Tejedor
 María Gutiérrez Fernández

Neuroprotective Strategies in Neurodegenerative Diseases

Director: Ana Isabel Rojo Sanchís

Involvement of Glycinergic and Glutamatergic Systems in Central Nervous System Pathologies

Director: Francisco Zafra Gómez

Mechanisms and Biomarkers in Neurodegenerative Diseases

Director: Isabel Lastres Becker

Multiple Sclerosis Research

Director: Yolanda Aladró Benito



Cardiovascular Area

Coordinator: José Raúl Moreno Gómez;
 María Fernández Velasco

Research on Invasive Clinical and Translational Cardiology - ICCI-Paz

Directors: José Raúl Moreno Gómez
 María Fernández Velasco

Coagulopathies and Alterations of Haemostasis

Director: Víctor Jiménez Yuste

Vascular Physiology and Pharmacology

Director: Ana María Briones Alonso

Vascular Pharmacology and Metabolism (FARMAVSM)

Directors: Carlos F. Sánchez Ferrer
 Concepción Peiró Vallejo

***Paediatric cardiology research**

Director: Federico Gutiérrez-Larraya Aguado

**Group recently created, December 2023*



Infectious Diseases and Immunity Area

Coordinator: Eduardo López-Collazo

AIDS and Infectious Diseases

Director: José Ramón Arribas López

Molecular Microbiology

Director: Jesús Mingorance Cruz

Immuno-Rheumatology

Director: María Eugenia Miranda Carús

Innate Immune Response

Directors: Eduardo López-Collazo
 Carlos del Fresno Sánchez

Complement Defects in Human Pathology

Directors: Margarita López Trascasa
 Pilar Sánchez-Corral Gómez

Lymphocyte Pathophysiology in Immunodeficiencies

Director: Eduardo López Granados

Drug Hypersensitivity and Innate Immune Response

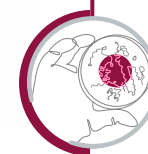
Director: Teresa Bellón Heredia

Immunomediate Gastrointestinal Diseases and other Digestive Pathologies

Director: María Dolores Martín Arranz

MicroRNA Regulation of Immune Tolerance, Autoimmunity and Cancer

Director: Alicia González Martín





Large System Pathology Area

Coordinator: Francisco García Río

Internal Medicine and Systemic Diseases

Director: Francisco Arnalich Fernández

Organic Dysfunction and Failure in the Aggression

Director: José Manuel Añón Elizalde

Respiratory Diseases

Directors: Francisco García Río
Carolina Cubillos Zapata

Regulation of Gene Expression and by Hypoxia

Director: Luis del Peso Ovalle

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Director: María Gemma Fernández Juárez

Diagnosis and Treatment of Allergic Diseases

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Patient Blood Management

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Health Care Nurses Research

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Cancer and Human Molecular Genetics Area

Coordinator: Javier de Castro Carpeño

INGEMM- Institute of Medical and Molecular Genetics

Director: Pablo Lapunzina Badía

Translational Oncology

Director: Jaime Feliú Battle

Experimental Therapies and Biomarkers in Cancer

Directors: Olga Vera Puente
Javier de Castro Carpeño

Oto-Neurosurgery Research

Director: Luis Lassaletta Atienza

Cancer Molecular Pathology and Therapeutic Targets

Director: David Hardisson Hernández

Mechanisms of Tumour Progression

Director: José Manuel González Sancho

Research and Diagnosis of Inherited Metabolic Diseases

Director: María Belén Pérez González

Dyslipemias of Genetic Origin and Metabolic Diseases

Director: Sonia Rodríguez Novoa

Human Genetic Variability

Director: Ana Fernández Santander



Surgery, Transplant and Health Technologies Area

Coordinator: Nuria Vilaboa Díaz

Bone Pathophysiology and Biomaterials

Director: Nuria Vilaboa Díaz

Cellular Engineering

Director: María Paz de Miguel González

Clinical Pharmacology

Director: Antonio J. Carcas Sansuán

Osteoarticular surgery research - gicoa

Director: Enrique Gómez Barrena

Translational research in maxillofacial surgery and head and neck cancer

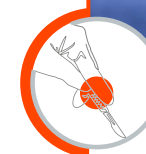
Directors: José Luis Cebrián Carretero
Ana Sastre Perona

Patients Safety and Quality Research

Director: Elena Ramírez García

Translational Research and Innovation in General and Digestive Surgery

Director: Constantino Fondevila Campo





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Coordinator: Cristina Calvo Rey
Antonio Pérez Martínez

Neonatology

Director: Adelina Pellicer Martínez

Molecular Hepatology

Directors: Paloma Jara Vega
Loreto Hierro Llanillo

Maternal and Fetal Medicine

Director: José Luis Bartha Rasero

Pediatric Respiratory, Systemic and Neurological Infections & Host Immune Response

Director: Cristina Calvo Rey

Pediatric Systemic Infections; HIV, tuberculosis, Imported and Emergent Diseases

Director: Talía Sainz Costa

Translational Research in Pediatric Oncology, Hematopoietic Transplantation and Cell Therapy

Director: Antonio Pérez Martínez

Congenital Malformations and Transplantation

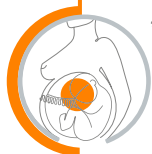
Director: Francisco Hernández Oliveros

Research in Endometriosis

Director: Alicia Hernández Gutiérrez

*Research on Comprehensive Care for Transplanted Children and Adolescents

Directors: María Jesús Pascau González-Garzón,
Luz Yadira Bravo Gallego



*Food oxidative stress and cardiovascular health

Director: Silvia M. Arribas Rodríguez

**Group recently created, December 2023*



Multidisciplinary Research in Healthy Aging

Coordinator: Rocío Menéndez Colino

Aging and fragility in the elderly

Director: Rocío Menéndez Colino

Frailty and healthy aging

Director: Leocadio Rodríguez Mañas

Frailty, multimorbidity patterns and mortality in the elderly population residing in the community

Director: Miguel Ángel Salinero Fort





PUBLIC RESEARCH CONTRACTS

Ramón y Cajal Stabilisation Contracts (I3) - CM

- Karen Elise Heath. INGEMM - Institute of Medical and Molecular Genetics Group
- Jesús Mingorance Cruz. Molecular Microbiology Group
- Rebeca Pérez de Diego. Innate Immune Response Group

Miguel Servet Stabilisation Contracts (I2) - ISCIII/CM

- Teresa Bellón Heredia. Drug Hypersensitivity and Innate Immune Response Group
- Juan Ángel Fresno Vara. Translational Oncology Group
- Ángel Campos Barros. INGEMM - Institute of Medical and Molecular Genetics Group
- María Paz de Miguel González. Cellular Engineering Group
- Eduardo López-Collazo. Innate Immune Response Group
- Berta Rodés Soldevila. AIDS and Infectious Diseases Group
- Pilar Sánchez-Corral Gómez. Complement Defects in Human Pathology Group
- María Rosa Torres Jiménez. Dyslipidemias of Genetic Origin and Metabolic Diseases Group
- David Vicent López. Molecular Hepatology Group
- Nuria Vilaboa Díaz. Bone Pathophysiology and Biomaterials Group
- Nora Viviana Butta Coll. Coagulopathies and Alterations of Haemostasis Group
- María Inmaculada Ibáñez de Cáceres. Experimental Therapies and Biomarkers in Cancer Group
- Rosa María Rodríguez Pérez. Diagnosis and Treatment of Allergic Diseases Group
- Laura Saldaña Quero. Bone Pathophysiology

and Biomaterials Group

- María Fernández Velasco (CPII16/00047). Research on Invasive Clinical and Translational Cardiology - ICCIT-PAZ
- Carolina Cubillos Zapata (MS18/00208). Respiratory Diseases Group

Miguel Servet Contracts Type I - ISCIII

- Ana Sastre Perón (MS19/00033). Experimental Therapies and Biomarkers in Cancer Group
- Carlos del Fresno Sánchez (CP20/00106). Innate Immune Response Group
- Laura Otero Ortega (CP20/00024). Neurology and Cerebrovascular Diseases Group
- Elias Dahdouh (CP23/00036). Molecular microbiology group

Miguel Servet Contracts Type II - ISCIII

- María Dolores Gutiérrez (MSII20/00002). Neurology and Cerebrovascular Diseases Group

Intensification Contracts – ISCIII

- Alberto Borobia Pérez (INT22/00016)
- Blanca Fuentes Gimeno (INT22/00039)
- Antonio Carcas Sansuan (INT22/00054)
- José Ramón Arribas (INT23/00003)
- Teresa Álvarez Román (INT23/00069)
- José Carlos Moreno Navarro (INT23/00092)

Río Hortega Contracts - ISCIII

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- Elena de Celis Ruiz (CM22/00077)
- Víctor Galán Gómez (CM22/00078)
- Mikel Urroz Elizalde (CM22/00085)
- Enrique Seco Meseguer (CM22/00156)
- Luis Ramos Ruperto (CM22/00160)
- Laura Casado Fernández (CM23/00022)
- Gonzalo Solís García (CM23/00054)





- Blanca Bravo Queipo de Llano (CM23/00057)
- Patricia Martínez Martín (CM23/00058)
- Borja Rivero Santana (CM23/00121)
- Claudia Millán Longo (CM23/00139)
- Julian Villamayor Sánchez (CM23/00159)

Juan Rodés Contracts - ISCIII

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- Carlos Daniel Grasa Lozano (JR22/00044)
- Irene García García (JR22/00036)

Sara Borrell Contracts - ISCIII

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- Luna Rindan Cordeiro Minute (CD22/00042)
- Almudena Val Blasco (CD22/00055)
- Olga Vera Puente (CD22/00040)
- Clara Correa Paz (CD23/00005)
- Marta Mascaraque Checa (CD23/00167)

Predoctoral Fellowship - ISCIII

- Enrique Alfaro García (FI20/00059)
- Rebeca Gallego Ruiz (FI21/00033)
- Andrea Bueno Sen (FI21/00259)
- Andrea Guzmán de Antonio (FI22/00182)
- María Paz López Molina (FI22/00009)
- Javier Pozo Novoa (FI22/00187)
- Lucía Gutiérrez García (FI23/00061)
- Paula Pérez Moreno (FI23/00151)

Bioinformatics Technician Contract – ISCIII

- Carlos Rodríguez Antolín (CA22/00002)

Predoctoral Contract – MINECO

- Miguel Angel Lerma Juarez (PRE2019-090430)
- Elsa Lucas Castro (PRE2021-098PRE2021874)

Technical Support Stabilisation Contracts - CM

- Francisco Gayá Moreno. AIDS and Infectious Diseases Group

- María Teresa Vallejo Cremades. Congenital Malformation Surgery Group

Youth Guarantee Contracts - CM

Graduate

- Julia del Prado Montero (PEJ-2021-AI/BMD-22842)
- Teresa Alonso Poza (PEJ-2021-AI/BMD-22352)
- Sara Carpintero Barrado (PEJ-2023-AI/SAL-GL-27751)
- Paula Almellones Araiz (PEJ-2023-AI/SAL-GL-27602)
- Rocío Sánchez Siles (PEJ-2023-AI/SAL-GL-27700)
- Isabel García Pérez (PEJ-2023-AI/SAL-GL-27678)
- Cecilia Zapata García (PEJ-2023-AI/SAL-GL-28777)
- Nerea Díez Gamero (PEJ-2023-AI/SAL-GL-27704)

Technical Support

- Jaime Fernández Pascual (PEJ-2021-TL/BMD-21048)
- Beatriz García Brihuega (PEJ-2021-TL/BMD-22184)
- Diana Soledad Reyes Zuñagua (PEJ-2021-TL/BMD-22295)
- Inés Álvarez Alonso (PEJ-2023-TL/SAL-GL-28762)

Investigo SEPE Contracts

- Pouya Alikhani
- Rocío Sánchez León
- Cristina López Fernández
- Irene Casado Juárez
- Álvaro Clemente Bernal
- Carmen Ruiz Fernández
- Ana Belén Griso Acevedo
- Alicia Román San Martín
- Gonzalo Saenz de Santa María
- Andrés París Muñoz
- Laura Bravo Robles
- Jesús Fernández Felipe
- Marta Cadenas Martín
- Gulce Bicakcioglu
- Beatriz Sanz Verdejo



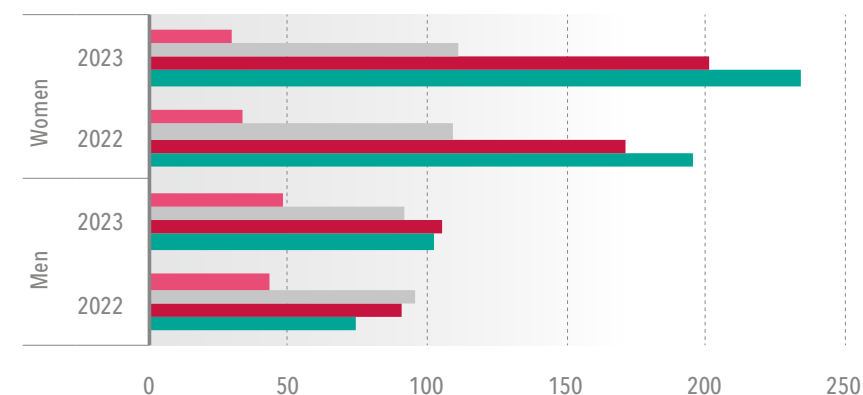
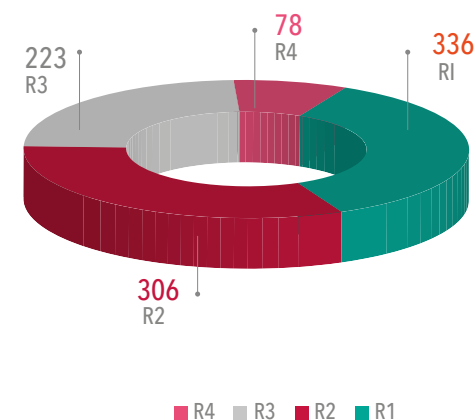
DATA: HUMAN RESOURCES

Programme	Organisation	Total
Ramón y Cajal Stabilisation Contracts (I3)	CM	3
Miguel Servet Stabilisation Contracts (I2)	ISCIII/ CM	16
Technical Support Stabilisation Contracts	CM	2
TOTAL ESTABLISHED		21
Miguel Servet Contracts CP Type 1	ISCIII	4
Miguel Servet Contracts CP Type 1I	ISCIII	1
Intensification Contracts	ISCIII	6
Río Hortega Contracts	ISCIII	14
Juan Rodés Contracts	ISCIII	3
Bioinformatics Technician Contract	ISCIII	1
Sara Borrell Contract	ISCIII	6
Predocctoral Fellowship	ISCIII	8
Investigo Contract	SEPE	15
Predocctoral Contract	MINECO	2
Youth Guarantee Contracts	CM	12
TOTAL PROGRAMMES		72
TOTAL ESTABLISHED + PROGRAMMES		93
UCICEC	CAIBER	8
FIS Projects	ISCIII	41
European Projects	EU	27
Research Network	ISCIII	7
Research Network	CAM	2
SAF/MAT	MINECO	4
Biobank	ISCIII	8
Commercial clinical trials	ISCIII	2
Commercial clinical trials	EECC Promoters	51
Private projects	Pharmaceutical Industry	64
In-house Projects	FIBHULP	11
ITEMAS Network	ISCIII	2
TOTAL EMPLOYEES DEPENDENT ON P.I.		227
TOTAL STAFF DEPENDENT ON P.I.		320
Technical Unit Staff	FIBHULP	31
TOTAL TECHNICAL UNIT		31
TOTAL		351

Researcher profile

The following graphs show the classification of IdiPAZ researchers according to the EURAXES regulations proposed by the European Union. In addition, in the following image we can see the evolution of this classification that has occurred in the last year.

Euraxess researcher profile





2.3 Training Report and Teaching



Some of the goals of IdiPAZ are to generate knowledge, to train specialists in the biomedical, to promote research and to transfer the knowledge not only to clinical practice but the society too.

2.3.1. Doctoral Theses

In 2023, 71 Doctoral Theses have been read and/or supervised by IdiPAZ researchers, and 6 of them was thesis with **International Doctorate mention** ★.

Doctoral Student	Title	Directors	University
Alén Alonso, Rosa María	Vesículas extracelulares de tamaño pequeño derivadas de hepatocitos en el interactoma intrahepático e hígado-páncreas en el contexto de la enfermedad de hígado graso no alcohólica	Martínez Valverde A, García Martínez I	UAM
Alonso López P	Evolución pulmonar, cardiológica, ponderoestatural y neurológica de los adolescentes prematuros moderados y tardíos en comparación con los recién nacidos a término	García García ML	UAX
Álvarez Ortega, Carlos Antonio	Predictores biofísicos de eficacia del procedimiento de aislamiento de venas pulmonares mediante criobalón: Análisis del estudio RECABA	Peinado Peinado R,	UAM
Angelès Fité, Martina Aïda	Papel de la cirugía en el cáncer de ovario avanzado	Hernández Gutiérrez MA, Martínez Rodríguez-Marín A	UAM
Arriaza Schiller, Karem Fabiola	Alteración en las vías moleculares del zinc en el circuito cardiopulmonar derecho, en condiciones de hipoxia hipobárica	Arribas Rodríguez SM, Siqués Lee P	UAM
Arribas Carreira, Laura	Implicaciones del metabolismo de la glicina en la salud y la enfermedad humana: Hiperglicemia no Cetósica, una enfermedad con fenotipo clínico neurológico	Rodríguez Pombo P,	UAM
Ballesteros Martínez, Constanza	La prostaglandin E sintasa microsomal-1 participa en las alteraciones metabólicas, cardiovasculares y renales asociadas a la obesidad.	Briones Alonso AM, Salaices Sánchez M	UAM ★
Barcia Aguilar, Cristina	Factores asociados a las secuelas a largo plazo en el estatus epiléptico refractario pediátrico.	Pascual Pascual SI,	UAM
Boldó Roda A	Análisis y resultados en el cambio del paradigma del tratamiento de cancer de ovario avanzado	Domingo del Pozo S, Hernández Gutiérrez A	Universitat de Valencia
Boria Alegre, Félix	Papel del 18F-FDG PET/TC preoperatorio en la evaluación de la resección completa en la cirugía citorreductora primaria de cáncer de ovario. Desarrollo de un modelo predictivo.	Zapardiel Gutiérrez I, Chiva de Agustín L	UAM
Caballero Mora MA	Papel de la marcha y equilibrio en sujetos ancianos (70-79 años) y muy ancianos (>80 años)	Rodríguez Mañas L	UE
Celis Ruiz, Elena de	Terapia reparadora cerebral con células troncales alogénicas derivadas de tejido adiposo en el ictus isquémico	Díez Tejedor E, Fuentes Gimeno B	UAM



Doctoral Student	Title	Directors	University
Condorhuamán Alvarado, Patricia Ysabel	Utilidad de los indicadores de calidad del registro nacional de fracturas de cadera para mejorar la atención de los pacientes con fractura de cadera en España	Gutiérrez Misis A, González Montalvo JI	UAM
Consuegra Fernández, Irene	Estudio de miRNAs en pacientes pediátricos infectados por VIH-1 por transmisión vertical y su papel como potencial biomarcador de progreso de la enfermedad y seguimiento del tratamiento. papel decisivo de los biobancos.	Mellado Peña MJ, Muñoz Fernández MA	UAM
Da Silva Ferreira, Vítor Manuel	La modulación de AMPK y de JNK1 en el hipotálamo por Olanzapina controla el balance energético y la lipogénesis hepática: beneficios adicionales de la inhibición de PTP1B.	Martínez Valverde A, Rada Llano P	UAM
Díaz González, Francisca	Caracterización funcional de variantes en los genes PRKG2 e IHH: Implicación en la etiología de nuevas displasias y fenotipos esqueléticos.	Heath KE,	UAM
Duyos Mateo, Inmaculada	Exitus de un gemelo en la gestación monocorial. Predicción de daño cerebral y resultados perinatales en el gemelo superviviente	de la Calle Fernández-Miranda M, Antolín Alvarado E	UAM
Eguibar González, Aritz	Marcadores de desmineralización ósea asociados a riesgo cardiovascular en pacientes con cáncer de próstata. Efecto de 5β-dihidrotestosterona en la disfunción vascular asociada a privación androgénica	Ferrer Parra M, Gómez Rivas J	UAM
Elizagaray García, Juan Ignacio	Distinguiendo entre pacientes con migraña crónica y cefalea tensional crónica a través de la exploración somatosensorial y musculoesquelética cervical.	Gil Martínez A,	UAM ★
Eyasu Belete M	Práctica de automedicación con antibióticos en pacientes adultos, con sospecha de infección del tracto urinario (ITU), de Addis Abeba (Etiopía)	Romero Garrido JA, Martín-Aragón Álvarez S, Benedí González J	UCM ★
Felipe Mendía, Raquel	Regulación y modificación del transportador de glicina GlyT2	López Corcuera B, Camafeita Fernández E	UAM
Fuente Alonso, Andrea de la	Contribución de las rutas de señalización canónica y no canónica del NO a la enfermedad aórtica en el síndrome de Marfan	Campanero García MR, Juan Miguel Redondo Moya	UAM
Gámez Chiachio, Manuel	Implicación dual de GSDMB en la biología del cáncer: desde la resistencia a la terapia anti-HER2 hasta la inducción de la muerte celular	Moreno Bueno G, Sarrio López JD	UAM
García Ezquiaga J	Prevalencia e incidencia de alergia alimentaria en población española	García García ML	UAX
García Mato, Ángela	Mecanismos moleculares implicados en la regulación de la homeostasis coclear. Papel del IGF-1 y de la G6PD	Varela Nieto I, Rodríguez de la Rosa L	UAM
García Romero, María Del Mar	Estudio de una cohorte de pacientes con enfermedad de Lesch Nyhan: valoración clínica y manejo terapéutico de las complicaciones neurológicas.	Pascual Pascual SI,	UAM
Gasior Kabat, Mercedes	Trasplante de progenitores hematopoyéticos con purgado de células CD45RA+ e inmunoterapia adoptiva con Linfocitos T CD45RO+ y células Natural Killer en pacientes pediátricos con hemopatías malignas y no malignas	Pérez Martínez A, de Paz Arias R	UAM
Gil García, Ana Isabel	Análisis genético y funcional del antígeno de superficie del virus de la hepatitis B aislado de pacientes antígeno e negativo en la zona gris de tratamiento.	Madejón Seiz A, García-Samaniego Rey J	UAM
Gómez García, Lara María	Factores pronósticos con impacto en la supervivencia de pacientes pediátricos con leucemia aguda mieloblástica y síndrome mielodisplásico sometidos a trasplante de progenitores hematopoyéticos	Pérez Martínez A, Díaz Pérez MA	UAM
González Carnicero Z	Regulación por Nrf2 de la inflamación vascular y el estrés oxidativo inducidos por IL-1beta en células de músculo liso vascular. Relación con TLR	Martín Cortés A, Hernanz Martín R	URJC ★
Guerrero Camacho, Raisa de los Ángeles	Análisis de resultados de dos protocolos terapéuticos en pacientes con hemofilia adquirida A en un hospital terciario.	Jiménez Yuste VM, Álvarez Román MT	UAM



Doctoral Student	Title	Directors	University
Guillo Moreno, Verónica	Estudio de nuevos protocolos de Maniobras de Reclutamiento Pulmonar en un modelo experimental neonatal con Síndrome de Distrés Respiratorio Agudo.	García Fernández J, Gilsanz Rodríguez F	UAM
Haro Martínez, Ana María	Terapia de Entonación Melódica en el tratamiento de la afasia postictus. Adaptación al idioma español y análisis de eficacia	Díez Tejedor E, Fuentes Gimeno B	UAM
Hernández Alonso, Judith	Evaluación del impacto de la pandemia de COVID-19 en la mujer gestante. Análisis de la salud mental perinatal y ajuste psicológico	Armijo Suarez OM, de la Calle Fernández-Miranda M	UAM
Herrero Fernández, Beatriz	La lamina A/C como modulador de la respuesta inmune mieloide en el contexto de infecciones virales y enfermedad inflamatoria intestinal	González Granado JM, Arribas Rodríguez SM	UAM
Juárez Vela, Raúl	Gestión de la Sangre del Paciente Crítico en las Unidades de Medicina Intensiva de España	Quintana Díaz M, Quintana Díaz M	UAM
Laso García, Fernando	Vesículas extracelulares y su contenido proteico como efectores de recuperación en un modelo preclínico de hemorragia intracerebral	Alonso De Leciñana Cases M, Gutiérrez Fernández M	UAM
Lastra Martínez, Diego	Análisis de la función del factor de transcripción NRF2 en la progresión tumoral.	Escoll Guerrero MI, Cuadrado Pastor AC	UAM
Leblic Ramírez, Israel	Diseño, implantación y resultados de un equipo multidisciplinar de accesos vasculares para hemodiálisis	Selgas Gutiérrez R, Riera del Moral LF	UAM
López Ruiz, María Elena	Ultraestadificación molecular del ganglio centinela en carcinoma de endometrio mediante método OSNA (One-Step Nucleic Acid Amplification)	Hardisson Hernaez D,	UAM
Mariscal Aguilar, Pablo Marcial	Relación entre los niveles de contaminación atmosférica con la historia natural y mortalidad de la fibrosis pulmonar idiopática	Gomez Carrera L, Álvarez-Sala Walther R	UAM
Marques Mejias, María Andreina	Broncoespasmo y urticaria aguda en el departamento de urgencias pediátricas: características, manejo e impacto de los factores ambientales.	Quirce Gancedo SE,	UAM
Martín Montes, Ángel	Implicación del metabolismo del colesterol en la patogenia de la enfermedad de Alzheimer	Frank García A, Bullido Gomez-Heras MJ	UAM
Martín Palumbo, Giovanna	Relación entre factores angiogénicos y evaluación de la entrada vascular placentaria en el embarazo normal y patológico	Antolin Alvarado ME, Bartha Rasero JL	UAM
Martín Prieto, Libertad	Utilidad de un programa de tratamiento de Biofeedback electromiográfico y Electroestimulación endoanal para pacientes con Incontinencia Fecal	Pascual Miguelañez I, Fernández Cebrián JM	UAM
Meijón Ortigueira, María del Mar	Profilaxis primaria personalizada en hemofilia a grave	Jiménez Yuste VM, Álvarez Román MT	UAM
Migdan , Carmen Mihaela	Resultados perinatales en pacientes con cribado combinado de primer trimestre para aneuploidias patológico y cariotipo normal.	Bartha Rasero JL, Lerma Puertas D	UAM
Miranda Poma, Jesús	Validación de un modelo predictivo basado en la expresión de micrnas (BIO-MIR), para determinar el riesgo de recurrencia en pacientes con carcinoma renal de células claras en estadio temprano tratados con nefrectomía radical o parcial	Pinto Marín A, Gamez Pozo A	UAM
Montero Ruiz, Santiago	Aplicabilidad, seguridad y eficacia de una intervención basada en mindfulness, en pacientes portadores de desfibrilador automático implantable: estudio piloto aleatorizado	Rodríguez Vega B, Peinado Peinado R	UAM
Moral Cuesta, Debora	Prevención secundaria de fracturas de cadera por fragilidad: descripción del tipo de pacientes y del funcionamiento de una fracture liaison service desde el ingreso en una unidad de ortogeriatría.	Gutiérrez Misis A, Martínez Velilla N	UAM



Doctoral Student	Title	Directors	University
Nocete Navarro, Luis	La experiencia de los profesionales de salud mental en el uso de la sujeción mecánica en la Comunidad de Madrid: una investigación cualitativa con personal en formación.	Bravo Ortiz MF, Fernández Liria A	UAM
Orosa Duarte, Álvaro	Eficacia de una intervención digital basada en mindfulness en el desarrollo de empatía y autocompasión en estudiantes de ciencias de la salud	Rodríguez Vega B, Bayon Pérez C	UAM
Palpán Flores, Alexis Junnior	Evaluación de la supervivencia del Glioblastoma IDH no mutado con métodos de estadística multivariante y algoritmos de inteligencia artificial, basados en su presentación clínica, histológica, imagen de resonancia magnética, volumetría tumoral y espectroscopía ex vivo.	Roda Frade JM, Cerdan García-Ballester S	UAM
Pascual Antón, Lucía	La transición mesotelio-mesénquima como diana terapéutica común para el tratamiento de las adhesiones peritoneales postquirúrgicas y la metástasis peritoneal.	Sandoval Correa P, López Cabrera M	UAM
Puente Santamaría, Laura	Un abordaje computacional a la regulación transcripcional en respuesta a hipoxia	Peso Ovalle L,	UAM
Ramón Ortiz, Carmen Julia de	Papel de los biomarcadores plasmáticos en el síndrome de obstrucción sinusoidal tras el trasplante de células madre hematopoyéticas	Jiménez Yuste VM,	UAM
Roca Cabau, Mireia Ariadna	Evolución del tratamiento del retinoblastoma en las últimas décadas en un hospital terciario español.	Peralta Calvo J,	UAM
Rocamora González, Cristina	Eficacia de una intervención basada en mindfulness a través de una aplicación móvil en calma en el quirófano para personas en espera de cirugía colorrectal: ensayo clínico aleatorizado.	Rodríguez Vega B, Palao Tarrero AI	UAM
Rodríguez Cobo, Ana	Tromboembolismo pulmonar subsegmentario. Prevalencia, características, evolución y pronóstico	Fernández Capitan MC,	UAM
Romero López, María del Mar	Metabolismo pulmonar en el modelo de nitrofen de la hernia diafragmática congénita	Martínez Martínez L, Peiró Ibáñez JL	UAM
Rosillo Rodríguez, Sandra Ofelia	Neumonía de inicio precoz y tardío en pacientes con parada cardíaca tratados con control de la temperatura corporal: Factores relacionados con el riesgo y el pronóstico	López-Sendon Hentschel JL, López De Sa Areses E	UAM
Segovia Falquina, Cristina	Generación de una plataforma de análisis funcional de variantes en PMM2 con fines diagnósticos y terapéuticos	Pérez González MB, Gamez Abascal MA	UAM
Sendra Ortola, Miquel	La secuencia espacio-temporal de la especificación del miocardio y del endocardio en el tubo cardíaco primitivo de mamíferos.	Torres Sánchez M,	UAM
Serrano Díaz Del Campo, Lucía	Mediadores proresolutivos como posible estrategia terapéutica frente al daño cardiovascular en hipertensión	Briones Alonso AM, Salaices Sánchez M	UAM ★
Tejera Muñoz, Antonio	El factor 2 de la red de comunicación celular (CCN2) ejerce un papel esencial en el mantenimiento de la estructura y las respuestas vasculares de la aorta en ratones.	Ruiz Ortega M, Rodrigues Díez R	UAM
Triana Junco, Paloma Elena	Sirolimus en el Tratamiento de las Anomalías Vasculares.	López Gutiérrez JC,	UAM
Triana Pascual, María Ángeles Elia	Calidad de la voz cantada en sopranos, influencia del texto y el acompañamiento musical.	Gavilan Bouzas J, García López I	UAM
Udaondo Gascón, Clara Isabel	Infecciones en niños con artritis idiopática juvenil y comparación con niños sanos.	Calvo Rey C, Núñez Cuadros E	UAM
Valcárcel Hernández, Víctor	Desentrañando los mecanismos de la enfermedad, desarrollando modelos preclínicos y estrategias terapéuticas dirigidas a la deficiencia de MCT8	Guadaño Ferraz AC, Bárez López S	UAM
Vilas Lagoa, Alicia	Desarrollo de modelos con fines diagnósticos y terapéuticos para la deficiencia de fosfomanomutasa 2.	Pérez González MB,	UAM ★
Wang, Ting	Distribución de los transportadores de hormonas tiroideas MCT8 y OATP1C1 en los ganglios basales de humano y macaco.	Guadaño Ferraz AC, Rausell Tamayo E	UAM



2.3.2 Master Theses

In 2023, 31 Master Theses have been read and/or supervised by IdiPAZ researchers

Student	Title	Director	University
Martín Martínez I	Design and implementation of a system for the automation of the Fugl Meyer Assessment scale in stroke patients	Larraga García B, Alonso de Leciñana M	UPM
Yagüe Novoa N	Design and implementation of a virtual reality platform for upper limb rehabilitation using a haptic robot	Larraga García B, Alonso de Leciñana M	UPM
Debasa Mouce M	6-MSITC (wasabi-isocyanate) as a modulator of NRF2 and protector against taupathy	García Yagüe AJ, Cuadrado Pastor A	UAM
Pérez Cuervo A	Role of the innate immune system in the progression of human and experimental cardiovascular disease	Fernández Velasco M	UAM
Saez de Buruaga Corrales E	Estudio de localización y desplazamiento esofágico mediante contraste en ablación de venas pulmonares	Peinado Peinado R	Universidad San Pablo CEU
Ayala More HD	Utilidad del mapa de activación con integración de vectores e información de velocidad para guiar la ablación de taquicardias macroreentrantes auriculares	Peinado Peinado R	Universidad San Pablo CEU
González Ferrero T	Strain auricular izquierdo como predictor de áreas de bajo voltaje en pacientes sometidos a ablación de fibrilación auricular	Peinado Peinado R	Universidad San Pablo CEU
González Estriégana S	Parámetros ecocardiográficos predictores de éxito en la terapia de resincronización cardíaca	Peinado Peinado R	Universidad Católica de Murcia
Jiménez Moreno E	Desarrollo de nuevos ingredientes alimentarios más saludables y sostenibles	Miguel Castro M	UAM
Cuadrado A	Canagliflozin induce anti-inflammatory and anti-senescent effects in human vascular smooth muscle cells and improves endothelial dysfunction in mesenteric microvessels from diabetic mice	Peiro Vallejo C, Sánchez Ferrer CF	UAM
Menéndez Calderón MJ	El cambio de las enfermedades infecciosas: revisión leptospirosis 2016-2021 en un Hospital de segundo nivel	Díaz Menéndez M	Universitat de Barcelona
López Peláez MV	Brote familiar de fiebre Q en ambiente urbano	Díaz Menéndez M	Universitat de Barcelona
Manrique Pérez JM	Miocardiopatía en la enfermedad de Chagas arritmias y su manejo.	Díaz Menéndez M	Universitat de Barcelona
Díaz Menéndez M	Despistaje de Fiebre Hemorrágica de Crimea-Congo. Implementación del diagnóstico de infección protésica compleja. Manejo de PREP e ITS.	Díaz Menéndez M	Universidad de Sevilla
Noblejas Mozo A	Nocardiosis pulmonar en paciente inmunodeprimido tras inducción con rituximab por vasculitis	Díaz Pollán B	Universitat de Barcelona
Carrasco Molina S	Efectividad del tratamiento con Fidaxomicina vs Vancomicina en la Infección por	Díaz Pollán B	Universidad de Alcalá de Henares
Martín Portugués S	Desarrollo de un protocolo de tipificación rápida por MLST, para aislados clínicos de Escherichia coli y Staphylococcus aureus, utilizando la secuenciación masiva por MinION	Dahdouh E	UAM
Tello Durán B	Interacción entre miRNAs, microbiota intestinal y marcadores de inflamación: Caracterización y desarrollo de un pipeline para su aplicación en muestras humanas	González Soltero R	UE
Bravo Robles L	Inmunoterapia oncológica a través de mucosas basada en la memoria inmune innata	del Fresno Sánchez C	UCM
Ochaita Aguado A	Impacto de la quimioterapia en el paisaje inmunológico del cáncer	López-Collazo E; Cueto Rodríguez FJ	UCM
Cueto Rodríguez FJ	Búsqueda de marcadores inmunitarios predictivos en pacientes con sepsis	López Collazo E	Universidad de Granada



Student	Title	Director	University
García Sánchez MR	Impact of FH desialylation on the regulation of the Alternative Pathway and contribution to pathology	Sánchez-Corral Gómez MP, Corvillo Rodríguez F	UCM
González Baños E	Impacto de las partículas volcánicas en patologías respiratorias. Una revisión sistemática.	Behzadi Koochani N	Universidad Camilo José Cela
Lezcano Fernández E	Impacto socioeconómico de la guerra de Ucrania en la población vulnerable por discapacidad. Estudio observacional	Behzadi Koochani N	Universidad Camilo José Cela
López Molina VM	Estudio de la relación entre el microbioma intestinal, los alimentos ultraprocesados y la calidad de la dieta mediante métodos bioinformáticos.	Carrillo de Santa Pau E, Marcos LJ	UAM
Méndez Grande I	Establecimiento de técnicas para la generación de esféroides a partir de células de schwannoma vestibular	Miguel Cosgaya J	Universidad CEU San Pablo
Pardinas del Águila L	Hacia el desarrollo de un estroma corneal biomimético por impresión 3D: comparativa de biomateriales de colágeno I con aplicabilidad clínica	de Miguel González MP	Universidad CEU San Pablo
Caballero Rodríguez S	Estudios de biocompatibilidad in vitro de prótesis estromales corneales biofabricadas por impresión 3D	de Miguel González MP	Universidad CEU San Pablo
Ibáñez Herrera B	Caracterización del papel del gen DUSP1 en la progresión de cáncer escamoso de glándula salival	Sastre Perona A	UCM
Crespo Gómez-Escalonilla A	El ritmo y la percusión como herramienta de cohesión social	del Olmo Barros MJ	UAM
Arjona García A	La Música como herramienta terapéutica con alumnos con problemas de conducta	del Olmo Barros MJ	UAM

2.3.3 Final Degree Theses

In 2023, 38 Final Degree Theses have been read and/or supervised by IdiPAZ researchers

Student	Title	Director	University
Maroto Cid Fuentes C	Papel de las vesículas extracelulares derivadas del sistema nervioso en un modelo preclínico de hemorragia intracerebral	Gutiérrez Fernández M	UAM
Schümmer Bengoa P	Desarrollo y análisis de un sistema de movimiento basado en redes neuronales artificiales para la evaluación de la prueba Ledged Beam Walking Test en modelos experimentales murinos de ictus	Gutiérrez Fernández M	UAM
Botella Cruces L	Análisis de las vesículas extracelulares circulantes como biomarcador en pacientes de Esclerosis Múltiple	Otero Ortega L	UAM
Ruiz González A	Diseño e implementación de un sistema de análisis de correlación de datos de imagen, clínicos y cinemáticos en pacientes de ictus agudo	Alonso de Leciana M, Gutiérrez A	UPM
Múgica Estévez M	Desarrollo de un sistema de captura de vídeo basado en técnicas de aprendizaje profundo para el estudio de la cinemática de las manos de pacientes con ictus	Larraga García B, Alonso de Leciana M	UPM
Moldes Castillo R	Diseño e implementación de un sistema para el almacenamiento masivo de datos cinemáticos de la mano en pacientes con ictus	Larraga García B, Alonso de Leciana M	UPM
de Spusa Da Silva A	Diseño e implementación de aplicaciones web para la divulgación y visualización de herramientas de evaluación de pacientes con déficit motor	Gutiérrez A, Alonso de Leciana M	UPM
García Pastor S	Manifestaciones de enfermedad cardiaca en el dúplex carotídeo en pacientes con ictus isquémico	Alonso de Leciana M, Rodríguez Pardo J	UPM
Vázquez Medel A	Caracterización de mutantes de GLYT2 asociados a hiperplexia humana	López Corcuera B	UAM



Student	Title	Director	University
Berrojo Armisen A	Análisis del posible efecto neuroprotector del tratamiento con dimetil fumarato en un modelo de demencia frontotemporal TDP-43 dependiente.	Lastres-Becker I	UAM
Sáenz Molina M	Incidencia y factores predictores de fibrilación auricular en el seguimiento de pacientes con cardiopatías congénitas del adulto sometidos a ablación de flutter auricular.	Peinado Peinado R	UAM
Cuevas Carmona E	Tetralogía de Fallot en el adulto: complicaciones arrítmicas en el postoperatorio precoz. Análisis de incidencia, factores de riesgo e implicaciones a corto y medio plazo.	Peinado Peinado R	Universidad Autónoma de Madrid
Albasanz García P	Validación de nuevas técnicas microfluídicas en cámara de flujo para el análisis de trastornos de la hemostasia.	García Arias-Salgado E, Jiménez Yuste VJ	Universidad Politécnica de Madrid
Loeches Rivero JC	Valoración anatomopatológica de los efectos de un hidrolizado de quinua con actividad antioxidante y antihipertensiva en ratas espontáneamente hipertensas	José Uranga AJ, Miguel Castro M	UAH-URJC-CIAL
Vidal Liscano AC	Importancia de la nutrición en el deportista con diagnóstico de diabetes tipo 1	Briones Alonso AM, González Blázquez R	UAM
Díez Benítez I	Efectos de la alimentación vegetariana en el rendimiento deportivo	García Redondo A, Blanco Rivero J	UAM
García Monedero S	Efecto de la diabetes tipo 1 en el rendimiento deportivo de un futbolista. Mejora del rendimiento a través de la alimentación.	García Redondo A, Blanco Rivero J	UAM
Merino González S	Selección por antibióticos de mutantes de porinas en enterobacterias	Mingorance Cruz J	UAM
Muñoz García M	El papel de la dieta en el Síndrome del Intestino Irritable	Menéndez Gómez C	UAM
Redondo Lois L	Implicaciones del SIBO en la absorción de nutrientes	Menéndez Gómez C	UAM
Zapata G	Caracterización inmunológica de la respuesta a crioblación en pacientes con cáncer de mama	del Fresno Sánchez C	UAH
Guitierrez M	Estudio de células híbridas humanas resultado de la fusión entre monocitos y células madre tumorales derivadas de adenocarcinoma de colon	López Collazo E	Universidad Politécnica de Madrid
Linares Reyes SC	Regulación de la expresión de IL15 e IL15RA en fibroblastos de piel: Relevancia para el tratamiento de pacientes con Síndrome de Stevens-Johnson /necrolisis epidérmica tóxica.	Bellón Heredia T	Universidad de la Laguna
Villadangos Reyes L	Regulation of B cell activation by microRNAs	González Martín A	UAM
Abanades Salmeron M	Rol del eje HIF/BHLHE40 en la diferenciación de adipocitos marrones	del Peso Ovalle L	UAM
Barrau Arnedillo J	Prevalencia de caídas y factores asociado en mayores de 64 años	Castell Alcalá MV	UAM
Caballero Lombaña J	Caracterización de la respuesta de células de schwannoma vestibular a agentes senogénicos y senolíticos	Jiménez Lara AM	UAM
Pérez Ruiz I	modelo de daño acústico por ruido blanco de banda ancha en rata	Cediel R, Murillo Cuesta S	UCM
Merlano Castellanos S	Factores predictivos de la función del nervio facial tras la cirugía del schwannoma vestibular	Lassaletta Atienza L, Morales Puebla JM	UAM
González Garnacho I	Estudio de la fisiopatología de la acidemia propiónica en modelos celulares neurales humanos derivados de iPSCs	Richard Rodríguez EM	UAM
Alvera Alonso B	Generación de modelos celulares y evaluación de terapia antisentido para defectos de splicing en enfermedades neurológicas	Ruiz Desviat ML	UAM
García Mesa J	Estudio del carácter oligogénico de la hipercolesterolemia mediante secuenciación masiva de panel customizado y exoma completo	Rodríguez Jiménez C, Rodríguez Novoa S	Universidad Francisco de Vitoria
San Lorenzo A	Regulación de la transición epitelio mesénquima parcial en cáncer oral: el papel de TGFβ y los fibroblastos asociados al cáncer.	Sastre Perona A	UAM
López García I	Identificación de mecanismos de resistencia a quimioterapias en tumores de cabeza y cuello.	Sastre Perona A	UAM
Cubillo Heras P	Bocios grandes ¿factor de riesgo para hipoparatiroidismo postquirúrgico?	Gómez Ramírez J	UAH
Andrés Blanco L	Violencia sexual en adolescentes, ¿cuestión de género?	Echevarría AM, Sainz Costa T	UAM
del Rey G	Virus y sus reservorios: murciélagos	Casas Flechas I, Iglesias-Caballero M	Universidad Complutense Madrid
González B	Diseño y desarrollo de una plataforma para la monitorización y acompañamiento de personas con endometriosis.	Hernández Gutiérrez MA	Universidad Politécnica de Madrid



2.3.4 Scientific Training Plan

The Training Committee established a Training Plan, which specifies the training strategy for the institute's human resources and covers the research training needs of their members. Annually it's developed the training offer with several proposals to make up the plan. Also, it's developed a residents training program have been started for residents doctors of the University Hospital La PAZ.

The own training offer is mainly based on a series of transversal courses in research methodology and courses related of the different lines of research.

The plan is complemented by several activities such as conferences, scientific seminars and other activities linked to these areas.

In addition, The Training Committee established a Residents training program for residents of the University Hospital La Paz

Members:

President
 Bárbara Martínez de Miguel

Secretary
 Mercedes Ruiz Balibrea

HULP representative
 Alberto Borobia Pérez
 Ana Martínez Virto
 Julián Nevado Blanco
 Talía Sainz Costa

FIBHULP representative:
 Paloma Gómez Campelo
 María Fernández Velasco
 Irene Montero Morales
 Rocío Rosas Alonso
 Ana Sastre Perona
 Aitana López Redondo

UAM representative:
 Ana García Redondo

Employee's representative:
 Pilar Sánchez-Corral Gómez





2.3.4.1 Training Program

Title	Coordinator	Dates	Participants
Investigación clínica, REDCap.	Alberto Borobia Pérez	20 th - 23 rd November	15
Fundamentos de ciencias de datos aplicada a la investigación: Adquisición, manejo y visualización de datos en Microsoft excel	Rocío Rosas y Ana García	16 th -17 th October	40
Igualdad de oportunidades en la sociedad actual	Paloma Gómez Campelo	3 rd -5 th October	40
Gestión de grupos de investigación, liderazgo	Mercedes Balibrea	16 th ~ 22 th May	30
Bioestadística: Programa con 'R'	Alberto Borobia Pérez	2 nd - 5 th October	30
Divulga tu ciencia	Aitana López e Irene Montero	12 th -13 th July	30
Objetivos de Desarrollo Sostenible y Agenda 20230 en el ámbito de la investigación	Aitana López Redondo	10 th ~ 11 th May	29

2.3.4.2 Scientific Seminars

IdiPAZ Scientific Seminars program welcomes renowned researchers and clinical investigators to our Institute to share, discuss and debate latest insights, discovery and next directions in oncology with our students, postdocs and senior faculty from our research groups.

Scientific Moderators:

- Eduardo López Collazo
- Ana Sastre Perona
- Carlos del Fresno













2. Executive summary











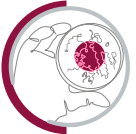


2.3. Training Report and Teaching

Research Area	Date	Speaker	Seminar title
 MATERNAL INFANT CHILD AND YOUTH RESEARCH	13 jan	Dr. Luiz Stark Aroeira Postdoctoral Researcher of the "Molecular Hepatology" research group at IdiPAZ.	 "Identification of biological processes with diagnostic potential for liver diseases in childhood."
 SURGERY, TRANSPLANT AND HEALTH TECHNOLOGIES	21 jan	José Carlos González Sánchez y Enrique Álvarez Robles Cofundadores y data scientists en Spaik Technologies, S.L.	 "Cómo puedo sacarle partido a la IA en Medicina y en mis proyectos de investigación "
 MATERNAL INFANT CHILD AND YOUTH RESEARCH	27 Jan.	Dra. Adelina Pellicer Jefa de Servicio de Neonatología del Hospital Universitario La Paz y directora del grupo Neonatología de IdiPAZ	 "SafeBoosC: Safeguarding the brains of our smallest infants"
 SURGERY, TRANSPLANT AND HEALTH TECHNOLOGIES	03 Feb.	Dra Ana Sastre Perona Investigadora senior y codirectora del grupo de investigación Traslacional en cirugía Maxilofacial y Cáncer de cabeza y cuello de IdiPAZ	 "Identificación de mecanismos de progresión y resistencia a terapias en cáncer de cabeza y cuello"
 SURGERY, TRANSPLANT AND HEALTH TECHNOLOGIES	10 Feb.	Marta Cadenas Martín Investigadora Predoctoral , colaboradora del grupo "Ingeniería Celular" de IdiPAZ.	 "Generación de córnea biomimética con células madre mesenquimales de tejido adiposo"



Research Area	Date	Speaker	Seminar title
 SURGERY, TRANSPLANT AND HEALTH TECHNOLOGIES	17 Feb.	Dr. Miguel Ángel Bañares investigador del CSIC, Dra. Ana Iglesias investigadora del Instituto de Catálisis y Petroleoquímica y Dr. Antonio Alcamí investigador del Centro de Biología Molecular Severo Ochoa. <div style="display: flex; flex-direction: column; align-items: center;">    </div>	"Tecnología altamente eficiente para un aire limpio y seguro: desarrollo de purificadores de aire avanzados para inactivar patógenos en aerosoles"
 INFECTIOUS DISEASES AND IMMUNITY	24 Feb.	Dra. Aránzazu Cruz Dalia Universidad Complutense de Madrid Facultad de Medicina Departamento de Inmunología, Oftalmología y ORL	"Mecanismos moleculares que regulan las células linfoides innatas tipo 3 (ILC3s) frente a una infección intestinal"
 CANCER AND HUMAN MOLECULAR GENETICS	10 Mar	Dra. M. Esther Gallardo Investigadora responsable del grupo "Investigación traslacional con células iPS" del Instituto de Investigación Sanitaria Hospital 12 de Octubre, i+12	"Utilización de iPSCs como modelo de enfermedad, aproximación a terapia y mejora diagnóstica "
 CARDIOVASCULAR	17 Mar.	Dra. María Fernández Velasco Investigación En Cardiología Clínica YTraslacional - Iccit-Paz	"Lipoxinas, unas nuevas herramientas terapéuticas en la enfermedad cardiovascular "
 NEUROSCIENCES	24 Mar	Dra. Eva de Lago Femia Directora del Instituto Investigación en Neuroquímica, Profesora titular del dpto. de Bioquímica y Biología Molecular de la Universidad Complutense de Madrid	"Neuroprotective strategies based on ECS modulation in ALS and FTD"



Research Area	Date	Speaker	Seminar title
 MATERNAL INFANT CHILD AND YOUTH RESEARCH	14 Apr.	Dr. Antonio Pérez Martínez Director del grupo de Investigación Traslacional en Cáncer Infantil, Trasplante Hematopoyético y Terapia Celular de IdiPAZ.	 "Terapia celular para enfermedades causadas por virus: Resultado del ensayo clínico fase 2 randomizado para evaluar la eficiencia de la infusión de linfocitos T memoria como terapia adoptiva para enfermos de COVID-19 (RELEASE)"
 MATERNAL INFANT CHILD AND YOUTH RESEARCH	28 April	Dr. Francisco Hernández Oliveros Director del grupo de Investigación 'Malformaciones congénitas y trasplante' de IdiPAZ.	 'Trasplante combinado de órgano sólido y hematopoyético para inducir tolerancia'
 NEUROSCIENCES	2 Jun.	Dra. Isabel Lastres-Becker Profesora titular de la Universidad Autónoma de Madrid.	 "CX3CR1-deficient microglia shows impaired signalling of the transcription factor NRF2: Implications in tauopathies"
 CARDIOVASCULAR	9 Jun.	Dra. Esther Pérez David Jefa de sección de Imagen cardíaca del Hospital Universitario La Paz e investigadora del grupo de investigación en cardiología clínica y Traslacional de IdiPAZ.	 'Utilidad de biomarcadores de fibrosis miocárdica en el diagnóstico y evaluación del riesgo de cardiopatías'
 SURGERY, TRANSPLANT AND HEALTH TECHNOLOGIES AREA	23 Jun.	Dra. Bricia López Plaza Coordinadora de la Plataforma de Alimentación, Nutrición y Salud de IdiPAZ.	 'La miraculina y la percepción del sabor en el estado nutricional de pacientes oncológicos en tratamiento activo que presentan desnutrición'
 INFECTIOUS DISEASES AND IMMUNITY	1 Dec.	Dr. Carlos del Fresno Investigador postdoctoral del grupo de investigación "Respuesta Inmune Innata" de IdiPAZ	 Inmunidad entrenada, ampliando fronteras en vacunación.
 CARDIOVASCULAR	15 Dec.	Dr. David Sancho Jefe de grupo en el Centro Nacional de Investigaciones Cardiovasculares (CNIC).	 "Historias de metabolismo, inmunoterapia y microbiota"



2.3.4.3. Scientific Clinical Sessions-Hospital Universitario La Paz

FECHA	TEMA	PONENTES	MODERADORES
11/01/2023	Varón de 75 años con adenocarcinoma renal multitratado y neumonía fúngica	Ana Pertejo Fernández (S. Oncología médica), Gabriela Barrios Millán (S. A. patológica)	Jaime Feliu (S. Oncología médica), M ^a Carmen Glez García (S. Anatomía patológica)
18/01/2023	Sangre: ¿necesaria, imprescindible y suficiente?	Irene Iniesta (B. Sangre), Ana Kerguelen (S. Hematología), Manuel Quintana (S. M.intensiva)	Aurora Viejo (S. Hematología), Manuel Quintana (S. Medicina intensiva)
25/01/2023	La artritis reumatoide: desde el inicio al fin	Laura Nuño (S. Reumatología), M ^a Eugenia Miranda (S. Reumatología), Chamaida Plasencia (S. Reumatología), Marta Novella (S. Reumatología), Isabel Castillo (S. Farmacia)	Alejandro Balsa (S. Reumatología)
01/02/2023	La Paz: 25 años liderando el Point-of-Care Testing. Expectativas de futuro	Paloma Oliver (S. Análisis clínicos), Ruth Gaspar (S. Endocrinología), Rosario Torres (S. Urgencias), Dolores Elorza (S. Neonatología)	Antonio Buño (S. Análisis Clínicos), Pilar Fernández Calle (S. Análisis Clínicos)
08/02/2023	Abordaje multidisciplinar de la malformación anorrectal y su transición a adultos	Alejandra Vilanova (S. Cirugía pediátrica), Mar Muñoz (S. Ginecología), Virginia Amesty (S. Urología ped), Isabel Pascual (S. Cirugía general).	Juan Carlos López (S. Cir. pediátrica)
15/02/2023	Toma de decisiones en paciente geriátrico con demencia avanzada	Araceli Menéndez (S. Med. interna), Francisca G ^a Iglesias (S. Med.interna), Aranzazu Castellanos (U.Paliativos), Angélica Rivera (S. Urgencias)	Alberto Alonso Babarro (U.Cuidados paliativos, C. Ética asistencial), Rosario Torres Santos- Olmos (S. Urgencias, C. Ética asistencial)
22/02/2023	Comité de Microangiopatía Trombótica. Un modelo de multidisciplinariedad	Begoña Rivas (Nefrología), Rubén Gómez (Análisis clínicos), Pilar Nozal (Inmunología), Marta Morado (Hematología), Elena Martín Boado (Ginecología), David Bueno (Oncología infantil), Alejandro Zarauza (Nefrología infantil), Luis González del Valle (Farmacia hospitalaria)	Paloma Dorao (C. intensivos pediátricos)
01/03/2023	Nódulo pulmonar en paciente de 41 años con antecedentes neoplásicos	M ^a Elena Corpa (S. Cirugía torácica), Víctor Macarrón Aguilera (S. Anatomía patológica)	Prudencio Díaz-Agero (S. Cirugía torácica), Carmen Glez García (S. Anat. patológica)
08/03/2023	Estudio de la experiencia del paciente en procesos asistenciales	Ángel Aroca (S. Cirugía cardíaca infantil), Ana Castaño (S. Oncol radioterápica), Lubna Dani (U. HADO)	Gabriela Guzmán (S. Cardiología)
15/03/2023	Historia clínica digital SNS (HCDSNS) y proyecto Eur- e	Noemí Glez Pérez de Villar (Subd. Médica), Susana Noval (Subd. Médica), Adrián Torres (Gerencia de Hospitales)	
22/03/2023	Manejo multidisciplinar de la patología aórtica compleja	Lucía Fernández Gasso (S. Cardiología), Ali Ayaon Albarran (S. Cirugía cardíaca), Luis Riera del Moral (S. Cirugía vascular).	Álvaro Fdez Heredero (S. C. vascular)
29/03/2023	Varón de 68 años con lesión cavitada pulmonar	Alberto Mangas (S. Neumología), María Mercedes Petrino (S. Anatomía patológica)	Rodolfo Álvarez-Sala (S. Neumología), Carmen Glez García (S. A. patológica)
12/04/2023	Tromboembolismo pulmonar en pacientes con COVID19 grave	Pablo Lapunzina (S. Genética), Carlos Carpio Segura (S. Neumología)	Rodolfo Álvarez-Sala Walther (S. Neumología)
19/04/2023	Experiencias de cooperación sanitaria	Ángel Abad (Oficina Agenda 2030), María Serrano (S. Ginecología), Sonia Lobo (S. Ginecología), Sergio Zurita (S. Anestesia), Belén Fernández (S. Análisis Clínicos).	Alicia Hernández (S. Ginecología), Mar Muñoz (S. Ginecología).
26/04/2023	Varón de 71 años con demencia avanzada y apnea obstructiva del sueño grave	Teresa Glez Alegre (S. Medicina interna), Ángel Martín (S. Neurología), Paula Voinescu (S. Anat. patológica)	
03/05/2023	Paciente politraumatizado. Un paciente de todos	Bárbara Martínez (U. Calidad), Rosario Torres (S. Urgencias), Angélica Rivera (S. Urgencias), Luis Riera (S. Cirugía vascular), Mónica Glez Nuño (S. Rehabilitación)	Manuel Sánchez (S. Medicina intensiva), Carmen Fernández Capitán (S. Medicina interna), José Mostaza (S. Medicina interna), Carmen Glez García (S. Anatomía patológica)
10/05/2023	Implementación de la farmacoterapia personalizada: caso-modelo en el H.U. La Paz	Alberto Borobia (S. Farmacología clínica), Irene García García (S. Farmacología clínica), Rocío Rosas Alonso (S. Genética), Yasmina Mozo (S. Hemato-Oncología pediátrica)	Antonio Carcas (S. Farmacología clínica)
17/05/2023	¿Qué hay de nuevo con el Lupus Eritematoso Sistémico?	Eugenia Miranda Carús (S. Reumatología), Ángel Robles (S. Medicina interna), Gema Fernández Juárez (S. Nefrología)	Gema Fernández Juárez (S. Nefrología), Alejandro Balsa (S. Reumatología)



2. Executive summary

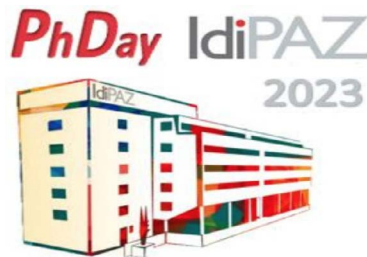
2.3. Training Report and Teaching

FECHA	TEMA	PONENTES	MODERADORES
24/05/2023	Varón de edad muy avanzada con fibrilación auricular de reciente diagnóstico e insuficiencia cardíaca	Rocío Menéndez (S. Geriátría), Marta de Uribe Vitoria (S. Anatomía patológica), Esther Pérez David (S. Cardiología)	Juan Ignacio González Montalvo (S. Geriátría), Alberto Berjón García (S. Anatomía patológica), Raúl Moreno (S. Cardiología)
31/05/2023	Alergia y desensibilización a fármacos y su dimensión transversal	Leticia de las Vecillas (S. Alergología), Rosario Cabañas (S. Alergología), Teresa de Soto (S. Hematología), Ana Pertejo (S. Oncología médica)	Ana Fianдор (S. Alergología)
07/06/2023	Superando limitaciones CAR-T19 en LLA-B: CART dual 19/22	Berta González (S. Hemato-oncología pediátrica), Pilar Guerra (S. Hemato-oncología pediátrica, UCICEC), Isabel Mirones (up-MTA), Gema Casado (S. Farmacia hospitalaria)	Antonio Pérez Martínez (S. Hemato-oncología pediátrica)
14/06/2023	Varón de 83 años con infartos cerebrales múltiples	Laura Lacruz (S. Neurología), Blanca Fuentes (S. Neurología), Pablo Pérez Montero (S. Anatomía patológica)	Ana Frank (S. Neurología), María del Carmen González García (S. Anatomía patológica)
21/06/2023	De la radiación a la protección: aprendiendo a minimizar los riesgos	María Fernández-Velilla Peña (S. Radiodiagnóstico), José Manuel Cordero García (S. Medicina nuclear), Raúl Sánchez López (S. Radiofísica), Paula Hidalgo Gutiérrez (S. Radiodiagnóstico)	Rosario Torres Santos-Olmos (S. Urgencias)
28/06/2023	Adaptación del Proceso Asistencial Integrado del paciente con insuficiencia cardíaca crónica	Ana Cristina García Álvarez (D. Continuidad asistencial), Florentina Martín Rodríguez (C.S. Soto del Real), Inés Ponz de Antonio (S. Cardiología), Antonio Martín Alonso (S. Farmacia), Rosario Luis-Yagüe (S. Trabajo Social)	Raúl Moreno (S. Cardiología), Mª Dolores Cano Pérez (Dirección Asistencial Norte Atención Primaria)
20/09/2023	Inteligencia artificial: retos, oportunidades y riesgos para la asistencia hospitalaria	Julián Isla Gómez (Microsoft)	Fernando Martín Sánchez (Subgerencia)
27/09/2023	Inteligencia artificial: retos, oportunidades y riesgos para la asistencia hospitalaria	Julián Isla Gómez (Microsoft)	Fernando Martín Sánchez (Subgerencia)
04/10/2023	Mujer de 80 años con infarto cerebral, tromboectomía e implantación de stent	Jorge Rguez-Pardo de Donlebún (S. Neurología), Paula Isabela Voinescu (S. A.patológica)	Ana Frank García (S. Neurología), M. Carmen González García (S. Anatomía patológica)
11/10/2023	Programa de Psico-Oncología : Conectando con la vulnerabilidad	Pilar Zamora Auñón (S. Oncología médica), Ángela Palao Tarrero (S. Psiquiatría), Melisa Cuesta Pastor (U. Cuidados paliativos)	Mª Fe Bravo Ortiz (S. Psiquiatría)
18/10/2023	Obesidad y gestación: manejo multidisciplinar	Mercedes Calvo (S. Obstetricia), Beatriz Barquiel (S. Endocrinología), Miriam Zapatero (S. Endocrinología), María Delgado (U. Diabetes), Francisco López (S. Obstetricia)	José Luis Bartha (S. Obstetricia), María de la Calle Fernández-Miranda (S. Obstetricia)
25/10/2023	Varón de 76 años con epigastralgia, adelgazamiento y embolismo pulmonar	Ramon Puchades (S. Medicina Interna), Gabriela Barrios Millán (S. Anatomía patológica)	Carmen Fdez Capitán (S. Medicina Interna), Alberto Berjón (S. Anatomía Patológica)
08/11/2023	PAIZEN. La Oficina Kaizen del HULP: motor de la mejora continua en la asistencia hospitalaria	Ramon Cantero (S. Cir. general), Bárbara Martínez (U. Calidad), Lucía Deirós (S. Cardiología infantil), Mercedes Hermsilla (U. Trasplante)	Javier Cobas Gamallo (Subgerencia)
15/11/2023	Varón de 86 años con antecedentes de cancer escamoso de pulmón, y bronconeumonía grave	Laura Gutiérrez Sainz (S. Oncología médica), Sara Quiñones (S. Anatomía patológica)	Jaime Feliu Batlle (S. Oncología méd), M. Carmen Glez García (S. Anatomía patológica)
16/11/2023	Actividades del Nodo de Transformación Digital	Federico Gutiérrez Larraya (S. Cardiología infantil), Ana Gómez Galindo (Subdirección de gestión), Fernando Martín Sánchez (Subgerencia)	Javier Cobas (Subgerencia)
22/11/2023	Errores congénitos del metabolismo: un reto diagnóstico en niños y adultos	Ana Bergua (S. Nutrición infantil), Giorgina Salgueiro (S. Medicina Interna), Amanda Herranz (S. Genética), Olaia Rodríguez Fraga (S. Análisis Clínicos)	Mª Gemma Serrano (S. Análisis Clínicos), Carmen Fdez Capitán (S. Medicina interna)
27/11/2023	Liderazgo para la obtención de Valor en salud	Vicenç Martínez Ibañez. Instituto de Investigación en Ciencias de la Salud de Castilla la Mancha	
29/11/2023	Consulta postCOVID. Resultados obtenidos y perspectivas actuales	Jorge Álvarez Troncoso (S. Medicina interna), Carlos Carpio Segura (S. Neumología), Óscar Lorenzo (Departamento de Medicina. IIS-FJD, UAM).	Carmen Fernández Capitán (S. Medicina interna), Rodolfo Álvarez-Sala Walther (S. Neumología)
13/12/2023	Diagnóstico y tratamiento de lesiones premalignas rectales y cáncer de recto precoz	Aurora Burgos (S. Digestivo), Ramón Cantero (S. Cirugía General), Mª Dolores Martín Arranz (S. Digestivo)	Mª Dolores Martín Arranz (S. Digestivo)
20/12/2023	Sesión de humanidades: Vermeer, tempus fugit	Santiago Quirce Gancedo (S. Alergología)	



2.3.4.4. Another Scientific activities

14th December 2023: 5th PhDay IdiPAZ



Advance stage clinical work

Mireya Fernández-Fournier, Value of the presence of antibodies against EBNA-1 and Epstein Barr virus VCA in extracellular vesicles as diagnostic and evolutionary biomarkers in patients with Multiple Sclerosis.

20th November 2023: Presentation Scientific Report 2022

Early stage translational category

Ana Belén Griso Acevedo. Defining CAF-induced tumor cell plasticity as a positive switch for tumor progression and therapy resistance.

Clinical work in initial phase

José Luis Rueda García. Study of hypercoagulability by global techniques of hemostasis and platelet function in patients with Inflammatory Bowel Disease.

Late stage translational work

Lucia Acero Riaguas. Development of predictive and therapeutic tools to combat resistance to chemotherapies in head and neck squamous cell carcinomas.

Acto de Presentación de la Memoria Científica

20 de noviembre a las 12:30 horas, aula Profesor Ortiz Vázquez del Hospital General

PROGRAMA:

12:30 h. **Bienvenida** a cargo del **Dr. Rafael Pérez-Santamarina**, Director Gerente del Hospital Universitario La Paz.

12:40 h. **Ponencia** a cargo del **Dr. Juan Tamargo Menéndez**, doctor en Medicina y Cirugía, especialista en Farmacología Clínica y catedrático de Farmacología en la Facultad de Medicina de la Universidad Complutense de Madrid, titulada "2014-2023, una década prodigiosa de la farmacología cardiovascular"

13:00 h. **Presentación de la Memoria Científica 2022** a cargo del director científico, **Dr. López-Sendón**.

13:20 h. Entrega de los **Premios IdiPAZ**.

13:30 h. Clausura.





2.3.5. Science and Society-Scientific Outreach Initiatives

The Unit of Scientific Culture and Innovation of IdiPAZ (UCC+i) has the aim of dissemination of science and innovation performed in our institution and as a key service to increase the scientific education and culture, to promote scientific vocations and innovative talent, to communicate researchers' findings, and to foster research among new generations, knowledge the population and patients.

Unit of Scientific Culture and Innovation of IdiPAZ

Members:

- Paloma Gómez Campelo
- María Gutiérrez Fernández
- Aitana López Redondo
- Daniel Quijada Alcón
- Santiago Rello Varona
- Andrea Martínez Feijóo
- Estela Sánchez Simón
- Ana Sastre Perona
- Gema Vallés Pérez

IdiPAZ participated in the International Day of Women and Girls in Science, to promote full and equal access and participation in science for women and girls. Gender equality is a global priority for UNESCO, and the support of young girls, their education, and their full ability to make their ideas heard are levers for development and peace. This year was focus on the role of Women and Girls and Science as relates to the Sustainable Development Goals namely Sustainable Development Goals 5 (Achieve gender equality and empower all women and girls) and Sustainable Development Goals 10 (Reduce inequality within and among countries).

Also, IdiPAZ participated in the 23rd edition of the Madrid Science and Innovation Week and in the European Researchers' Night.





Semana de la Ciencia y la Innovación en IdiPAZ



In 2023, IdiPAZ development **Ciencia por la Calle** an initiative through which scientific dissemination activities were organized for society in general. All these activities are free of charge and allow attendees to learn first-hand about R&D&I and the institution's researchers through talks in schools, workshops, fast meetings, guided tours, etc.



ACTIVITY

DATE



International Day of Women and Girls in Science: Workshops and activities held in schools.

Management: a fundamental pillar in research: With the idea of making visible the importance of management in research as well as the role of women in IdiPAZ, professionals from the technical unit of FIBHULP and the Biobank, visited the Claudio Galeno Vocational Training Center to tell their students step by step, the management of a research project, the innovations that have been implemented in the institute and how this allows, for example, to carry out the activity in Biobank.


11th February



De izquierda a derecha: Lucía del Pino Molina, Rebeca Rodríguez Pena, Andrea González Torbay, Elena Sánchez Zapardiel, Kerem Reche Yebra, Laura Miguel Berenguel y Elisabeth Matas Pérez.

'From here to science' and 'Cancer detectives': Predoctoral researcher, Laura Clares, gave two talks at the Gustavo Adolfo Bécquer school, each followed by a DNA extraction workshop for 6th grade students. In addition, she spoke about her scientific career and current cancer research to 4th ESO students.



ACTIVITY	DATE
<p>Hospital Immunology: health and science in the hands of women: The professionals of the group of Lymphocyte Physiology in Immunodeficiencies have given a talk to students of 2nd year of High School of IES El Pinillo where they have told the operation of the department and their experiences in the field of research.</p> <p>Research experience in the field of immunology and rare diseases: From the group of Lymphocyte Physiology in Immunodeficiencies they have also carried out a series of recreational activities for students from 1st-6th grade of primary school in the YMCA of Carabanchel to understand the functioning of the immune system</p> <p>"Magic flowers", 'Lava lamp' and 'Red cabbage as pH indicator': Researcher Jara Hurtado Gallego, from the group of Respiratory, Systemic and Neurological Infectious Pathology in childhood, and host immune response, visited a school and a nursery school to bring 'her science' to the little ones through activities and workshops that have delighted them.</p> <p>Visit us at IdiPAZ for the International Day of Women and Girls in Science": Biobank professionals and researchers from the Coagulopathies and Alterations of Hemostasis laboratory, open the doors of their laboratories to students of a high school to explain the importance of their work in science and show them curiosities that did not leave them indifferent.</p>	 <p><i>De izquierda a derecha Lucía Del Pino Molina, Rebeca Rodríguez Pena, Elena Sánchez Zapardiel, Pilar Nozal Aranda, Andrea González Torbay, Yadira Bravo Gallego y Elisabet Matas. Del grupo de Fisiología Linfocitaria en Inmunodeficiencias.</i></p>
<p>Science and Innovation Week: The future needs the best ...biobanqueros! Paloma Gómez, Marina Arranz, Laura Córdoba, Sandra Nieto, Yaiza Pedroche y Celia García.</p>	<p>6th November</p>
<p>Science and Innovation Week: How do we defend ourselves? Journey inside our Immune System. Luna Cordeiro y Carlos del Fresno.</p>	<p>6th November</p>
<p>Science and Innovation Week: Separating the wheat from the chaff: How to find an oasis in the information desert. Raúl Román</p>	<p>7th November</p>
<p>Science and Innovation Week: IdiPAZ: Research in the service of health and medicine. Gema Vallés, Kilian Gutiérrez y Eva Jaraba</p>	<p>7th and 14th November</p>
<p>Science and Innovation Light and color to follow the molecular footprints of diseases in our cells. Visit-Workshop at the Molecular Imaging and Immunohistochemistry Unit. Mayte Vallejo y Onys Camps.</p>	<p>8th and 15th November</p>
<p>Searching for defects in genes and proteins: it goes a long way. Pilar Sánchez-Corral, Alberto López y Laura González</p>	<p>10th and 17th November</p>
<p>How to be a scientific Sherlock Holmes? Daniel Quijada</p>	<p>13th November</p>
<p>From transplant research to the operating room: how scientific breakthroughs reach the patient Francisco Hernández, Ane Miren Andrés y Javier Serradilla.</p>	<p>13th November</p>
<p>An approach to a childhood cancer research laboratory. Alfonso Navarro, Andrés París, Karima Al-Akioui, Lara Clares, Lidia Pertiñez, Natalia Riestra y Patricia Rodríguez.</p>	<p>13th, 15th and 17th November</p>
<p>The Pediatric Radiologist: who we are and what we do Montserrat Bret</p>	<p>14th November</p>
<p>Debunking myths about ADHD Eduardo Fernández-Jiménez</p>	<p>16th November</p>



2.4 Innovation and Transfer Activities



2.4.1. Innovation and Transfer Activities

The Innovation Support Unit (or Innovation Unit), UAI, of FIBHULP was created in June 2010 within the framework of the ITEMAS Network –currently called ITEMAS Platform- of the Carlos III Institute of Health. Since its creation, the Innovation Support Unit has contributed to promoting and protecting innovative/ground breaking research conducted by IdiPAZ. The Innovation Unit also intends to harness our institute's considerable innovative potential generated, as a step prior to its subsequent transfer to society.

Therefore, one of the main commitments of the Innovation Unit is that researchers and health personnel perceive it as a resource at their service, to provide support and advice in all that relates to the identification, management, protection, transfer, marketing and dissemination of their research results.

ACTIVITIES

The main aim of the Innovation Support Unit is to identify the potential transferable research results generated within our institute and to accompany and support the researcher throughout the whole innovation process: from the birth of the idea to its placement on the market.

Since the Innovation Unit has been in operation, several projects sponsored by the institute itself have been managed and different collaboration agreements have been signed with important private institutions and organisations to promote innovation.

Our main objectives are:

- Promoting a culture of innovation and entrepreneurship within the institute by fostering the generation of innovative ideas and solutions that meet the needs of patients and society, in general, and supporting their development through various initiatives.
- Actively searching and identifying knowledge and research results emerged within the institute and transferable to the market.
- Fostering and managing the protection and transfer of knowledge and research results to society and promoting the current technology portfolio of the institute while getting an economic return which allows its reinvestment in research and development.
- Promoting the participation of industry in the innovation process acting as a stakeholder actively involved in it.

- Formalising business alliances, including technology companies as well as industrial and financial partners, to develop collaborative projects and to transfer the results to the market.
- Generating resources that achieve the greatest impact on society, enabling a better quality health care and at the same time contributing to the sustainability of the National Health System.
- Boosting a fruitful collaboration among all entities that make up the ITEMAS Platform.

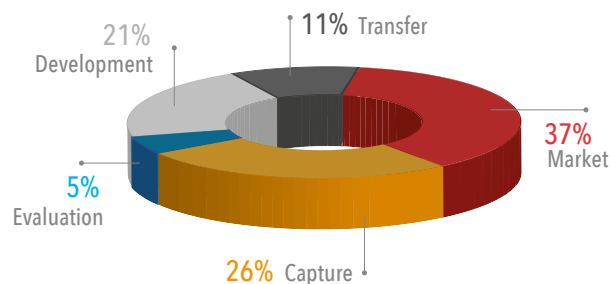
In the last years the UAI has definitely consolidated its presence and visibility in the whole environment Hospital-Institute. Among the greatest achievements of the Innovation Support Unit are the following:

1. The UAI has become one of IdiPAZ's most in-demand and requested platforms as it is responsible for promoting, supporting and managing all innovation projects.

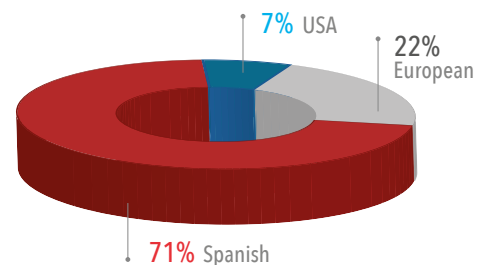
At December 31 2023 the UAI had 262 innovation projects or ideas in active state, 25 of which were in the capture phase, 72 in the evaluation phase, 46 in development, 80 in transfer and 39 in the market. Ac-



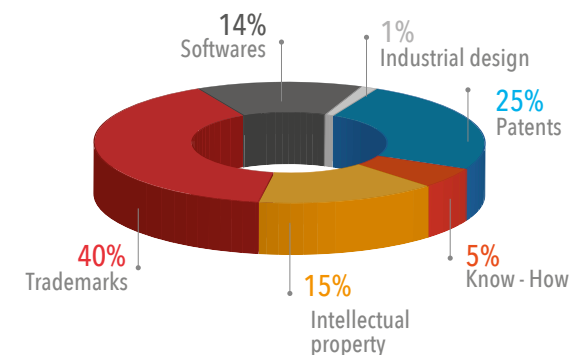
UAI portfolio breakdown by project development phase (2023)



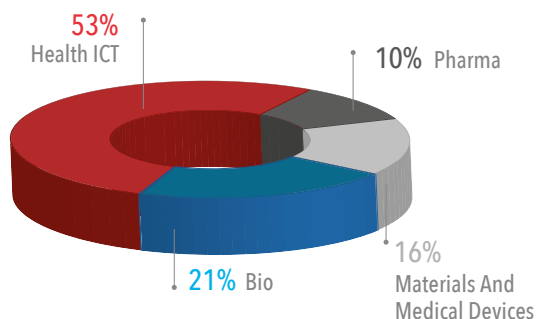
Priority of IdiPAZ's patent families in force during 2023



Total tally of ip legal figures in force during 2023



UAI portfolio breakdown by project type (2023)



According to these data, it follows that 15% of the projects have been successfully exploited and positioned in the market, a very positive percentage (although far lower than the aspired figure) given the precariousness of the times we go through and the resources (both human and financial) with which the UAI counts.

The analysis of IdiPAZ's technology portfolio according to the type of project show how Health ICT, Bio and Medical Device, and Materials and Devices types stand out above the others, with practically the same number of projects for all three types.

2. The UAI has built a wide and diverse technology portfolio. Each year the number of innovation projects managed by the UAI increases with respect to the previous year, also increasing the number of Hospital services, research groups and professionals in general who join IdiPAZ's innovation community.

During 2023 the UAI filed 1 priority patents (European patent kind), 3 PCT which 1 national or regional phase entry applications (3 at EPO). UAI's portfolio of patent families is active state during the period 2023 reached the figure of 17 patent families (10 of them with Spanish priority, 3 of them of European priority and 1 of them having US priority).

As for the software, during the period 2023 IdiPAZ had 10 computer software registered. The period of 2023 has been remarkable in this aspect, protecting 10 new computer softwares.

Special mention should also be made to the UAI trademark portfolio. During the period 2023, 2 Spanish and 5 European trademark applications were filed and 5 European trademark was granted. The total number of trademark families active and in force during 2023 was 29.

As well, in this year the UAI has made the applications to a new legal figure, the industrial design. Into this category, 1 Spanish was counted.

The total tally of Intellectual Property figures in force during 2023 is the following 14 patent families, 27 SW, 29 trademark families, 11 IP Works and 4 know-how, and 1 industrial model.



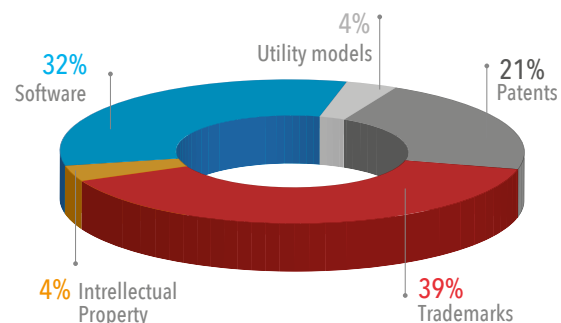
It is important to note that these trademarks, besides allowing IdiPAZ to distinguish its products or services from competitors' products or services, are associated with the know-how of the institution, know-how that has been transferred along with the distinctive sign in the case of the license agreements signed by the institution in respect of trademarks.

3. The UAI has prepared a catalogue of technology offers -based on specification sheets-, which includes the complete portfolio of exploitable IdiPAZ results. This catalogue aims to promote the transfer of IdiPAZ's technology portfolio to the industrial sector, generate collaborative projects for technological development and foster the exploitation of research results. Those validated specification sheets are published on IdiPAZ's website. The catalogue is updated as the Institute's technology portfolio grows.

4. The UAI has been, is, and will continue to be the principal architect for the transfer and exploitation of IdiPAZ's technology portfolio. During 2023, the UAI succeeded in signing 17 license agreements -16 of which related to intellectual property works and 1 to know-how- and the portfolio of licensed or commercially exploited inventions reached the figure of 23 technologies, 14 patents, 1 utility model, 2 SW, 2 trademarks, 3 IP Works and 1 know-how.

5. At the ending of 31 December 2023 4 spin-off projects existed and were being managed by the UAI, 2 of which were expected to be set up in the short-medium term. Attending to that, a new spin-off has been released during this year, called LUCADIA EPIGENETICS (From now just LUCADIA). This brand was approved by FIBHU-

Technologies licensed or in commercial exploitation (2023)



LP's Board as a sign of the institutional support authorising its release to the market. The birth of this brand new company serves as proof of an effective process of technological transfer under the wing of IdiPAZ, with the important collaboration of UAI. LUCADIA was awarded a DTS grant from ISCIII (Desarrollo Tecnológico en Salud), where this project took off. The main goal was to develop a novel diagnostic test that will impact the use of liquid biopsy by confirming the efficacy of miRNA biomarkers. These products also enable the detection of lung cancer patients at early stages and improve the clinical outcomes of patients diagnosed at advanced stages. Additionally, the development of this project was worthy of a Caixa Impulse Innovation grant, recognizing the importance of these kits and pushing the scale up of this project. Last but not least, this project has attracted interest from many stakeholders and investors (such as ITEMAS,

Caixa, and other investors within the health sector) who have contributed to its growth. This product would come to fill a market gap in early-stage detection attending to early stages patients improving the clinical outcomes of patients diagnosed at advanced stages.

6. Through the promotion of a culture of innovation, the UAI has managed to create a large community of innovative professionals. Over the last year, its promotional activity has consisted in the celebration of several working days, workshops, seminars, etc. Among all the promotional activities organised, the following stand out:

- **1st Quality Commission Training Day:** "Política de protección de datos". 12/12/2023 13:30-14:45.
- **2nd Quality Commission:** "Presentación Convenio OPEM-ITEMAS-ISCIII: la Propiedad Industrial al servicio de los Hospitales". 21/04/2023 10:00-12:00
- **3rd Quality Commission Training Day:** "Política de protección de datos" 25/04/2023 11:00-13:00

In addition, the UAI has collaborated with important institutions and private entities to promote innovation, in particular, it has participated in various forums and round tables organized by various stakeholders of the biomedical sector. Such as, Bioentreprise, Shipventure, Assabys, Biopartner and others business angels and family office. Actors from the health sector with the ability of pushing new ideas and scale them up. Linking private entities and making ideas grow is one of the main functions of UAI but funding is one of our main stoppers, for that reason, investors, private entities and funding companies are one of the



most important driving forces which take in the process of scaling ideas up.

7. The UAI has succeeded in creating a wide-ranging network of contacts. By virtue of its membership in the ITEMAS Platform, the Unit has continued to strengthen ties and creating synergies with the members of this Platform in order to achieve its established objectives.

Apart from the above results, it is important to highlight the increasing amount of innovation projects managed by the Innovation Unit that has been awarded with prestigious awards and aids. The following are some of the projects that won grants or awards during 2023:

- a. **Polifyl.** This project aims to identify predictive response biomarkers for this cancer immunotherapy, to identify new immune checkpoints with potential immunotherapeutic application, to improve current ICI-based immunotherapies by modulating innate immune responses. Establishing a Poly Functional Immune Liquid (PolyFIL) biopsy platform that will interrogate the peripheral blood immune compartment from an observational, functional and modulating perspective. The result will be a massive amount of immunological data obtained from a single blood sample analyzed by multivariate analysis and machine learning techniques. PolyFIL analysis in a cohort of lung cancer patients receiving anti PD-1/PD-L1 will allow to identify predictive biomarkers for the efficacy of such treatments, addressing aim 1. Furthermore, this effect have been in parallel studied in in vivo models of primary, metastatic and spontaneous tumors. PolyFIL was awarded by the ISCIII, into the FIS grant.

- b. **Novocornea.** This project aims to construct a human corneal organoid, replacing full cornea in today's penetrating corneal grafts. This means 1) unlimited tissue for any type of corneal graft/ocular surface, creating a new model of corneal banks; 2) drastic reduction of the need for corneal donors, meaning the removal of ethical limitations and biological considerations; 3) wider treatment availability for more numerous and varied ocular surface disorders - insufficiently treated today. NovoCornea eye tissues offer further treatment options: corneal endothelium will substitute the deep endothelial lamellar transplants; and ocular surface will increase the possibility of success of borderline cases with stem cell corneal deficiency; and all the diseases of the ocular surface that will be treatable with elements of NovoCornea.

This project has been highlighted for its use of disruptive technology to create organoids used for corneal replacement or transplant. This technology has not only stood out from a scientific point of view, but also from an industrial point of view. The level of disruption has attracted the attention of one of the major players in the pharmaceutical industry, ZEISS, resulting in a profitable agreement.

- c. **ASSIST.** European project is based on the brand new technology of IA. Anticipating and getting prepared is the main goal of this project. Throughout electrocardiograms are used to prevent future heart attacks. ASSIST is a collaborative project of some of the European leading institutions in Acute Heart Attack together with the Inter-American Society

of Cardiology (SIAC), looking for funding from EIT Health. The ASSIST Consortium (Artificial intelligence at Scale Solutlon for ST elevation myocardial infarction) is creating the first of its kind, endto- end solution for the triage and diagnosis of acute coronary syndromes. This digital platform is being designed to speed and improve patient access to cardiovascular treatment and support doctors in achieving greater diagnostic accuracy to increase the effectiveness and efficiency of treatments during acute myocardial infarction. This consortia group in which IdiPAZ is taking part was awarded by the European Institution, EIT-Health, identifying as a disruptive project and pushing this new technology as a useful tool into the health care.

- d. **Enfarma.** This project aim to solve medication errors (MEs). These incidents are preventable and can cause harm to the patient, in some cases as severe as dead making this events a global problem, above all in the practice of paediatric medicine with special effect in emergencies. Although there are tools that prevent these MEs, such as smart infusion pumps or the electronic prescription system, they have not been defined as effective solutions to this problem. In response to this casuistry and digitalisation in the field of health, more specifically as mHealth, ENFARMA was developed, an application based on scientific evidence in order to promote the safe use of intravenous medication in paediatrics. This project was awarded by the Dr. Luis Álvarez grant, promoted by FIBHULP and created in order to support the research in the core of the institution.



e. Agora E-salud. This project is trying to fill one of the most damaging gaps in our health system, loneliness is a common feeling among patients. This platform is trying to answer and help patients, carers and professionals to avoid communication barriers in the continuum of non-face-to-face social and healthcare care and to enhance their social interaction, empowerment and self-care through a multi-platform digital solution in order to resolve doubts, improve the experience, alleviate loneliness and access experiential, truthful and contrasted information. It is financed through invoicing per service to the health administration, hospital groups and health insurers so that they can reduce frequentation, admissions, the pressure of face-to-face care and control morbidity, and to patient associations and socio-health scientific societies to respond to the training and information needs of their associates. Peer support groups and close relationships with social and health care professionals emerge as effective solutions to assimilate the new situations linked to the disease in daily life and to enhance people's autonomy. Digital tools make it possible to connect patients and health professionals in a simple, synchronous and asynchronous and remote way. This project was chosen to take part into the competition of HealthStart making possible the creation of this interactive platform. As well, It's important to mention the co-creation labs as citizen participation action in order enhance the care system adapting the health system to the patients, making this solution suitable to help other patients. In summary this technological

solution is to create a tool from patients to patients.

8. On the other hand, it is important to mention a sudden event that had happened in the last year, 2023. It was based on the fact that FIB-HULP has introduced ciBIS, the cluster of researching platforms creating a central Unit of clinical-health research and Clinical trials (UCIC-EC by its Spanish acronym), biobank and innovation platform, recognised by ISCIII. These three platforms by La Paz-IdiPAZ works in coordination with three other matrix platforms by Institute of Health Carlos III (ISCIII) such as Supporting Unit to support of researching clinical Investigation, biobanks platforms, Biomodels and the ITEMAS platform to endure the innovation and boost the industrial abilities of the National Spanish Health System. The Key effort of this unit is the creation of an innovative culture and the dissemination and diffusion of the main ideas building a brand-new strategy to entrepreneurs in the health field. All of this had happened thanks to the work of UAI. As a consequence of it, there was a development of a new portfolio of intellectual property with more than 40 patent families, brands, trademarks, licences, and corporate agreements including spin-off. Currently the main targets have been set in order to promote the transfer of the value in all the scenarios around the health field, General Practitioners, health research Institutes, universities and independent entrepreneurs exclusively within the Community of Madrid.
9. The UAI helps projects based on different disruptive technologies to go ahead and leading

health innovation. These technologies such as IA or machine learning, this technologies probes the great labour taking in action by this unit, the UAI. As well, as part of the action taking inside of IdiPAZ there are some projects have been succeed in 2023. First of all, during this past year the project Kids and Pets was launched as an action leading by the IP Ana Mendez Echevarria, this project was awarded by Mapfre Foundation, Ignacio Larramendi grant. This project was awarded for the one health perspective, this worldwide trend promote by the ISCIII and for the ministry of health of Spain, the outcomes of this project, an app to help immunosuppressed kids with pets, has been recognised by the one health prize, indicating how worth it of the efforts to demonstrate this perspective.

10. The UAI helps projects based on virtual reality to materialize into clinical practice: The University Hospital of La Paz in Madrid leads a pioneering project to improve our understanding of the IA. This project is an end-to-end solution for the triage and diagnosis of acute coronary syndromes. This digital platform is being designed to speed and improve patient access to cardiovascular treatment and support doctors in achieving greater diagnostic accuracy to increase the effectiveness and efficiency of treatments during acute myocardial infarction. This project is a new evidence of our leadership into the development of new technologies into the health system.
11. Increased collaborations with industry: Kairós DS and the *Instituto de Investigación Sanitaria del*



Hospital Universitario La Paz (IdiPAZ) have joined forces to help patients suffering from post-stroke aphasia through the VerbalizApp platform. In Spain, 25,000 new cases of aphasia are diagnosed each year, a language disorder characterized by the inability or difficulty in communicating through speech, writing or mimicry. It is caused by a wide variety of events, from strokes, head injuries or brain tumors, to even the most serious cases of COVID-19. To combat it, Kairós DS and IdiPAZ have joined forces to help patients suffering from post-stroke aphasia through the VerbalizApp platform. Due to the presence in the health ecosystem we count on collaborations with companies from the health-care sector such as AINIA, Bluezone, Tecknicker. On the other hand, IdiPAZ as a research institution collaborates with other public entities, universities, UPM, or UAM, another research institution such as CNIC, were really helpful attending to design, development of a new app deliver to the market for 2023. Part of this apps were launching in 2023 are codimapp, kids and pets, endopaz app joining to the market place making clear this new tendency, scilicet, development of app within health system. The new app promotes communication and the recovery of patients with language disorders from the acute phase of the stroke. The use of artificial intelligence and machine learning can help recovering the communication skills of these patients. "With projects like this we can really change things, helping people and their families".

ORGANISATION

Since its implementation, the Innovation Support Unit has been integrated into the organisational structure of FIBHULP, as one of the Support Platforms for IdiPAZ research.

The Innovation Unit is directed by Dr. **Javier de Castro Carpeño**, M.D. and Ph.D. in Medicine and he's a member of the Medical Oncology Department of the La Paz University Hospital, Autonomous University of Madrid and of the Translational Oncology Unit of IdiPAZ.

The Innovation Unit also consists of a team of experts in fostering innovation and protecting research results and technology transfer:

- **Estela Sánchez Simón**, Law Graduate;
- **Ignacio Zaldivar Pozo**, Biology Degree.

CONTACT COORDINATOR

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 innovacion.legal@idipaz.es
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MEMBERS

- **Ignacio Zaldivar Pozo**
 international.grants@idipaz.es
 Phone: (+34) 912071232



2.4.2. Patents and trademarks



NEUROSCIENCES AREA

Psychiatry and Mental Health Group



Rodríguez Vega B, author; FIBHULP, assignee. Trademark name: En calma; ESM 3.695.071; 2017 December 12.



Rodríguez Vega B, Mediavilla Torres R, Bravo Ortiz MF, Muñoz San José A, Bayón Pérez C, Lahera Forteza G, Palao Tarrero A, authors; FIBHULP, assignee. Trademark name: SocialMind; ESM 3.748.550; 2018 December 17.

Neurology and Cerebrovascular Diseases Group

Valdivieso Amate F, Bullido Gómez-Heras MJ, Martínez García A, inventors; UAM, assignee. Method of identifying compounds that induce or inhibit endoplasmic reticulum stress or oxidative stress. P200702997, PCT/ES2008/000705, EP2221379, US20100304384; 2007 November 13.

Vergés Milano J, García García A, Ruhí Roura R, Montell Bonaventura E, García López M, Aláez Versón CR, Escaich Ferrer J, Egea Máiquez J, Lorio González S, Negrodo Madrigal P, inventors; BIOIBÉRICA S.A., UAM, assignees. Sulphated disaccharides for the treatment of neurodegenerative and/or neurovascular diseases. P200902399, PCT/EP2010/070613, US20120309707, CA20102785237; 2010 December 22.

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2.5. IdiPAZ Quality Committee



The search for quality and excellence in research management has been one of the main goals of IdiPAZ since its origin in 2009. This is shown in the fact that external monitoring audits of its Integrated Management System that jointly respond to the ISO 9001 and UNE 166002 standards were satisfactorily completed once again. After this last cycle, the System covers a total of 5 management units, 6 support platforms and 3 collegiate bodies of IdiPAZ, highlighting on this occasion as a novelty the incorporation in the quality certificate of the scientific support process in project applications that is provided to researchers as well as the corporate process of scientific dissemination. Likewise, a significant effort has been made to proceed in this latest audit to adapt the R&D&I management system (research, development and innovation) to the requirements of the new UNE 166002:2021 Standard, which brings healthcare and research personnel closer to the culture of innovation and promotes alliances with other agents in the field of innovation, both national and international.

Although the first certification of the Quality Management System was given in 2013 and its development has been a strategic objective all these years, its growth and consolidation has been especially notable in the last 4 years, currently being included in the scope for both standards the processes of the following units platforms and organ:

- Quality Commission
- Project request support.
- Innovation Support Unit.
- UICEC.
- SANGER sequencing.
- Biobank.
- Management of scientific production and communication.
- Training Commission.
- Common laboratories.
- Project management.
- Accounting.
- Legal and Contracting.
- Human resources.
- Collegiate Government Bodies.

Quality certificates to all units, platforms and bodies involved were delivered during the presentation of the Scientific Report of IdiPAZ 2022 which took place November 20th 2023.

Moreover, for a third year in a row specific training webinars were developed by the Committee in order to strengthen the competence of IdiPAZ members in quality management, thus ensuring the sharing of best practices among them. These webinars are accessible at IdiPAZ website: <https://idipaz.es/PaginaDinamica.aspx?IdPag=20&Lang=ES>



Finally, considering that IdiPAZ is a continuously evolving organisation, the Quality activities of our institution have been enriched by the different achievements made by its member organizations.

The attached table shows the clinical pathways reviewed in 2023, as well as the protocols developed or updated in the same period. In addition, the staff continuously collaborates in the improvement of the institution by participating in clinical committees and setting up improvement groups, as well as by implementing patient and professional satisfaction surveys. Also during 2023, the quality management of the hospital's departments has been consolidated into a comprehensive management system in accordance with the various national and international ISO standards. The hospital has also been recognised by the National Accreditation System for Reference Units and the European Reference Networks of the European Commission

Protocol/Clinical pathway	Status
Protección y Prevención para los trabajadores frente a agentes biológicos en el ámbito sanitario	Review
Guía clínica de inducción al parto	New
Atención al paciente politrauma	New
Extracción de electrodos en pacientes adultos	New
Fotomodulación de maculopatías	New
Procedimiento de contingencia 6ºD	New
Manejo multidisciplinar de la pancreatitis aguda	New
Protocolo catéter urinario en urgencias	New
Protocolo reducir NPO en Urgencias	New
Protocolo restricciones sujeciones físicas en urgencias	New
Protocolo Poliglobulia	New
Protocolo para la mejora de la coordinación asistencial entre Atención Primaria y Cardiología	New

Protocol/Clinical pathway	Status
Transporte muestras biológicas Biobanco	New
Alta precoz en neonatología	New
Inyecciones intravítreas	New
Protocolo intratecales	New
Protocolo anafilaxia	New
Protocolo Calostro	New
Protocolo ETEV de la Comisión de Trombosis	New
Procesamiento en fresco de muestras tumorales de la Comisión de Tumores	New
Recomendaciones control SARM	New
Guía Cirugía ambulatoria pediátrica	New
Protocolo ovario poliquístico	New
PAI Insuficiencia Cardiaca	New
Protocolo Presalida	New
Tratamiento parasitosis de la Comisión PROA	New
Tratamiento infecciones respiratorias comisión PROA	New
Tratamiento infecciones piel y partes blandas comisión PROA	New
Antibioterapia infantil Comisión PROA	New
Tratamiento infección fúngica pediatría	New
Protocolo Sellado Catéter	New
Procedimiento admisión Apertura HC	New
Diabetes insípida pediatría	New
Consulta neuroendocrinología	New
Protocolo déficit GH pediatría	New
Protocolo manejo vía área difícil	New
Protocolo actuación antes casos gripe en adultos	New
Protocolo de actuación ante infección respiratoria aguda por COVID	New



2.6 Platforms

2.6.1 Biobank

The Hospital La Paz Institute for Health Research Biobank (IdiPAZ Biobank) is a platform of support service to the Institute's research, product of the integration of different pre-existing nodes with a long and fruitful research trajectory within the University Hospital La Paz. The IdiPAZ Biobank works to obtain, store, manage and distribute large collections of human biological samples of diseases of interest for researchers.

In 2020, the Biobank increased its capacity with the incorporation of new scientific-technical services, and as result the platform has been renamed as Biobanks and Biomodels platform.

This service is created with the collaboration of the University Hospital La Paz, the Foundation for Biomedical Research of the University Hospital La Paz (FIBHULP) and the Carlos III Health Institute, being integrated into the Network of Hospital Biobanks (RetBioH). The Biobank of the University Hospital La Paz - Institute of Health Research of the University Hospital La Paz - IdiPAZ is registered in the National Biobank Network of the Carlos III Health Institute with the code B.0000684.

The **Platform for Biobanks and Biomodels of IdiPAZ** (PT23/00028) belongs to the *ISCIII Biobanks and Biomodels platform* (<https://www.isciii-biobanksbiomodels.es/>) to support research in Biomedicine and Health Sciences from Strategic Health Action 2017-2023 of the Carlos III Health Institute.

The ISCIII Biobanks and Biomodels Platform has joined the European Biobanking Infrastructure (BBMRI-ERIC) as an observ-



ing member, acting as the national node in BBMRI-ERIC, one of the most relevant research platforms in the European Union.



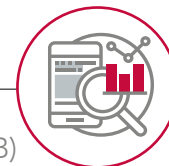
Since 2018, the Biobank of IdiPAZ was certified according to the ISO 9001:2015 quality management system standard within the scope of IQNet Certificate IdiPAZ Number ES-0512/2018.

Objectives

The main objective of the IdiPAZ Biobank is to promote biomedical research, which will increase and improve the quality of scientific production in Spain. This is a specialized work in the management of human biological samples and their associated data for biomedical research in accordance with the legislation in force in Spain, Law 14/2007 on Biomedical Research and the RD of Biobanks 1716/2011. This guarantees the confidentiality of the samples and associated data.

The IdiPAZ Biobank provides researchers with an agile channel to access samples, their products and data associated with quality assurances and ethical-legal adaptation.

The obtaining, and if necessary the revocation, of the patient's informed consent is controlled. Special attention is given to guarantee the protection of privacy and the confidential treatment



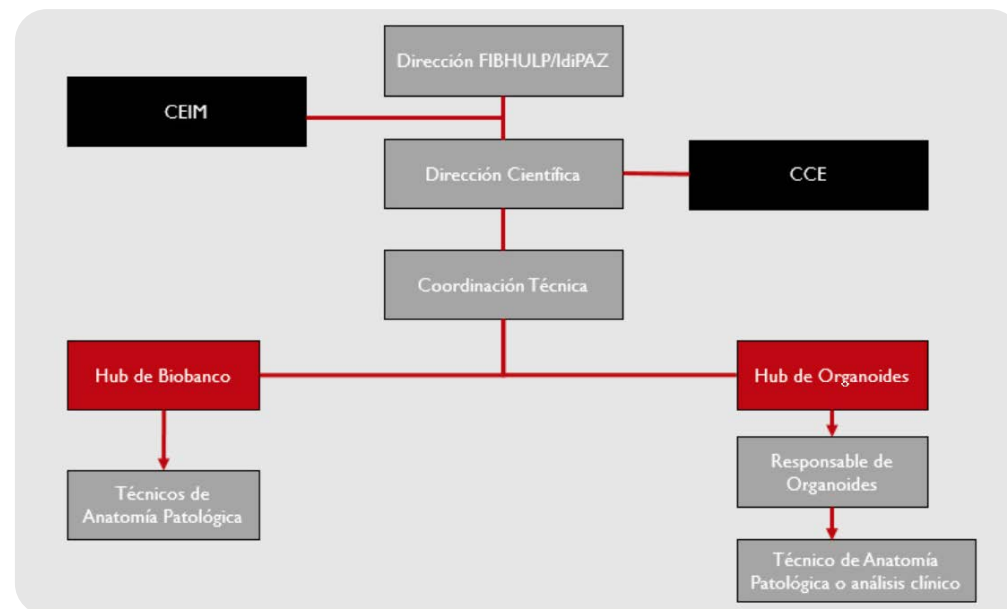
Biobanco y biomodelos (BB)

of personal data contained in the IdiPAZ Biobank, clinical data and research results.

Thanks to this, the development of a continuous dynamic of analysis and evaluation of the needs of the users of the Biobank is favored. In addition, the activity of the IdiPAZ Biobank is made known and valued to society and, especially, in the field of patient and affected associations.

The IdiPAZ Biobank will provide benefits at different levels, starting with donors, patients, society in general and the clinicians and researchers involved. It also aims to facilitate communication and co-operation of different groups with common interests both nationally and internationally.

All of this will result in a higher quality of research and an increase in scientific production, without forgetting the strict compliance with the regulations on Data Protection and the Rights to Privacy and Confidentiality of all patients (Organic Law 3/2018 and Regulation General Data Protection 2016/679).



Composition

Scientific Director:

Paloma Gómez Campelo (PhD)

Coordinator:

Marina Arranz Álvarez

Pathological Anatomy Technician

Sandra Nieto Torrero

Yaiza Pedroche Just

Celia García García

Pablo Concha Soler

HUB Organoids

Head: Laura Córdoba García

Jesús Jiménez Rodríguez

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Enrique Espinosa Arranz (MD, PhD)

Olga Vera Puente (PhD)

Alicia Hernández Gutiérrez (MD, PhD)

Eduardo López Granados (MD, PhD)



Equipment

- Eight -80°C deep freezers equipped with remote alarm temperature control and a CO₂ backup system. Seven of these are equipped with an open door control software
- One tank of liquid nitrogen at its gas phase with an alarm temperature control and a lack of CO₂ detector
- W-2D tube system with a data matrix codification for liquids, with a scanner to read col boxes and reader for the identification and the traceability of the tubes
- Combined refrigerator of 4° C y -20° C
- Cryostat to cut frozen samples
- Microtome y bath/coating to cut paraffin samples
- Laser Microdissector
- Biological safety cabins IIA
- Centrifuge with capacity to process samples in tubes and Eppendorfs
- Automatic platform to manipulate and trace liquids
- One mini coolers to freeze inclined biological samples below 1°C
- Two containers to freeze and transport Isopentane
- One container for the transport of isopentame samples
- Vortex Mixer /agitator
- Spectrophotometer (Nanodrop®)
- Fungibility: basically kits and the necessary products to process and preserve tissues, blood, and cells.
- Printer/photocopier/scanner
- 3 computers and a management computer system
- Label printing system and a bar code reader connected to the management software

Portfolio of services



HUB Biobank

Technical and scientific assessment:

- Collection and management of new collection
- Work Methodology/ Methods
- Quality control of DNA/ARN sample treatment
- Expert training to use Biobank management system
- Training and advice on the use of Biobank management software.
- Information to the investigator on the custody, deposit, availability and transfer of samples associated with the biobank.
- Training of trainees (FCTs) of training cycles.

Sample/collection management:

- Coordinating a collection of samples in multiple study/research centers
- Storage of pre-existing collections under LIB 14/2007.
- Storage of preexisting samples in accordance with Spain's Biobank laws LIB 14/2007 and 1716/2011 Royal Decree
- Management and control of Informed Consent (CI) and/or clinic's regarding samples
- Aliquot of blood/serum/plasma/other liquids
- Sample reception and codification

Histology techniques:

- Making paraffin block
- Making frozen tissue blocks
- Paraffin/frozen cuts
- Hematoxylin and eosin stain (H&E)

- Other kinds of stains
- Laser microdissection

Cell techniques:

- Purifying and freezing of mononuclear cells of peripheral blood (PMBCs)
- Molecular Techniques:
- DNA and RNA quantification via spectrophotometer (NANODROP)

Researchers who wish to deposit their collections in IdiPAZ' Biobank will have to sign an agreement of sample deposit (in which the terms and conditions under which the Biobank will deposit the samples) and in agreement with the existing legislation on the subject. Also, researchers who wish to use our samples will have to sign a Transfer Agreement (Material Transfer Agreement) in which the terms and conditions under which the Biobank will grant the samples.



HUB Organoids

IdiPAZ's Biobank is working on the establishment of a living biobank of organoid 3D models directly generated from patient biopsies. Patient derived organoids (PDOs) are novel in vitro 3D cell models that preserve the molecular, structural and functional characteristics of their tissues of origin, representing a clinically-relevant alternative to traditional 2D cell lines and an effective tool to study the biology of human tissues in health and disease. Currently we have a comprehensive collection of over 70 highly



characterized human intestinal organoids, including rectum and colon, derived from both healthy and colorectal cancer biopsy tissue. This organoid patient-derived collection includes a detailed description of associated patient clinical and pathological data of great value for translational research purposes, as well as histological and molecular characterization of both the tissue of origin and the resulting organoid cultures.

Areas of application

- Studies of tissue morphogenesis and organ development
- Modelling of infectious, genetic and inflammatory diseases
- Oncology and immuno-oncology
- Identification of diagnostic and prognostic biomarkers
- Drug screening for toxicity and efficacy
- Personalized and precision medicine

Portfolio of services

- Culture of human healthy intestine organoids derived from donor biopsies
- Culture of human tumoral intestine organoids derived from donor biopsies
- Paraffin/OCT embedding and sectioning
- Hematoxylin and eosin characterization
- Characterization by immunofluorescence and confocal microscopy of organoid sections and 3D organoids
- Cryopreservation and biobanking

Biobank's scientific indicators

Stored samples

118,642

INPUT 2009-2023



41,268
Donors



61,411
Biological
sample



152,167
Aliquot

BIOBANK

OUTPUT 2009-2023

33,525 Aliquot



290 research projects

Stored samples

7,389

INPUT 2023



1,618
Donors



3,279
Biological
sample



9,875
Aliquot

BIOBANK

OUTPUT 2023

2,486 Aliquot

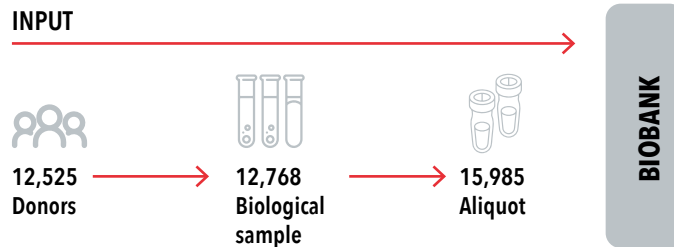


17 research projects



Finally, the recent emergence of the novel pathogenic SARS-coronavirus 2 (SARS-CoV-2) and its rapid national and international spread (pandemic), have provided the IdiPAZ Biobank the opportunity of have started a COVID-19 Collection.

SARS-CoV-2 Samples

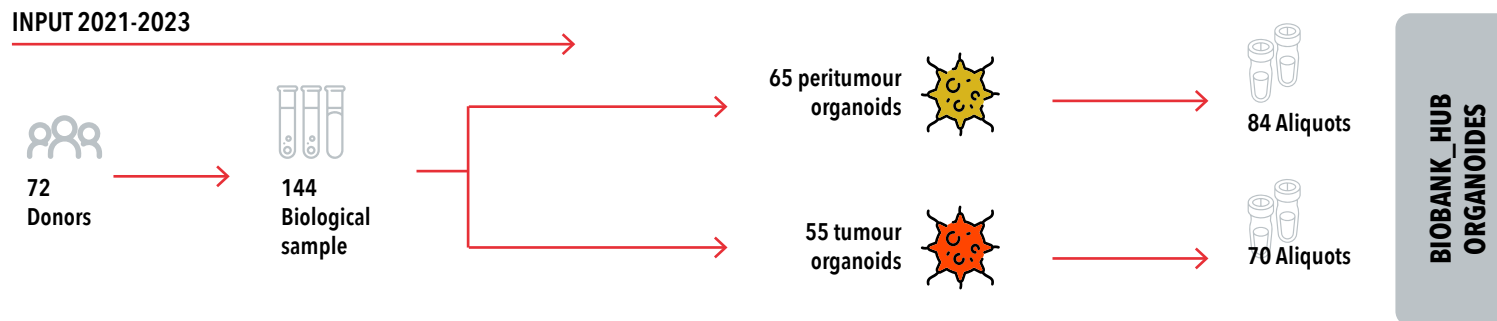


Publications in 2023 with the mention of IdiPAZ Biobank authorship attribution

Papers	Journal	Impact factor (2023)	Communications and scientific publications
1	Journal of clinical medicine	3	Materials and Methods
1	Journal of Gastrointestinal Oncology	2	Acknowledgements
2	Internal Journal of Molecular Sciences	4.9	Materials and Methods Acknowledgements
1	Frontiers in medicine	3.1	Acknowledgement
1	Research Square		Acknowledgement
1	Biomarker Research	9.5	Acknowledgement
1	Journal of Investigative Dermatology	5.7	Acknowledgement
1	Journal of Experimental & Clinical Cancer Research	11.4	Materials and Methods Acknowledgements
1	Proteomes	4	Materials and Methods Acknowledgements
1	Pediatric Research	3.1	Acknowledgement

Colon organoids

Stored samples





2.6.2. Biostatistic Platform

The Platform for Biostatistics is a pioneer in the field of research support in hospitals and carries out work that is recognised by the vast majority of professionals who, for several decades, have requested statistical advice for their research work or for other studies with immediate application to healthcare practice.

Portfolio of services

- Advice on the methodological design of research projects and clinical trials, drafting of protocols and statistical analysis plans.
- Determination of sample size for clinical trials and research projects.
- Data analysis of research projects and clinical trials, writing of interim and final reports, and futility analysis.
- Data management of research projects and clinical trials, eCRD designs in Macro and RED-Cap, data management plan writing and data validation.
- Development of software dedicated to the extraction and pre-processing of existing information in information systems.
- Support for the interpretation of scientific publications and their applicability in clinical practice.
- Evaluation and validation of diagnostic tests.
- Design of clinical scales and scores.



Composition

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2.6.3. Experimental Surgery

The Experimental Surgery Section includes a microsurgery room, an operating room, an animal facility, and service areas (changing rooms, office, and staff room). The microsurgery room is used for performing microsurgical procedures on small species, mainly rodents. It is equipped with surgical microscopes, inhalation anesthesia systems, and cardiovascular monitoring. It also has mobile tables and fixed benches that allow for flexible arrangements, making it versatile for both microsurgery courses and laparoscopic simulation.

The operating room is fully equipped with complete surgical stations: surgical tables, anesthesia stations, and cardiovascular monitoring systems. It also has laparoscopic, ultrasound, and X-ray equipment. This room is used for all procedures involving large animals (rabbits, pigs, or sheep), as well as training courses in various specialties such as laparoscopic surgery, anesthesia, trauma care, and the development of surgical techniques.

The animal facility has 7 conventional housing rooms plus 2 SPF rooms, handling rooms for large species and rodents. It also has specific equipment for washing and disinfecting housing materials.

Animal facility

Research and teaching at IdiPAZ involving the use of laboratory animals are managed through the experimental surgery platform of IdiPAZ, supervised by Dr. Carlota Largo Aramburu. This department develops biomedical research projects, specialized training courses in various areas, as well as proce-



cedures to implement new diagnostic techniques or therapies involving the use of experimental animals. Additionally, it collaborates with the Ethics Committee for Animal Welfare, whose authorization is necessary for all procedures.

The animal facility is located in basement 2 of the IdiPAZ building within the hospital complex. It has a total of 9 rooms for housing animals, both in breeding and experimental phases, plus 2 rooms for handling animals and experimental procedures, and 2 rooms for washing materials, which include a cage washer, an autoclave, and a pressure washing system. To ensure its proper functioning, it is connected with the rest of the Experimental Surgery departments, which include a double operating room, a microsurgery room, and various additional rooms (changing rooms, offices, and storerooms).

The species typically used include rodents (rats, mice, and gerbils), rabbits, pigs, sheep, and goats, and occasionally dogs, cats, or guinea pigs. There is also a housing unit for fish (zebrafish). To avoid contamination and ensure an efficient workflow, the rooms for housing large animals are physically separated from those for rodents and the rest of the facilities (washing area, storerooms, or han-



dling room). Additionally, all rooms are equipped with an external video camera system to monitor the interior and avoid unauthorized personnel entry.

The cages provide the minimum dimensions required for housing pigs and/or small ruminants. The structure of each cage includes stainless steel anchored to the wall, with sliding separators that allow the expansion of space by joining two cages. The rooms have the necessary slope to encourage the elimination of solid residue through a drain located at the rear of the cage, equipped with protection systems to prevent the entry of rodents or insects. For cleaning the room and the animals, there are hot and cold water connections via hoses.

The rabbit room includes modular mobile racks of 3, 6, or 9 cages, in which the rabbits are housed in individual stainless steel cages with plastic grids, complemented by an internal box structure that allows the animals to hide or climb to a higher position. The stainless steel feeders and water drinkers are located in the cage door, with a removable stainless steel tray to collect feces and urine. This room has a central drain similar to the facilities for large animals.



The rodent area is separated from the rest of the facility by a system of doors without locks, where staff can dress appropriately before entering (boots, gown, gloves, cap, and mask). This area contains 3 rooms for housing rats and mice. There is also a storeroom for food and shavings, as well as a room for handling and performing procedures.

In addition to the two large animal areas, the facilities include: a washroom equipped with a cage washer (Matachana), a stainless steel pool, and an autoclave. It also has a pressure washing system for cleaning the cages and/or visitors who require it.

A recently incorporated SPF area for immunodeficient mice with capacity for 4 ventilated racks, a housing area for them, and an SPF laboratory. This room is located in an isolated area within the biocontainment facility, with restricted access and airlock systems to prevent the entry of pathogens. The door has controlled access and features a HEPA filtration and ventilation system for both incoming and outgoing air, ensuring the air circulates without introducing pathogens.

The animal facility complies with all current legislation and is registered under number ES-280790001941.

Composition

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 Rubén Ruiz Garzón
 Paloma Guijarro Bachiller
 Verónica Claudia Véliz Ticona
 Carmen Rius Copoví
 Lourdes Hernanz del Álamo
 Elena Martín de Castro

Portfolio of service

- Animals for experimentation (own breeding)
- Housing and maintenance of animals
- Leasing of spaces for conducting courses (microsurgery laboratories and operating room)
- Performance of surgical procedures on large animals (leasing space and anaesthesia, does not include surgery)

Animal experimentation projects approved by the competent authority in 2024

- Strategic activation of regulatory T cells to treat immune-mediated diseases causing fibrosis. Dr. Luis Stark Aroeira.
- Nanotechnology applied to the treatment of inflammatory diseases. Use of the nanoparticle NIL10 as a candidate for the treatment of psoriasis and atherosclerosis. Dr. Carlos Zaragoza Sánchez.
- Micro-structured patterned PLA films to promote wound healing. Dra. Nuria Vilaboa Díaz.
- New therapeutic solutions for the treatment of irradiated skin. Dra. Nuria Vilaboa Díaz.
- Reproduction of homeostasis and metabolic stimuli during prolonged normothermic per-

fusion of isolated liver. Dra. Carolina Cubillos Zapata.

- Thyroid disruption biomarkers and fetal brain damage in Dehal1 knockout mouse model of gestational thyroid dysfunction. Dra. Paz de Miguel.
- Development and therapeutic application of a normothermic extracorporeal perfusion system in intestinal transplantation: the end of the ice age. Dr. Javier Serradilla Rodríguez.
- Translational potential of HSF1 transcription factor inhibitors as anticancer drugs. Dra. Nuria Vilaboa Díaz.
- Is it possible to prevent post-traumatic/post-surgical arthrofibrosis? Validation of a new experimental rat model of arthrofibrosis and efficacy of celecoxib and ketotifen in its prevention. Dr. Enrique Gómez Barrena.
- Prognostic impact of glycemic variability in acute cerebral infarction and influence of corrective hyperglycemia treatment in a rat animal model. Dra. Blanca Fuentes Jimeno.
- High-resolution multimodal ultrasound imaging in cerebrovascular diseases. A preclinical approach to new translational applications. Dra. María Gutiérrez Fernández.

Training activity

The experimental surgery platform has hosted 30 training activities in addition to the fine-tuning of new surgical techniques or medical device and the training of multidisciplinary teams and residents.



2.6.4. Documentalist

The documentalist platform is responsible for the analysis, maintenance and dissemination of the scientific production generated by the Institute. This production is collected both in the bibliometric reports that are published on the IdiPAZ website as well as in the Institute's Research Report which is published annually and in which all the research activity of our research groups is collected. Also key is the support of the unit to the scientific management when carrying out internal evaluations of researchers or research groups.

The platform provides support to all IdiPAZ researchers when performing bibliographic searches, managing ORCID, CVN or different researcher profiles, advising on scientific evaluation, advising on quality criteria for scientific publications and any training related to this service.

This platform has also played a key role in publicizing and promoting open access policies, as well as participating in the initiatives carried out by public institutions for the creation of institutional repositories.



Through the documentalist, IdiPAZ members can print the posters that will be used to disseminate the results of their research at the congresses of their specialties.

Since 2018, the Documentalist Platform of IdiPAZ was certified according to the ISO 9001:2015 quality management system standard ES-0512/2018.

Objetives

The main objectives of the platform are:

- To show society the relevance of scientific research conducted at IdiPAZ.
- Facilitate transparency and maximize the impact of the scientific production of the institute.
- Collaborate in the transmission of knowledge generated in the IdiPAZ environment.

Composition

Head:

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Portfolio of services

- Elaboration of Research Report: Design of forms to collect information, bibliographic searches and calculation of bibliometric indicators.
- Collaboration with researchers: Collaboration with research personnel in the search and location of documents useful for their research.
- Elaboration of bibliometric reports: Creation of control tools to keep a record of the Institute's publications.

- Evaluation of researchers: Calculation of bibliometric indicators for decision making in calls where there is a quota of researchers.
- Bibliometric evaluation of research groups: Calculation of bibliometric indicators to determine the scientific production of both established IdiPAZ groups and new groups for their subsequent inclusion in the Institute.
- Advice on bibliographic search tools: Help in the knowledge of the different valid tools for conducting bibliographic searches in specialized databases.
- Advice on the use of bibliometric techniques: Assistance in the knowledge and application of bibliometric indicators to scientific production.
- Poster printing for congresses



2.6.5. UICEC

La Paz Research and Clinical Trials Unit (Unidad de Investigación Clínica y Ensayos Clínicos del Hospital La Paz, HULP-UICEC), is one of the IdiPAZ supported research platforms. Its purpose is to promote and support clinical research at La Paz University Hospital and to establish collaboration links with other investigation centres. Presently HULP-UICEC is the coordinator of the Spanish Clinical Research Network (SCReN), research platform of Instituto de Salud Carlos III.

Its wide portfolio of services provides support to researchers in design, set-up (including IRBs and Competent Authority approvals), management, data analysis and report writing of clinical trials and research projects. As Trials Managers, assists the Principal Investigators in the preparation of feasibility and financial reports, administrative tasks (i.e., investigators coordination, schedule of visits), as well as projects development and research, particularly in the recruitment and follow-up of patients and data collection, assistance in audit, inspections and adverse drug reactions management according to regulatory procedures, among other tasks. We also perform nursing activities and laboratory management, obtaining, processing and shipping the samples to central laboratories. All operations are GCP compliant as needed.

HULP-UICEC also runs a Phase I-II Trial Unit; the facilities and equipment allows harbour early phase clinical trials both in healthy volunteers and patients (children and adults).



Composition

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 Enrique Seco Meseguer (MD)
 Stefan Stewart Balbas (MD)
 Lucía Díaz (MD)

Ethics Senior Researcher

María Cristina Murano (PhD)

Predoctoral Researchers

Andrea Guzmán de Antonio
 Francisco Javier Guijarro (MD)
 Arturo Gómez López de las Huertas (MD)



Nursing Supervisor

Tamara Domingo Pérez

Clinical Trials Nurses

Vega Mauleón Martínez (MsC)
 Raquel de Madariaga Castell
 Laura Vitón Vara (MsC)
 Cristina López Crespo (MsC)
 María Almena Rueda

International Project Managers

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 Paula Valle Simon (MsC)
 Eloy Ferreras Puente (MsC)

National Project Manager

Rocío Prieto Pérez (PhD)
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 Cristina Marian Revilla (MsC)
 Paula Gómez Rodríguez (MsC)
 Noa Baz Baz (MsC)

Project Manager Paediatrics Oncology Trials

María Ignacia Ceballos
 Darnadude
 Andrés Gómez Davila (MsC)

Data Management

María Teresa García Morales
 Diego Alvaredo Rodríguez

Bioestaticians

María Jiménez González
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 María Martínez Balaguer

Technical Secretary of SCReN

Victoria Hernández Rubio
 María José Rubira Touriño
 Gema del Prado Marugán
 Víctor Alelú Hernández
 Amparo Sánchez Correa

Data Entry

Silvia Llorente Gómez
 Beatriz Llorente Robledo

Laboratory Technician

Pilar Ayllon García

Sustainability Manager

Eduardo Royon Gómez

Communication and Dissemination

Sonia Escolano Alonso

Quality Control

Blanca Duque Bascuñana

Receptionist /Clinical Trials Assistant

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 Laura Lozano Infante
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Facilities

- 6 Work offices (28 work stations)
- 1 Meeting room (with audiovisual and teleconference systems)
- 1 Archive room
- Phase I/II Clinical Trial Unit:
 - » A hospital ward with eight beds and four chairs (children and adults)
 - » 2 Doctor's office
 - » 1 Central point for sample collection
 - » 1 Sitting room
- Carlos III Satellite Unit
 - » 1 Work office and doctor's office
 - » 1 Laboratory

Equipment

- 2 ECG
- 1 Centrifuge (Carlos III Satellite Unit)
- 2 Refrigerated centrifuge
- 1 Refrigerator
- 1 Room temperature chamber (Carlos III Satellite Unit)
- 3 -20°C freezers (1 in Carlos III Satellite Unit)
- 2 -80°C deep freezer
- 4 Vital signs monitors
- Defibrillator
- Temperature recording system
- Digital clocks synchronised by GPS
- 2 medical scales (1 in Carlos III Satellite Unit)
- Digital blood pressure monitors and pulse oximeters
- Digital timers
- Crash trolley
- 2 Cure trolleys
- Video surveillance system
- 11 patient calling devices
- 4 patient surveillance cameras

Portfolio of services

The portfolio of services includes more than 80 tasks grouped into:

- Methodologic support
- Clinical trial pre-study activities
- Study development
- Finalization and closure tasks
- Pharmacovigilance
- Statistics and data management
- Medical and nursing tasks



2.6.6. Internationalisation

The Internationalisation Platform of IdiPAZ is the office in charge of mobilising, promoting and managing the international projection of the research groups. Our continuous objective is to promote the different research groups that make up the institute at an international level, identifying possible synergies between groups and centres, new partners and sources of funding, as well as the formation of strategic alliances. To this end, we try to maintain open dialogues, not only with our researchers but also with the policy centres involved in the designing and planning the future of research in the European Union.

Throughout 2023, the Platform has relied on the efforts of:

José Luis Narro Villanueva, MBA

Santi Rello Varona, PhD

During 2023, the Internationalisation officers have navigated the increasing effort required to apply with success to the new Horizon Europe (HE), while managing the 26 internationally funded projects active during the year. We have attended 44 events, workshops and information days concerning the deployment of new rules, tips for proposal prepara-

tion, brokerage events and the deployment of new standards of international research and innovation. In addition, we have organised and performed five training courses, workshops or research stages.

In 2023, we participated in 39 proposals for competitive international research public funding (HE, EU4HEALTH, and Partnerships). In 2023, the Innovation Support Unit took over the labour of dynamisation of IdiPAZ's participation in EIT-Health. This represents a steady increase from the previous year, consolidating our presence in the European Research Area. IdiPAZ participates in six funded projects submitted during 2023, attracting more than three million euros.

Besides, the Platform's staff participates directly in the IdiPAZ involvement in the Experts' Group assessing the Spanish National Representative for EU Health Research, the European Open Science Cloud Association (EOSC-A), the Coalition on Advancement of Research Assessment (CoARA) and the international projects coordinated by the institute: RISEinFAMILY and the ERN TransplantChild.












Finally, throughout 2023 we have managed the following financed and active international projects:



2. Executive summary

2.6 Platforms

Project	Programme	Logo
AIMed	Antimicrobial Integrated Methodologies for orthopaedic applications	H2020-MSCA 
CARE	Corona Accelerated R&D in Europe	IMI 
CareInTrials	Care in Clinical Trials involving Youth. Exploring Vulnerability through Empirical Philosophy in a Clinical Trials Unit	H2020-MSCA 
CORDIAL	Clinical validation of a continuous flow peritoneal dialysis system, with dialysate regeneration	H2020 
EHRA-PATHS	Addressing multimorbidity in elderly atrial fibrillation patients through interdisciplinary, tailored, patient-centred care pathways	H2020 
EJP -RD	European Joint Programme on Rare Diseases	H2020 
ERA4HEALTH	Fostering a European Research Area for Health Research	HE 
ERA4TB	European Tuberculosis Regimen Accelerator	IMI 
ERICA	European Rare Disease Research Coordination and Support Action	H2020 
ERN BOND	European Reference Network on Rare BONE Diseases 2023-2027	EU4HEALTH 
ERN TransplantChild (Coordinated by IdiPAZ)	ERN TransplantChild Bridging Grant 2022-23 TransplantChild 2023-2027 PaEdiatric Transplantation European Registry - PETER	EU4HEALTH 3rd EU Health Programme 
EU-RESPONSE	European Research and Preparedness Network for Pandemics and Emerging Infectious Diseases	H2020 
HosmartAI	Hospital Smart development based on AI	H2020 
iroNKiller	Joining the forces of Natural Killer Cells and Ferroptosis to treat Refractory Neuroblastoma	HE-MSCA 

Project	Programme	Logo
ISIDORE	Integrated Services for Infectious Diseases Outbreak Research	HE 
LIVERATION	Unravelling the impact of Radiofrequency in liver surgery: the key to decrease local recurrence?	HE-MISSION CANCER 
MPX-RESPONSE	A clinical research network to improve the management of Monkeypox virus disease.	HE 
ORTHO-ALLO-UNION	ORTHOpaedic treatment with ALLOgenic combined ATMP in long bone fracture delayed UNION and non-union.	HE 
RELECOV 2.0	Consolidation of WGS and RT-PCR activities for SARS-CoV-2 in Spain towards sustainable use and integration of enhanced infrastructure and processes in the RELECOV network	EU4HEALTH 
RESPIN-VAR	REstoring balance: Specialized Proresolvin mediators for resolution of INflammation and VAScular Repair in humans at high cardiovascular risk	PARTNERSHIP-ERA 4HEALTH
RESPOND	Improving the Preparedness of Health Systems to Reduce Mental Health and Psychosocial Concerns resulting from the COVID-19 Pandemic	H2020 
RISEinFAMILY (Coordinated by IdiPAZ)	Alliance for Family Integrated Care (FiCare) Implementation in Neonatal Intensive Care Units	H2020-MSCA 
SPIDeRR	Stratification of Patients using advanced Integrative modeling of Data Routinely acquired for diagnosing Rheumatic complaints	HE 
UNDINE	The human genetic and immunological determinants of the clinical manifestations of SARS-CoV-2 infection: Towards personalized medicine.	HE 
VACCELERATE	European Corona Vaccine Trial Accelerator Platform	H2020 
VERDI	SARS-coV2 variants Evaluation in pRegnancy and paeDiatrics cohorts	HE 



2.6.7. Flow Cytometry Laboratory

The Flow Cytometry Core is an integrated facility into the Hospital La Paz Institute for Health Research (IdiPAZ), that provides all its members and external groups access to affordable and high-quality flow cytometry services, along with decisively scientific expertise using this technology in research.

We highlight a wide variety of flow cytometry applications: phenotypic analysis of cellular subpopulations using extracellular and intracellular staining, preliminary studies for subsequent clinical application, complex multicolor flow cytometry analysis, etc. This technology is an indispensable biomedicine tool, promoting symbiosis between clinical and basic researchers, as well as cooperation with external institutions.

The services provided include:

- Theoretical seminars and hands-on workshops training.
- Scientific and technical support.
- Experimental design, data analysis and interpretation assistance.
- Development of novel multicolor flow cytometry techniques assistance.

Equipment

Currently, the unit has three analyzers:

- Two Becton Dickinson FACSCalibur™ cytometer analysers:
A system that supports a wide variety of research and clinical applications and is complemented by a broad suite of intuitive software solutions to streamline analysis for a wide range of applications including enumeration of lymphocyte subsets, stem cells, residual white blood cells, and reticulocytes.
Each analyser has two lasers: Blue argon laser (3 detectors), and Red solid state Diode (1 detector), with which FACSCalibur™ can analyse four colors simultaneously.
- One Becton Dickinson FACSCelesta™ cytometer analyser:
It is designed to make multicolored flow cytometry more accessible and allow researchers to benefit from new equipment and reagent technological innovations. These optical and reagent technology parallel advances allow multi-laser equipment to complement with new bright fluorochromes, providing a deeper and more powerful insight into cell analysis.
This analyser has three lasers: Blue solid state Diode (4 detectors), Violet solid state Diode (6 detectors), and Ultra Violet solid state Diode (2 detectors), with which FACSCelesta™ can analyse twelve colors simultaneously.





These support a wide range of flow cytometry applications, and the possibility of developing new ones responding to facility needs and/or upon users demand. Also, during the current year, the Flow Cytometry Core endured quality levels required according to ISO 9001:2015 standard.

Composition

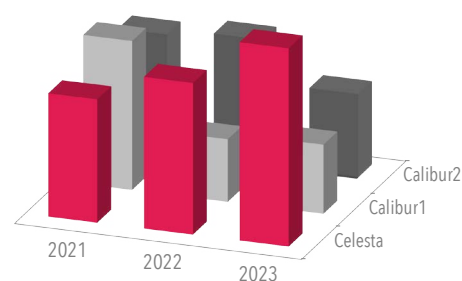
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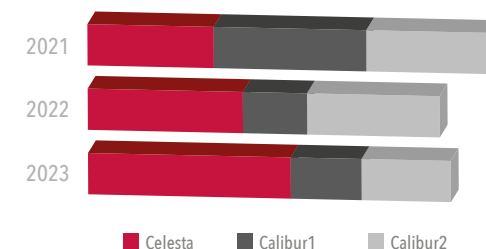
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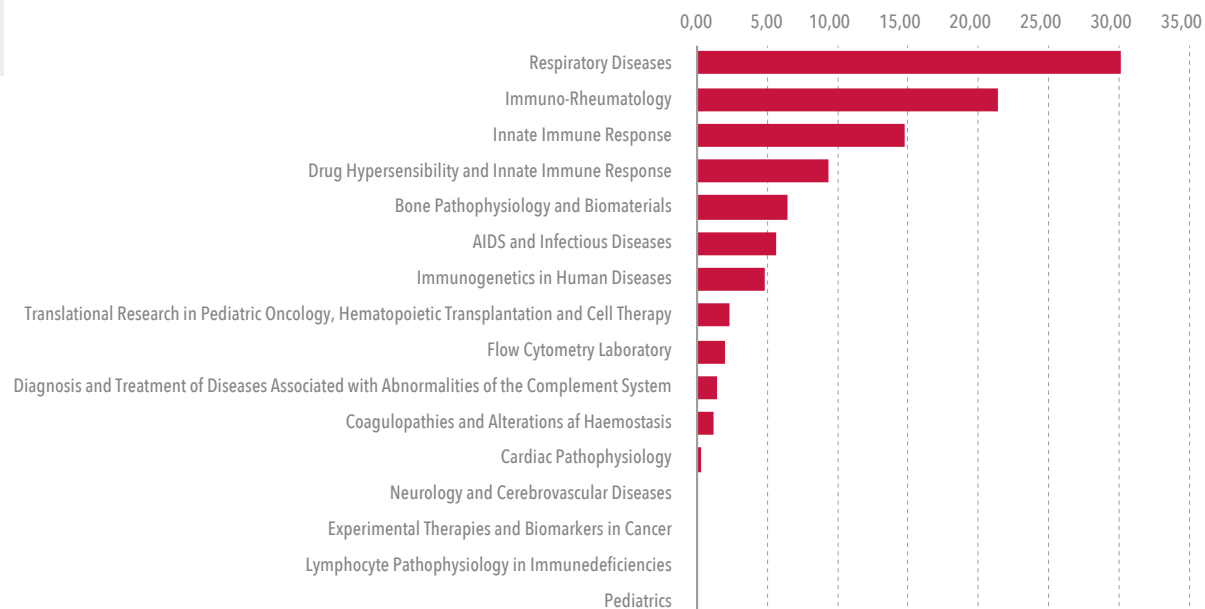
Cytometers Activity Distribution



Cytometers Activity

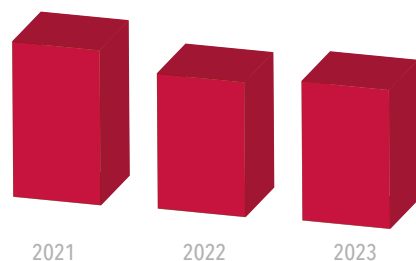


Groups Activity (%)



Indicators

Cytometry Core Activity





2.6.8. Cell Culture Unit

The Cell Culture Unit has been established as a core support division integrated and supported by Hospital La Paz Institute for Health Research (IdiPAZ) and La Paz University Hospital (HULP). This unit facilitates the establishment and management of in vitro model systems and the performance of experimental-related techniques for different applications and purposes. These include the elucidation of molecular and cellular mechanisms involved in different biological processes, the prediction of cellular and tissue responses to specific microenvironments and/or the identification and development of potential therapeutic drugs, compounds and/or cellular targets. Therefore, this platform provides a fundamental basis for the development of research initiatives in the field of Health Sciences and Biomedical and Pharmacological Research.

Objetives

The Cell Culture Unit accomplishes its mission by providing users with assistance and support at scientific, technical and instrumental level through access to knowledge, equipment, material and human resources. According to IdiPAZ strategic plan and other institutional guidelines, this division contributes to the translation of biomedical research by fostering the synergies and cooperation between traslational- oriented research groups belonging to IdiPAZ as well as to other external institutions. It also provides a dynamic and shared operational environment with a convenient basis for the exchange and dissemination of the scientific knowledge, innovation and creativity as well as the creation of collaborations and alliances between researchers of various areas, categories and disciplines. Moreover,

the association and proximity with other IdiPAZ core facilities such as the Molecular Imaging and Immunohistochemistry Unit, the Flow Cytometry Unit or the BSL2-Virology laboratory, enable users to develop complementary techniques, to explore and upgrade research hypotheses and to extend and/or improve their objectives.

Composition

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Equipment and facilities

The Cell Culture Unit consists of an experimentation laboratory, a cryopreservation room and a warehouse. All facilities are located in the IdiPAZ building.

The experimentation laboratory was fitted in 2023 with the following equipment:

Cabinets:

- 4 Telstar Bio-II-A biological safety cabinets
- 2Telstar Bio-II Advanced 3 biological safety cabinets

- 2 Nuaire NU-437-400E biological safety cabinets
- 1 Heraeus HS-12 biological safety cabinet
- 1 Faster BH-EN 2004 biological safety cabinet
- 1 Gelaire BSB 4A biological safety cabinet
- 1 Esco Class II BSC biological safety cabinet
- 1 Labogene Mars Pro 1200 biological safety cabinet
- 1 Faster BIO 48 vertical laminar flow cabinet
- 1 Faster TWO 30 vertical laminar flow cabinet

Incubators:

- 3 Thermo Forma 311 incubators
- 2 HERAcell incubators
- 1 Biotech Galaxy S incubator
- 3 Nuaire Autoflow incubators
- 1 Sanyo O2/CO2 incubator
- 1 POL-EKO incubator
- 1 Binder CB-S 260 incubator

This equipment is complemented with a centralized and alarmed gas system, which guarantees a constant and controlled supply of CO₂ and N₂.

Microscopes:

- 1 Nikon DIAPHOT TMD inverted light microscope connected to a Nikon D80 digital camera.
- 1 Leica DMIL inverted light microscope connected to a Canon Powershot S70 digital camera.
- 1 Optika inverted light microscope
- 1 Motic AE2000 inverted light microscope connected to an automatic counter Celeromics
- 1 Lan Optics inverted light microscope



Centrifuges:

- 2 Eppendorf 5810R refrigerated centrifuges
- 2 Eppendorf 5804 centrifuges
- 1 Hettich Universal 32R refrigerated centrifuge
- 1 Kubota 2010 centrifuge
- 1 Eppendorf 5415D centrifuge
- 1 Heraeus Megafuge 1.0 R centrifuge

Freezing and refrigerating systems:

- 5 Liebherr refrigerators (4 ° C and -20 ° C)

Other equipment:

- 1 Presoclave 75 P-Selecta autoclave
- 1 Heidolph Reax 2000 vortex
- 1 Raypa BAE-4 thermostatic waterbath
- 1 Memmert WNB thermostatic waterbath
- 2 P-Selecta Precistern thermostatic waterbaths
- 1 Grant JB Aqua 12 Plus thermostatic waterbath

Vacuum pumps, pipettes, counters, automatic pipetors, freezing containers, cell counting cameras, etc

The cryopreservation room is equipped with:

- 2 Statebourne Biorack 3000 liquid nitrogen tank
- 1 Thermo Locator 6 Plus liquid nitrogen tank
- 1 10 K Taylor Wharton liquid nitrogen tank
- 1 MVE Cryosystem 4000 liquid nitrogen tank
- 1 Cryo Diffusion B2016 liquid nitrogen tank
- 1 Cryo diffusion B2048 liquid nitrogen tank
- 1 Cryo Diffusion B2011 liquid nitrogen tank
- 1 SEO GT40 liquid nitrogen tank
- 1 MVE XLC 511 liquid nitrogen tank
- 1 Cryo Plus 7405 liquid nitrogen tank
- 1 Worthington LS SERIES liquid nitrogen tank
- 1 VWR 1478-0274 liquid nitrogen tank
- 1 Arpege 110 liquid nitrogen tank
- 1 Arpege 70 liquid nitrogen tank
- 1 Arpege 140 liquid nitrogen tank

The infrastructure for cryopreservation is completed with a liquid nitrogen transfer device and an alarmed

Oxygen O2 detector coupled to a mechanical ventilation system.

Portfolio of services

In general, this Division offers support for experimental approaches on an extensive range of matters including cell experimentation, consumables and reagents, equipment and laboratory area, technical assistance, training and research.

The main aspects of this support includes:

- Scientific and technical advice, personalized support and consultation: guidance in experimental setup and design, study planning, optimization of techniques and protocols, reagents and material acquisition, cells supply, troubleshooting, analysis and interpretation of results...
- Basic training and hands-on experiments (encouraging the self-service mode) according to biosafety, waste disposal and good laboratory practice guidelines.
- Access to facilities including instrumentation, equipment, materials and reagents.
- Preparation and supply of certain materials, reagents and sterile solutions.
- Management and general supervision including good laboratory practices and work habits, occupational health and safety, cleaning and waste disposal and operation and maintenance of the equipment.
- Performance of experimental procedures: establishment, maintenance, and propagation of cell lines and primary cultures, cryopreservation and resuscitation, viability and proliferation, etc...
- Control and maintenance of cryopreserved stock cells.

- Elaboration and management of protocols and guidelines, operating procedures, reports and other required mandatory documentation.
- Detection, identification and treatment of contaminations in cell cultures.

The Cell Culture Unit was certified according to the ISO 9001:2015 quality management system standard within the scope of IQNet Certificate INSTITUTO DE INVESTIGACIÓN SANITARIA DEL HOSPITAL UNIVERSITARIO LA PAZ Number ES-0512/2018.



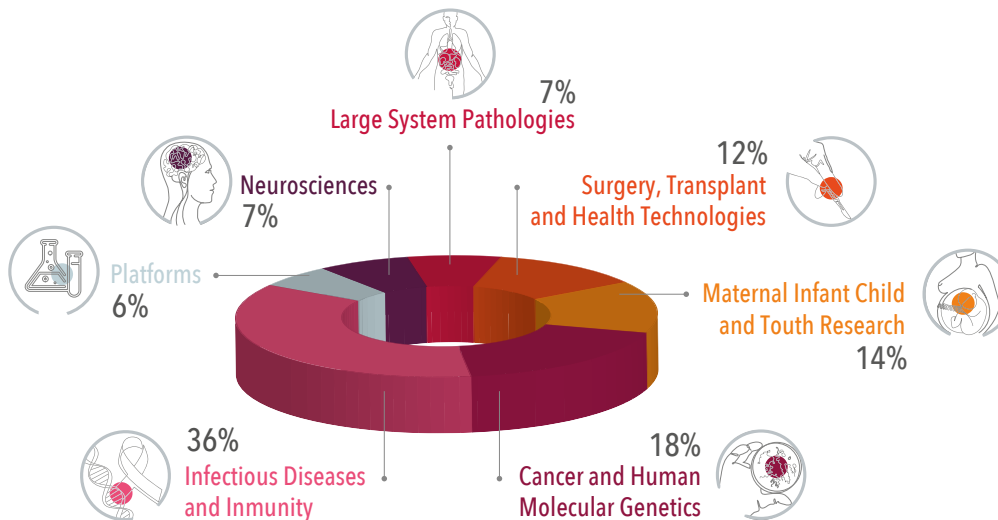
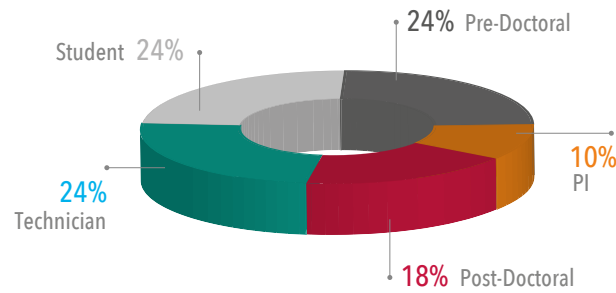
The personnel associated to the Unit are indebted to the users and other joint staff who directly and indirectly has contributed to this highlight.



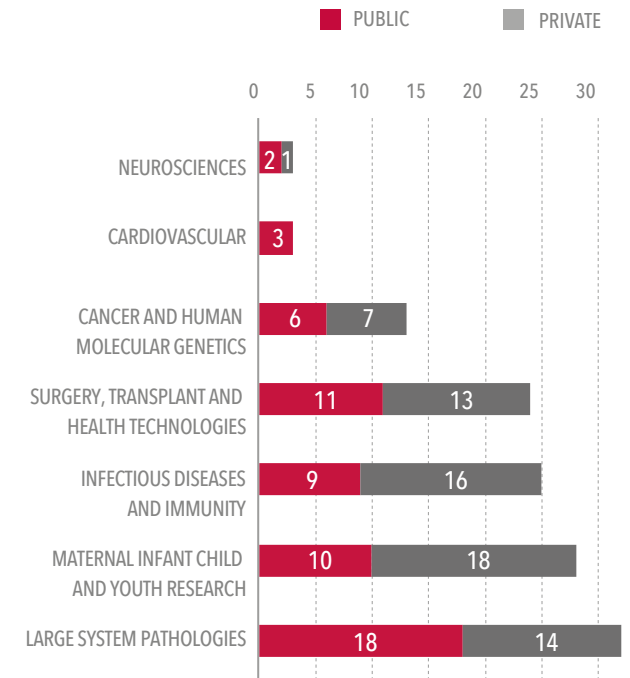
Cell Culture Unit's scientific indicators

USERS: Distribution according to academic profile and IdiPAZ research

128
USERS



PROJECTS: Distribution according to IdiPAZ research areas



128
PROJECTS



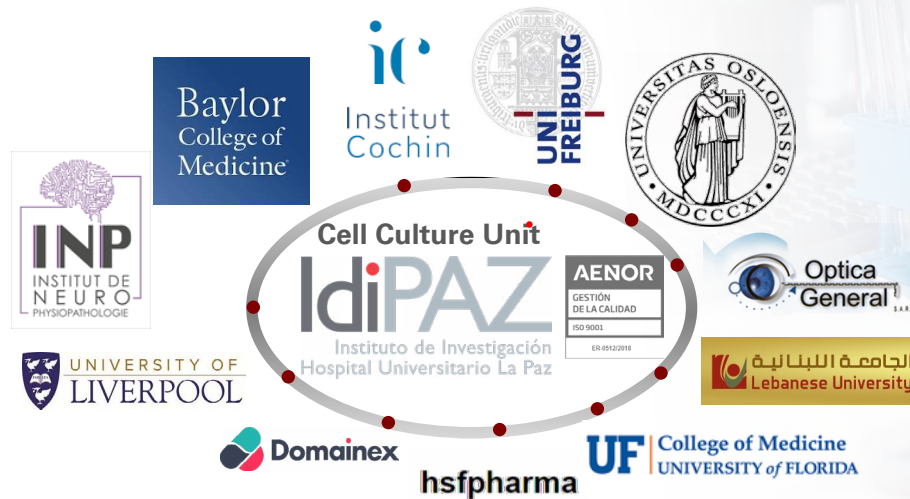
52
FUNDING INSTITUTIONS



Collaborations: Cooperative Health Research Networks & CIBER



International Collaborations





2.6.9. Molecular Image and Immunohistochemistry Unit

The mission of the Molecular Image and Immunohistochemistry Unit (UII) is to provide a centralized service equipped with the highest quality histology, immunohistochemistry and imaging equipment, as well as scientific and technical support to researchers. This core belongs to the network of core facilities supported by the Research Institute of Hospital La Paz (IdiPAZ) and La Paz University Hospital. The UII staff supports to the researchers' requirements through training sessions, development of protocols and technical processes of the projects. This activity is carried out thanks to its commitment to quality, innovation and specialized continuing training. As a part of the network of IdiPAZ core facilities, UII plays an essential role in enabling scientists and clinicians to realise their projects creating a link between basic and clinical research. The Unit activities are encompassed in the improvement of the quality management, education and innovation criteria ruled by IdiPaz strategic plan.

The Molecular Image and Immunohistochemistry Unit is open to all investigators, including; IdiPaz and their affiliates, commercial and not-for-profit biotechnology companies, and other academic institutions. The Unit, located in the IdiPaz building at the La Paz University Hospital, consists of two sections, the Immunohistochemistry and the Microscopy laboratories. Immunohistochemistry laboratory, housed in the first floor of IdiPaz building, offers protocols and automated high-throughput equipment allowing citospynes, fixation techniques (paraffined or frozen), sectioning of tissues (microtomes and



IMAGE UNIT
Microscopy and Immunohistochemistry labs.
IdiPAZ.



cryostats), and a wide variety of techniques ranging from routine histological techniques to immunohistochemical and immunofluorescent techniques in cells, whole frozen or fresh organs, or embedded in paraffin tissues

Microscopy Lab is in the -1 floor of IdiPaz building and offers facilities to perform a range of real time and end-point assays, including cell number, proliferation, apoptosis, cell size, and shape and viability measures. The equipment of Microscopy's lab allows doing con-





ventional, fluorescence, confocal and high-content microscopy, includes a Stellaris 8 and Leica TCS SPE inverted confocals, Leica DM6000 inverted fluorescence microscope, a microscope inverted Nikon Eclipse Ti with in vivo incubation system and a microscope Nanosight with a system of tracking nanoparticles.

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Resources, equipment and management of the laboratory

The services of the UII are available to all scientists in different models; collaboration, Do-It-Yourself (DiY) or in a fee (in this case, it must be consulted the head of the laboratory, the lab will support the service depending on staff availability). DiY users are allowed to access the facilities ONLY after training by the lab staff, training sessions can be scheduled at any time of the year. In addition, the lab provides fee-for-service model of use to external institutions and private companies. The general rule of the platform is that trained and authorized IdiPaz users have free access to the platform in a Do-It-yourself manner.

The laboratory staff will give the basic rules to new users for good practices and safety work in the laboratory. Users should not use the equipment until the laboratory personnel have checked their correct training. Users must schedule the time of work in any equipment and booking reserve it is mandatory in all the facility. Access requires previously authorized use of the magnetic individual identification card.

Equipment of Molecular Image and Immunohistochemistry Unit

Immunohistochemistry Laboratory:

- Tissue processor providing efficient, reliable and timely processing of paraffin wax (Leica TP1020)
- Embedding unit for high quality paraffin blocking (Leica Arcadia HC)
- Selecta Wax dispenser, paraffin wax dispenser with adjustable temperature from ambient to 100 °C
- 2 microtomes for specimen sectioning Leica RM2255
- Leica EG 1150C Cold plate
- 2 thermostatic water Leica HI 1210 baths
- 1 thermostatic water Selecta Thermofn bath
- 2 Cryostat for frozen sectioning (Leica CM 3050S and Leica CM1950)
- PTLINK DAKO
- Crison pH meter
- Liebher combi (-20°C and 4°C)
- Liebher economy freezer (-20°C)
- Shandon Cytospin 2
- Memmert BE 500 and UN30, Termaks and Selecta ovens.
- Selecta Agimatic-E magnetic stirrer with heating

- Olympus CH microscope, for practical laboratory applications
- Gilson pipette sets
- Selecta Agimatic-E magnetic stirrer with heating
- Staining area with manual options for Do-It-Yourself staining and cover slipping.
- Olympus BX41 (Bright field) upright microscope with an attached Digital camera
- Zeiss Axio Lab.AI microscope five objectives from 5x to 100x. ERC5S Axocan camera.
- Nanosight LM10 viewing unit measures nanoparticles, exosomes, vesicles's size based on the scattering of light, includes
 - » a microscope, a LM10 viewing unit with an objective x20
 - » a Marlin camera, and is connected to a image analysis software.
 - » Laser camera
 - » injector

The laboratory is equipped with shared facilities from Translational Oncology and Anatomopathology Breast and Gynecological Cancer groups that use them for diagnostic and clinical research purpose (ESCO fume hood and Crison Microtome). Permission to use must be asked to the head of these laboratories.

The Microscopy laboratory equipment includes:

- Stellaris 8 Leica confocal. Leica DMI8 inverted microscope;
 - » Illumination source, White and diode 405 Lasers
 - » equipped with incubation chamber Oko Lab
 - » Oko Lab incubation system
 - » Oko-Lab Gas Controller Bold line
 - » Microscope culture plates adapter



- NIKON microscope ECIPSE IT to conventional and fluorescence microscopy, in vivo imaging and High Content (equipped with incubation chamber)
 - » Camera IMAGING SOURCE
 - » Lauda Ecoline Star incubator edition 003
 - » Hotplate (OKO LAB)
 - » Oko-Lab DualGas Mixer (Okolab)
 - » Microscope culture plates adapter
 - Leica DMI6000B inverted microscope. Filter cubes: A4(UV), L5 (green), N3 (red) and Y5 (far red)
 - Zeiss Axioplan 2 upright microscope with five objectives from 5x to 100x, phase contrast and fluorescent capabilities
 - Digital microscopy (photography with a Leica DFC 350 FXR2 digital camera attached)
 - Image ProPlus 5.0 image analysis software
 - Leica LASX and LAS AF image analysis software
 - NIS elements image analysis software
 - Analysis work station with Huygens deconvolution software, Image J, LASAF Lite programme and related image analysis software.
 - Nanosight NTA 3.1 analytical software.
- The laboratory is equipped with shared facility from Neuroscience group, Leica TCS SPE inverted confocal. Leica DMI4000B inverted microscope; Illumination source, Lasers diode 405, Lasers diode 488, Lasers diode 532 and Lasers diode 635; Dishes, Standard microscope slides.
- ### Service Portfolio
- Collection and processing for fixing and decalcification of samples.
 - Sample processing in paraffin by hand or automatic.
 - » Complete paraffin embedding processing.
 - » Serial cut in microtome and tissue assembly.
 - Antibodies' validation.
 - Buffer preparation and distribution of consumables.
 - Sample processing frozen.
 - » Preparation of freeze blocks.
 - » Serial sections of blocks freeze and cuts collected on slides or floating.
 - Staining.
 - » Hematoxylin - eosin.
 - » Masson trichrome.
 - » PAS.
 - Cytochemical and immunohistochemical techniques.
 - » Decalcification of samples required.
 - » Dewaxing cuts, performing staining.
 - » Immunohistochemical staining automated system Autostainer.
 - » Protocols for Immunofluorescence in frozen and paraffin tissue.
 - » Dehydration and slide assembly.
 - Image acquisition. Viewing and digital format acquisition.
 - » Light microscopy.
 - » Light microscopy with phase contrast.
 - » Epifluorescence.
 - » Confocal microscopy.
 - » Advanced Microscopy in living cell.
 - » measures nanoparticles, exosomes, vesicles's size based on the scattering of light
 - Fluorescence colocalization by confocal microscopy.
 - 3D reconstruction.
 - Morphometry in biological samples.
 - Large images acquisitions (scanning the entire slide) for bright field and fluorescence.
 - Collaboration for sample processing protocols for microscopy (fastening, staining, marking, etc.) and advice for planning projects that could require the use of microscopy.

Research highlights

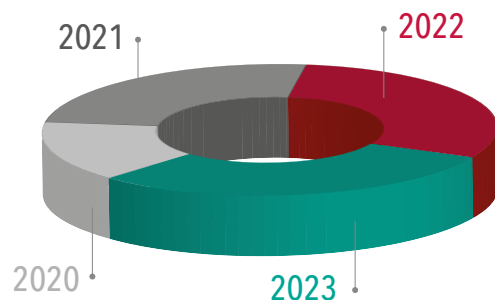
In 2023, Image unit maintained their quality standards in order to support and collaborate with the groups belonging to the research areas of IdiPAZ; Neurosciences, Infectious disease and immunity, Cancer and human molecular genetics, Cardiovascular, Organ system pathologies and Surgery, transplant and health technologies. The specialized staff is committing to researchers by assisting with histological, molecular and microscopy techniques which produce not only high quality data to support grant applications, scientific disseminations (Thesis) and national and international scientific publications but also time and cost savings when using shared resources. Specifically, the collaboration with Cirugía de Trasplantes y malformaciones congénitas' group has produced one publication and one congress communication.

Stringa P, Vecchio Dezillio LE, Talayero P, Serradilla J, Errea A, Machuca M, Papa-Gobbi R, Camps Ortega O, Pucci Molineris M, Lausada N, Andrés Moreno AM, Rumbo M, Hernández Oliveros F. Experimental Assessment of Intestinal Damage in Controlled Donation After Circulatory Death for Visceral Transplantation. *Transpl Int.* 2023 Jan 12;36:10803. doi: 10.3389/ti.2023.10803. PMID: 36713114; PMCID: PMC9878676.

Abate Zárate, JC., Vecchio Dezillio, L., Lausada, N., Vallejo Cremades, T., Largo, C., Stringa, P., Hernández Oliveros, F., y Andrés Moreno, AM.. DESARROLLO DE UN MODELO EXPERIMENTAL DE TRASPLANTE MULTIVISCERAL. X Congreso de la Sociedad Madrileña de Trasplante. Madrid. 22 al 24 de noviembre de 2023.



Equipment usage ratio



During the year 2023, it has been proven that the extraordinary period of low activity suffered by the consequences of the pandemic has ended. In 2023, as was

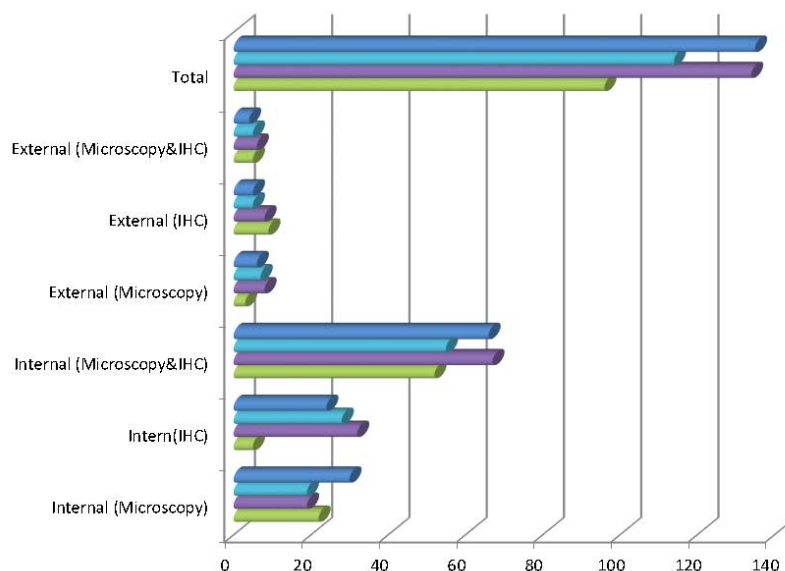
the case in periods before COVID, the activity remains similar or even higher than that estimated in 2022, as can be seen in the annual equipment use graph.

In this last year, 2023, we have increased the number of users until it equals what we had in 2021. As in the last two years, the most of inner users are interested in both facilities, Microscopy and Immunohistochemistry labs. The External users are interested mainly in the Microscopy lab.

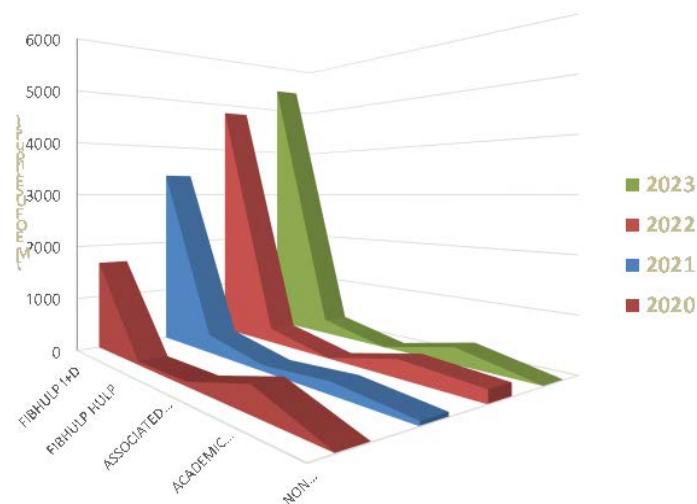
The greater number of users has also resulted in an increase in the hours of use of the equipment. This increase is mostly due to FIBHULP users, both basic and clinical (FIBHULP I+D and HULP) and to a lesser extent to external research groups (UCM, CSIC, etc.) remains practically the same.

The Image and Immunohistochemistry Unit has the certified scope of quality by AENOR referring to its processes according to the guidelines of the UNE-EN ISO 9001: 2015 Standard, and it was renewed in 2023.

As in previous years, and continuing with its work in the dissemination of science, the unit has participated in the workshop "Light and colour to know our cells. Visit-workshop to the Imaging Unit" during the XXIII Science Week organized by the CAM. And finally, the platform participates in training activities as a laboratory tutor for Anatomic Pathology students who need this training to obtain their Higher Certificate of Studies in Anatomic Pathology laboratory. In this sense, collaboration agreements have been renewed with vocational training centers in Madrid, in the field of anatomic pathology laboratory work.



Time of use. Equipment metric (hours)





2.6.10. Radioisotope Unit

The radioisotope unit of IdiPAZ is a second category radioactive facility authorized by the Nuclear Safety Council for the use of non-encapsulated radioactive sources. The radioisotopes authorized at the facility are: 3H, 33P, 32P, 125I, 14C, 51Cr.

The laboratory, in addition to the beta counter, has equipment and working space for the performance of molecular biology and biochemical procedures and experiments with cell cultures. Currently the most common procedures are cell proliferation tests with tritiated thymidine.

The use of the facility both by staff of the institution and by external users requires prior authorization by those responsible for the facility that approves both the technical suitability of the users to work with radioactivity, and the procedures to be employed. The HULP Radiation Protection Service is responsible for control of the facility and of the radioactive wastes generated.

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2.6.11. BSL2-Virology Laboratory

The BSL2-Virology laboratory is an IdiPAZ platform created in September 2019 to support the Institute's research. Many are the research groups that have benefited from the platform to conduct their research safely, since working with samples infected with a certain type of pathogen requires facilities with an adequate level of biosafety. The BSL2-Virology laboratory was certified according to ISO 9001 quality management standard within the scope of IQNet.

Objectives

The BSL2-virology laboratory has been adapted to work with human samples infected with the HIV, HBV and HCV viruses; as well as GMOs of risk group 1 and 2. It also allows developing certain experimental processes with other viral pathogens that require a biosafety level 2. The laboratory provides researchers with the necessary equipment to perform their own experimental processing and analysis, as well as training and assistance.

Composition

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New facility

Since July 2023, the IdiPAZ building has a new BSL2-Virology laboratory. The new facility of 44.5 m2 represents an increase of more than half of the previously available space.

The new Laboratory consists of an anteroom equipped with SAS, autoclave and hand wash sink with hand free operations, followed by a changing room located



before entering the experimental laboratory. The laboratory airflow has negative pressure system and passes through HEPA filters.

Permitted laboratory processes

- Processing of different types of blood cells from people living with HIV (PLWH)
- Preparation of samples from PLWH for cytometry. Studies of cellular polyfunctionality in the immune response against HIV.
- Handling and experimental processes of cell cultures.
- Measurement of the impact of antiretroviral drugs on mitochondrial function in PBMCs.
- Construction of viral protein expression vectors in eukaryotic expression vectors.
- Constructs of gene expression with viral vectors (lentiviruses and retroviruses)
- ELISA techniques of infectious samples.
- In May 2020 the laboratory was authorized for use of blood samples from patients with covid-19 and certain related processes.



Resources

The new BSL2-Virology Laboratory consists of an anteroom equipped with SAS, autoclave and hand wash sink with hand free operations, followed by a changing room located before entering the experimental laboratory. The laboratory airflow has negative pressure system and passes through HEPA filters. All facilities are located in the IdiPAZ building.

The experimental laboratory is equipped with the following equipment:

Type II Biological Safety Cabinets (BSC):

- 2 BSC Telstar BIO-II-A/P
- 1 BSC Neuroaire CSB120

CO2 incubators:

- 2 HERAEUS BB-6220 incubators

Centrifuges:

- 1 HERAEUS Biofuge primor refrigerated centrifuge
- 1 Hettich Universal 320 non-refrigerated centrifuge
- 1 Hettich Universal 320 R
- 1 Hettich Mikro 220 R

Microscope:

- 1 NIKON Eclipse TS100 Inverted Optical Microscope
- 1 OPTIKA Microscopio XDS3

Refrigeration systems:

- 1 Liebherr upright freezer (-20°C)
- 1 Liebherr profi line fridge (4°C)

Other equipment:

- 1 P-Selecta Precistern thermostatic bath
- 1 Inteliwasher 3D-IW8 BIOSAN
- 1 Automatic cell counter LUNA II





2.6.12. Sequencing Platform

Biomedical research is the main core of IdiPAZ institute and automatic sequencing facility is proud to participate in this working area of the hospital. Our facility is a support for translational research in the hospital in terms of genomic analysis and supporting diagnosis units. The facility has helped to incorporate research results in the routine of the hospital.

Automatic sequencing facility has the necessary equipment and infrastructure to perform tasks such as conventional sequencing (Sanger method), marker DNA genotyping and other molecular biology techniques based on capillary electrophoresis. The equipment can use up to five simultaneous colours on the same sample when it migrates to the genetic analyzers. Therefore, we are able to detect more than 30 polymorphic markers per sample. The expertise of the staff allows us to offer design, protocol development, and data analysis support and task training in genomic techniques.

On the other hand, the Genomic Analysis core offers assistance services in Next Generation Sequencing to the institute's research lines, providing support in the analysis of WES and WGS data.

During the last year, collaborations with different research groups has resulted in the co-authorship of seven articles in international journals.

The Genomic Analysis core has managed to develop two lines of research thanks to the granting of two research projects.

Both Sanger Sequencing and Genomic analysis cores are committed to quality work by maintaining ISO 9001:2015 certification. In addition, lab participates in international external quality controls annual evaluations (EMQN) and quality control evaluations with other laboratories.

Composition

Head

María del Rocío Mena de la Cruz
mariarocio.mena@salud.madrid.org
Phone: (+34) 912071214

Conventional sequencing

Head

María del Rocío Mena de la Cruz
mariarocio.mena@salud.madrid.org
Phone: (+34) 912071214

Technical Staff

Eva María Báez Monforte
evamaria.baez@salud.madrid.org
Carolina Pilar Blanco Agudo
carolinapilar.blanco@salud.madrid.org

Genomic Analysis

Head

Rebeca Pérez de Diego
rebeca.perez@idipaz.es
Phone: (+34) 91 207 10 32

Technical Staff

Ana María Van Den Rym Mayoral





Equipment

- Eppendorf 5415D Centrifuge.
- Veriti Thermocycler (Applied Biosystems).
- Genetics Analyzers SeqStudio y 3730xl (Applied Biosystems-Life Technologies).

Software:

- Sequencing Analysis v5.3.1
- Sequence Scanner v1.0
- GeneMapper v4.0
- Peak Scanner v1.0
- Variant report v1.0

Portofolio Service

Conventional sequencing

- Nucleic Acid quantitation (Tecan, Nanodrop).
- PCR purification for Sanger sequencing (Exosap).
- Sanger Sequencing.
- Migration Sanger samples.
- Fragments Analysis:
 - » STRs analysis
 - » QF-PCR.
 - » MLPAs (multiplex ligation-dependent probe amplification).
 - » Microsatellite instability (MSI).
 - » AZF.
 - » SnapShot.

- » TP-PCR.
- » ARMS.
- » AFLPs

Genomic Analysis

- Genetic analysis from annotated variants of PID Sequencing Panel.
- Genetic analysis from annotated whole exome sequencing (WES) variants.
- Genetic analysis from annotated whole genome sequencing (WGS) variants.
- Genetic analysis from raw data in FASQ format from PID Sequencing Panel.
- Genetic analysis from raw data in whole exome sequencing (WES) FASQ format.

2023 Facility Activity: Conventional sequencing

Research Area	Genotyping products	Sanger Sequencing products	Sanger Sequencing	Total samples
Infectious diseases and immunity	955	65		1020
Cardiovascular	153	3051		3204
Organ system pathologies	1224	1157	1087	2381
Cancer and human molecular genetics	8262	9107		18456
External synergy		36	16	52
Total	10594	13866	1103	

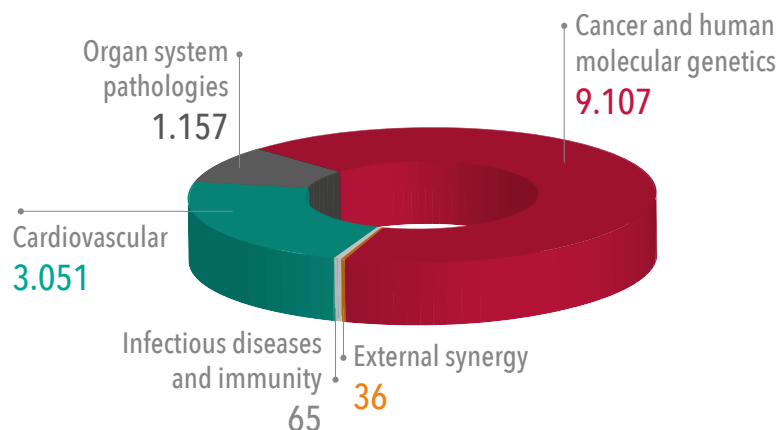
Genomic Analysis

Research Area	Genetic analysis from annotated variants of PID Sequencing Panel	Genetic analysis from annotated whole exome sequencing (WES) variants	Genetic analysis from annotated whole genome sequencing (WGS) variants	Total samples
External researches	1	32	0	33



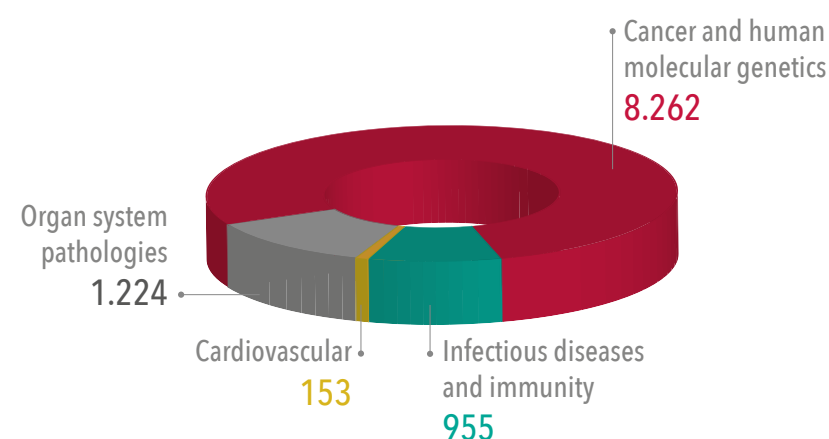
Distribution Sanger sequencing migration service by area

Sanger Sequencing products



Distribution Genotyping migration service by area

Sanger Sequencing products



Projects:

UNDINE_The human genetic and immunological determinants of the clinical manifestations of SARS-CoV-2 infection: Towards personalised medicine." programa marco europeo Horizonte Europa con acuerdo de subvención 101057100.

Identificación de nuevos errores innatos de la inmunidad hacia el diagnóstico de precisión y prevención de enfermedades inmunológicas. FIS PI22/00790.

Publications

1. IgG4-related disease and B-cell malignancy due to an IKZF1 gain-of-function variant.

García-Solís B, Tapia-Torres M, García-Soidán A, Hernández-Brito E, Martínez-Saavedra MT, Loren-

zo-Salazar JM, García-Hernández S, Van Den Rym A, Mayani K, Govantes-Rodríguez JV, Gervais A, Bastard P, Puel A, Casanova JL, Flores C, Pérez de Diego R, Rodríguez-Gallego C. J Allergy Clin Immunol. 2024 Apr 4:S0091-6749(24)00330-0. doi: 10.1016/j.jaci.2024.03.018. Online ahead of print. PMID: 38579942.

2. Inherited Human BCL10 Deficiencies.

Alsaidalani AA, García-Solís B, Bukhari E, Van Den Rym A, López-Collazo E, Sánchez-Ramón S, Corvillo F, López-Lera A, de Andrés A, Martínez-Barricarte R, Pérez de Diego R. J Clin Immunol. 2023 Dec 22;44(1):13. doi: 10.1007/s10875-023-01619-z. PMID: 38129623 Review.

3. Inherited human ezrin deficiency impairs adaptive immunity.

García-Solís B, Van Den Rym A, Martínez-Martínez L, Franco T, Pérez-Caraballo JJ, Markle J, Cubillos-Zapata C, Marín AV, Recio MJ, Regueiro JR, Navarro-Zapata A, Mestre-Durán C, Ferreras C, Martín Cotázar C, Mena R, de la Calle-Fabregat C, López-Lera A, Fernández Arquero M, Pérez-Martínez A, López-Collazo E, Sánchez-Ramón S, Casanova JL, Martínez-Barricarte R, de la Calle-Martín O, Pérez de Diego R. J Allergy Clin Immunol. 2023 Oct;152(4):997-1009.e11. doi: 10.1016/j.jaci.2023.05.022. Epub 2023 Jun 8. PMID: 37301410



4. Whole-Exome Sequencing of 21 Families: Candidate Genes for Early-Onset High Myopia.

Sánchez-Cazorla E, González-Atienza C, López-Vázquez A, Arruti N, Nieves-Moreno M, Noval S, Mena R, Rodríguez-Jiménez C, Rodríguez-Solana P, González-Iglesias E, Guerrero-Carretero M, D'Anna Mardero O, Coca-Robinot J, Acal JC, Blasco J, Castañeda C, Fraile Maya J, Del Pozo Á, Gómez-Pozo MV, Montaña VEF, Dios-Blázquez L, Rodríguez-Antolín C, Gómez-Cano MLÁ, Delgado-Mora L, Vallespín E. *Int J Mol Sci.* 2023 Oct 27;24(21):15676. doi: 10.3390/ijms242115676. PMID: 37958660.

5. A Spanish Family with Gordon Syndrome Due to a Variant in the Acidic Motif of WNK1.

Peces R, Peces C, Espinosa L, Mena R, Blanco C, Tenorio-Castaño J, Lapunzina P, Nevado J. *Genes (Basel).* 2023 Sep 27;14(10):1878. doi: 10.3390/genes14101878. PMID: 37895227.

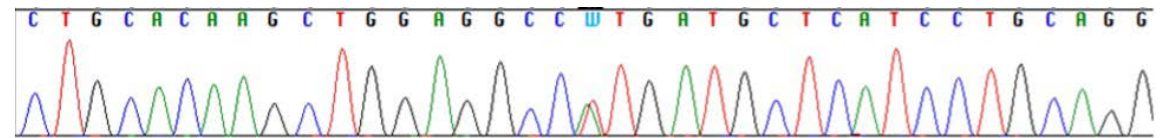
6. Whole-Exome Sequencing of 24 Spanish Families: Candidate Genes for Non-Syndromic Pediatric Keratoconus.

González-Atienza C, Sánchez-Cazorla E, Villoldo-Fernández N, Del Hierro A, Boto A, Guerrero-Carretero M, Nieves-Moreno M, Arruti N, Rodríguez-Solana P, Mena R, Rodríguez-Jiménez C, Rosa-Pérez I, Acal JC, Blasco J, Naranjo-Castresana M, Ruz-Caracuel B, Montaña VEF, Ortega Patrón C, Rubio-Martín ME, García-Fernández L, Rikeros-Orozco E, Gómez-Cano MLÁ, Delgado-Mora L, Noval S, Vallespín E. *Genes (Basel).* 2023 Sep 22;14(10):1838. doi: 10.3390/genes14101838. PMID: 37895187.

7. Whole Exome Sequencing of 20 Spanish Families: Candidate Genes for Non-Syndromic Pediatric Cataracts.

Rodríguez-Solana P, Arruti N, Nieves-Moreno M, Mena R, Rodríguez-Jiménez C, Guerrero-Carretero M, Acal JC, Blasco J, Peralta JM, Del Pozo Á,

Montaña VEF, Dios-Blázquez L, Fernández-Alcalde C, González-Atienza C, Sánchez-Cazorla E, Gómez-Cano MLÁ, Delgado-Mora L, Noval S, Vallespín E. *Int J Mol Sci.* 2023 Jul 13;24(14):11429. doi: 10.3390/ijms241411429. PMID: 37511188.





2.6.13. Bioinformatics Service

Objective

Research bioinformatic support platform whose main objective is to promote the development of any DNA / RNA study on a massive scale, either in humans or in other organisms. The activity of the platform is aimed at advising scientists and researchers on the possibilities and benefits obtained from the application of computational biology techniques in their research. In addition, researchers will be supported in the analysis and interpretation of data obtained using high-throughput experimental techniques.

Composition

Coordinator

Alejandro Pascual Iglesias
alejandro.pascual.iglesias@idipaz.es
 Phone: (+34) 91 207 15 12

Services

- Experimental design. Advice to decide the sample size, the design of the study and the planning of the methodology.
- Data analysis. The bioinformatic processing of the data obtained is carried out in various high-performance technological platforms used in the field of genomics. These analyzes include normalization, statistical analysis, and representation of the results. The most common analyzes are:
 - » Differential expression of genes, miRNAs or lncRNAs. The technology of origin of

the experiments can be microarrays (Affymetrix, Agilent) or RNA-seq (Illumina, Ion Torrent).

- » Protein-DNA interactions from immunoprecipitation and microarray (ChIP-chip) or sequencing (ChIP-seq) experiments.
- » Helps to interpret results. Once the genes of interest have been selected, biological-functional assignment studies are carried out, such as the study of functional enrichment of gene / protein lists.
- » Design, implementation and administration of databases (eg of patients, samples, etc.).
- » Individualized training activities: Training for users (scientific / technical) in the main theoretical and practical foundations for handling results and their interpretation.

Functioning

The procedure to follow is as follows:

- Fill in the "Job Application" form and send it to carolina.rubio.Martín@idipaz.es. Fill in what you want to do by means of a short memory in which the primary objective of the study and the secondary objectives, if any, are clearly specified.
- Meeting with the Bioinformatics Platform to share questions such as the sample size with which it is going to work, the statistical power to be obtained and the variables to be analyzed.

- Preparation and delivery of the data to be analyzed in the format previously agreed between both parties.
- Carrying out the analysis.
- Delivery of results in the pertinent formats.

Equipment

- High technical computer
- Intel Core i9 9900K
- Gigabyte Z390 D ATX 1151 1
- MEMORY HYPERX FURY 16GB

Activity in 2023

All the projects based on the work of bioinformatic platform are actually resulting in several research projects:

- "Estudio de la funcionalidad inmunológica circulante y la correlación con la infección por sars-cov-2 y adenovirus en hepatitis aguda pediátrica"
- Extending the Poly Functional Immune Liquid Biopsy (PolyFIL) to colon adenomas monitoring, rectal cancer diagnosis and new immunotherapies
- Long COVID-19 study in patients
- SEPSIS project
- THCs en sangre periférica en pacientes sometidos a resección quirúrgica pulmonar.

In the first study, known as "Pediatric acute hepatitis



of unknown origin”, bioinformatic platform has developed a predictive model for this disease, working with pediatric department of Hospital La Paz (M^a Loreto Hierro Llanillo) and pediatric UCI.

In sepsis project, this platform constructed a database taking all data from septic patients from Hospital La Paz and created a classification method for them. In addition, volcano analysis was performed

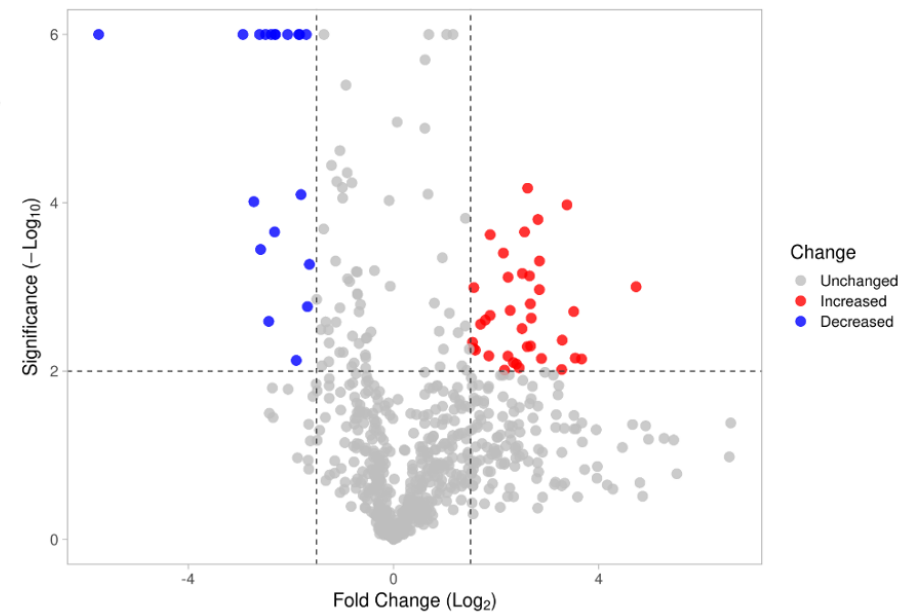
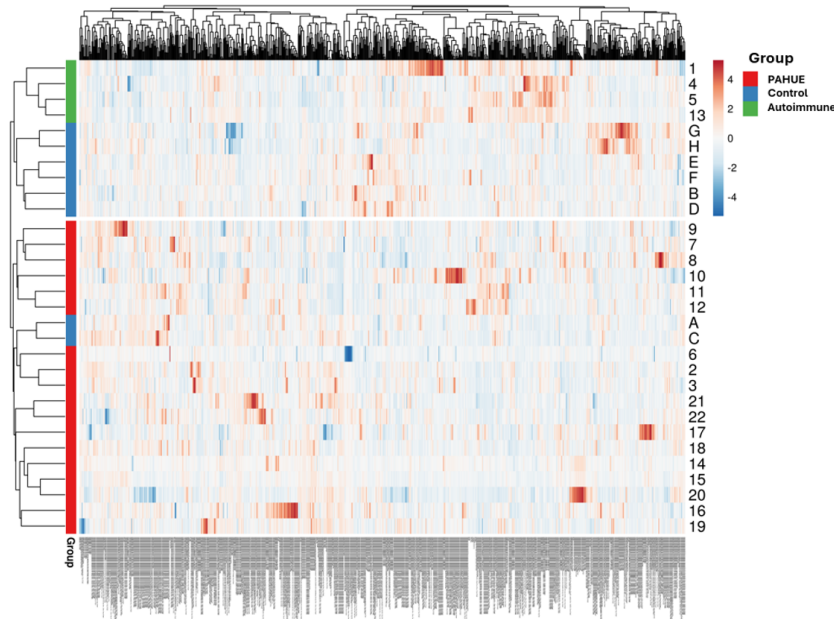
with all the data, leading to biomarkers identification.

Counselling services in different researching projects like organoids development for Laura Cordoba (Organoids HUB).

In THC (tumor hybrid cells) project in patients with lung cancer, bioinformatic platform developed

several analyses for thoracic surgery department, in collaboration with Sandra Pardo. This work was presented in SEOM meeting and will be further developed in more patients.

In terms of bioinformatics analysis, the platform created and developed an screening test for colon cancer for Carlos del Fresno and performed statistical analysis for new cohort of patients.





2.6.14. PAIN Platform

The Early-Stage Researcher Support Platform (Plataforma de Apoyo al Investigador Novel) from IdiPAZ is a platform that aims to promote the design and development of research projects in health areas. Focused in our early-stage professional researchers, training and research development will be encouraged to achieve our clinicians a better performance in competitive calls.

Composition

Head

Paloma Gómez Campelo

Technical manager of mentor program

Daniel Quijada Alcón

mentor@idipaz.es

Phone: (+34) 91 207 17 40

Portfolio of services

- Methodological and epidemiological support to the study design of the professionals in early-stage research.
- Technical and methodological support in developing a research protocol for a study. Analysis of the grounds for refusal of rejected projects.

- Methodological support to write grant proposals to access all available funding programs.
- Technical support in writing other scientific documents.
- Management of the Mentor Program

Mentor Program

IdiPAZ, with the support of La Paz University Hospital, has implemented since 2021 an Institutional Project, the Mentor Program, with the purpose of supporting our clinical early career researchers in the achievement of competitive projects, mainly from the main national call for health research projects: "Acción Estratégica en Salud (AES)", granted by Instituto de Salud Carlos III.

The objectives of the program are:

- Increasing the number of clinical research in IdiPAZ.
- Avoiding a generational leap of clinical researchers.
- Strengthening the research profile of our clinical staff.
- Becoming IdiPAZ a clinical research model, as the same level that IdiPAZ is in the clinical trials.

- Performing an internal cultural change in clinical research

The Mentor Program provides scientific and technical support in the preparation of a research project proposal. This support is structured as follows:

- Training, through seminars, in the different sections of the report of a research project.
- Advice, support and review in the drafting and configuration of the report and budget.
- Support in the creation of the curriculum.
- Methodological support through the institution's platforms.
- Support in the creation of solid research teams.
- Promotion of citizen engagement in research projects.

Furthermore, it take into account the experience and scientific knowledge from our senior researchers to help our early-stage researchers from the beginning of their research career.

In 2023, IdiPAZ has implemented the 3rd Mentor Program, in which 95 participants have participated:

RESEARCHER	SERVICE / RESEARCH GROUP (RG)
LETICIA DE LA VECILLAS SÁNCHEZ	ALLERGOLOGY
BLANCA TAPIA SALINAS	ANESTHESIOLOGY
ISABEL VALBUENA GÓMEZ	ANESTHESIOLOGY
ALFONSO JURADO ROMÁN	CARDIOLOGY
LUCÍA FERNÁNDEZ GASSÓ	CARDIOLOGY
SERGIO CASTREJÓN CASTREJÓN	CARDIOLOGY

RESEARCHER	SERVICE / RESEARCH GROUP (RG)
SANDRA OFELIA ROSILLO RODRÍGUEZ	CARDIOLOGY
JOAQUIN J. ALONSO MARTÍN	CARDIOLOGY
ENRIQUE VILLAGRAN MEDINILLA	CARDIOTHORACIC SURGERY
RAÚL SÁNCHEZ PÉREZ	CARDIOTHORACIC SURGERY
MARTA MOLERO LUIS	CLINICAL CHEMISTRY AND LABORATORY MEDICINE
PILAR NOZAL ARANDA	CLINICAL IMMUNOLOGY



RESEARCHER	SERVICE / RESEARCH GROUP (RG)
IRENE GARCÍA GARCÍA	CLINICAL PHARMACOLOGY
CRISTINA MURANO	CLINICAL PHARMACOLOGY
ELENA VILLAMAÑÁN BUENO	CLINICAL PHARMACY
ALEJANDRO MARTÍN QUIRÓS	EMERGENCY MEDICINE
PAOLA ANDREA PARRA RAMÍREZ	ENDOCRINOLOGY
BEATRIZ BARQUIEL ALCALÁ	ENDOCRINOLOGY
PATRICIA MARTÍN ROJAS-MARCOS	ENDOCRINOLOGY
CARLOS RODRÍGUEZ ANTOLÍN	EXPERIMENTAL THERAPIES AND BIOMARKERS IN CANCER (RG)
OLGA VERA PUENTE	EXPERIMENTAL THERAPIES AND BIOMARKERS IN CANCER (RG)
ALICIA GUTIÉRREZ MISIS	FAMILY MEDICINE
CRISTINA JULIA SUÁREZ FERRER	GASTROENTEROLOGY
MARILÓ MARTÍN ARRANZ	GASTROENTEROLOGY
ROCÍO MENÉNDEZ COLINO	GERIATRICS
MARTA MORADO ARIAS	HEMATOLOGY
MERCEDES GASIOR KABAT	HEMATOLOGY
CARMEN RODRÍGUEZ JIMÉNEZ	HUMAN GENETICS
ADELA ESCUDERO LÓPEZ	HUMAN GENETICS
ANA FERNÁNDEZ SANTANDER	HUMAN GENETICS
FRANCISCO JAVIER CUETO RODRÍGUEZ	INNATE IMMUNE RESPONSE (RG)
LAURA CÓRDOBA GARCÍA	INNATE IMMUNE RESPONSE (RG)
LUNA RIDAN CORDEIRO MINUTE	INNATE IMMUNE RESPONSE (RG)
JOSÉ MANUEL AÑÓN ELIZALDE	INTENSIVE MEDICINE
MANUEL QUINTANA DÍAZ	INTENSIVE MEDICINE
ÓSCAR PEÑUELAS RODRÍGUEZ	INTENSIVE MEDICINE
ANGUS (M ^a ANGUSTIAS QUESADA SIMÓN)	INTERNAL MEDICINE
RAMÓN PUCHADES RINCÓN DE ARELLANO	INTERNAL MEDICINE
YALE TUNG CHEN	INTERNAL MEDICINE
MARTA DÍAZ MENÉNDEZ	INTERNAL MEDICINE
ROCÍO MONTEJANO SÁNCHEZ	INTERNAL MEDICINE

RESEARCHER	SERVICE / RESEARCH GROUP (RG)
BEATRIZ DÍAZ POLLÁN	INTERNAL MEDICINE
FERNANDO MARTÍN SÁNCHEZ	MEDICAL INFORMATICS
ANA BELÉN CUSTODIO CARRETERO	MEDICAL ONCOLOGY
ISMAEL GHANEM CAÑETE	MEDICAL ONCOLOGY
ELIAS DAHDOUH	MOLECULAR MICROBIOLOGY (RG)
BIBIANA CHINEA JIMÉNEZ	NEONATAL NURSERY
ESPERANZA ESCRIBANO PALOMINO	NEONATOLOGY
MARÍA OVIDIA LÓPEZ OLIVA	NEPHROLOGY
GEMA FERNÁNDEZ JUÁREZ	NEPHROLOGY
ÁNGEL MARTÍN MONTES	NEUROLOGY
INMACULADA PUERTAS MUÑOZ	NEUROLOGY
JAVIER DÍAZ DE TERÁN VELASCO	NEUROLOGY
LAURA LACRUZ BALLESTER	NEUROLOGY
SOLEDAD SERRANO LÓPEZ	NEUROLOGY
JUDITH HERNÁNDEZ ALONSO	OBSTETRIC NURSERY
ANA LÓPEZ CARRASCO	OBSTETRICS AND GYNECOLOGY
MARILÓ DIESTRO TEJEDA	OBSTETRICS AND GYNECOLOGY
VIRGINIA GARCÍA PINEDA	OBSTETRICS AND GYNECOLOGY
NURIA MARTÍNEZ SÁNCHEZ	OBSTETRICS AND GYNECOLOGY
MARCOS JAVIER CUERVA GONZÁLEZ	OBSTETRICS AND GYNECOLOGY
MARÍA DE LA CALLE FERNÁNDEZ-MIRANDA	OBSTETRICS AND GYNECOLOGY
SARA RUIZ MARTÍNEZ	OBSTETRICS AND GYNECOLOGY
VIRGINIA ENGELS CALVO	OBSTETRICS AND GYNECOLOGY
EUGENIA ANTOLÍN ALVARADO	OBSTETRICS AND GYNECOLOGY
MARÍA NIEVES MORENO	OPHTHALMOLOGY
JOSÉ LUIS DEL CASTILLO PARDO DE VERA	ORAL AND MAXILLOFACIAL SURGERY
JAVIER PIZONES ARCE	ORTHOPAEDICS AND TRAUMATOLOGY
CARLOS DANIEL GRASA LOZANO	PAEDIATRICS AND INFECTIOUS DISEASES
TERESA DEL ROSAL RABÉS	PAEDIATRICS AND INFECTIOUS DISEASES

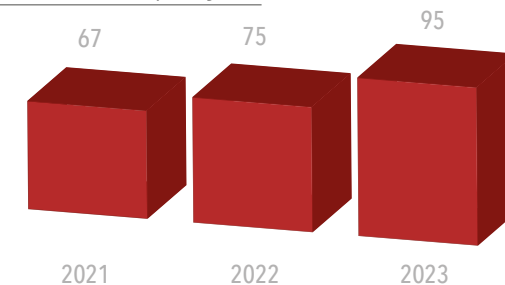


RESEARCHER	SERVICE / RESEARCH GROUP (RG)
ALBERTO ALONSO BABARRO	PALLIATIVE CARE
LUCÍA DEIROS BRONTE	PEDIATRIC CARDIOLOGY
ROSARIO LÓPEZ LÓPEZ	PEDIATRIC EMERGENCY MEDICINE
ATILANO CARCAVILLA URQUI	PEDIATRIC ENDOCRINOLOGY
JULIO GUERRERO FERNÁNDEZ	PEDIATRIC ENDOCRINOLOGY
JUAN JOSÉ MENÉNDEZ SUSO	PEDIATRIC INTENSIVE CARE
BELÉN CALDERÓN LLOPIS	PEDIATRIC INTENSIVE CARE
PEDRO MARÍA RUBIO APARICIO	PEDIATRIC ONCOLOGY
OLGA DE LA SERNA BLÁZQUEZ	PEDIATRIC RESPIRATORY MEDICINE
CLARA UDAONDO GASCÓN	PEDIATRIC RHEUMATOLOGY
ROSA ALCOBENDAS RUEDA	PEDIATRIC RHEUMATOLOGY
JOSÉ LUIS ENCINAS HERNÁNDEZ	PEDIATRIC SURGERY
FRANCISCO HERNÁNDEZ OLIVEROS	PEDIATRIC SURGERY
PALOMA TRIANA JUNCO	PEDIATRIC SURGERY
LUIS LANDÍN JARILLO	PLASTIC, RECONSTRUCTIVE AND AESTHETIC SURGERY
LUIS ALBERTO GLARIA ENRIQUEZ	RADIATION ONCOLOGY
ELISABET GONZÁLEZ DEL PORTILLO	RADIATION ONCOLOGY
PEDRO NAVÍA ÁLVAREZ	RADIOLOGY
ÁUREA DÍEZ TASCÓN	RADIOLOGY
JUAN JOSÉ BEUNZA NUIN	RESEARCH IN PEDIATRIC CARDIOLOGY (RG)
ALMUDENA VAL BLASCO	RESEARCH ON INVASIVE CLINICAL AND TRANSLATIONAL CARDIOLOGY (RG)
CARLOS JAVIER CARPIO SEGURA	RESPIRATORY MEDICINE
DANIEL LAORDEN ESCUDERO	RESPIRATORY MEDICINE
PABLO MARISCAL AGUILAR	RESPIRATORY MEDICINE
ADRIANA MAÑAS NÚÑEZ	TRANSLATIONAL RESEARCH IN PEDIATRIC ONCOLOGY, HEMATOPOIETIC TRANSPLANTATION AND CELL THERAPY (RG)



Since the launch of the Mentor Programme at IdiPAZ, the number of researchers who have participated in the programme has been increasing year by year, as can be seen in the following chart:

Number of mentorees per year





The program is supported by a network of senior mentors from different fields and professional expertise. The mentors provide mentees a constructive feedback, putting at their disposal all their experience, dedication and motivation, supporting the process of preparing their research projects.

ALBERTO BOROBIA PÉREZ	EDUARDO LÓPEZ GRANADOS	JUAN CARLOS LÓPEZ GUTIÉRREZ	PILAR SÁNCHEZ-CORRAL
AMELIA HESSHEIMER	ESTHER PÉREZ DAVID	KAREN HEATH	REBECA PÉREZ DE DIEGO
ANA SASTRE PERONA	EUGENIA ANTOLÍN ALVARADO	LAURA OTERO ORTEGA	ROCÍO ROSAS ALONSO
ANTONIO CARCAS SANSUÁN	EXUPERIO DÍEZ TEJEDOR	LAURA SALDAÑA QUERO	RODOLFO ÁLVAREZ-SALA WALTHER
ANTONIO PÉREZ MARTÍNEZ	INMACULADA IBÁÑEZ DE CÁCERES	MARGARITA LÓPEZ TRASCASA	ROSA TORRES JIMÉNEZ
BERTA RODÉS SOLDEVILA	ISABEL LASTRES BECKER	MARÍA FERNÁNDEZ VELASCO	SANTIAGO QUIRCE GANCEDO
BLANCA FUENTES GIMENO	JESÚS MINGORANCE CRUZ	MARÍA GUTIÉRREZ FERNÁNDEZ	TALÍA SAINZ COSTA
CARLOS DEL FRESNO SÁNCHEZ	JOSÉ LUIS CEBRIÁN CARRETERO	MIGUEL ÁNGEL SALINERO	TERESA BELLÓN HEREDIA
CRISTINA CALVO REY	JOSÉ LUIS LÓPEZ-SENDÓN HENTSCHEL	MIGUEL SÁENZ DE PIPAÓN MARCOS	
DAVID VICENT LÓPEZ	JOSÉ LUIS MERINO LLORENS	NORA BUTTA COLL	
EDUARDO LÓPEZ COLLAZO	JOSÉ RAMÓN ARRIBAS LÓPEZ	NURIA VILABOA DÍAZ	

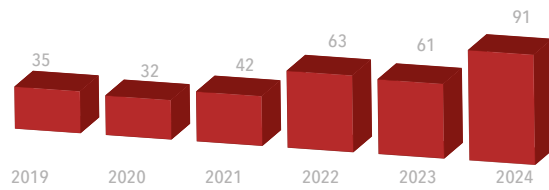
In order to ensure that the research project proposals submitted by our early-stage researchers have a high degree of excellence, the Mentor Programme has a training plan structured in webinars for each section of the application report.

In 2023, the following webinars were held as part of the Mentor Programme training plan:

TOPIC	DATE	SPEAKER
FIS PROJECT PREPARATION KEYS. PROJECT EVALUATION.	04/10/2023	Daniel Quijada
METHODOLOGY: STRUCTURE, BIASES AND CONTINGENCY PLAN	10/10/2023	Daniel Quijada
DORA CRITERIA	17/10/2023	Daniel Quijada
METHODOLOGICAL PLANNING FOR CLINICAL TRIALS	31/10/2023	Alberto Borobia
CVN	07/11/2023	Raúl Román
HOW TO PREPARE A GOOD BUDGET	14/11/2023	Silvia Arce, Raquel Carmona
STRATEGIC INTEREST OF THE PROJECT, DISSEMINATION AND CITIZEN ENGAGEMENT PLAN	21/11/2023	Daniel Quijada
GENDER PERSPECTIVE AND DIMENSION IN RESEARCH	28/11/2023	Daniel Quijada
DATA MANAGEMENT PLAN. DATA PROTECTION	12/12/2023	Daniel Quijada, Estela Sánchez
ORCID IDENTIFIER	19/12/2023	Raúl Román
AES CALL INTERNAL INFODAY	22/02/2024	Daniel Quijada

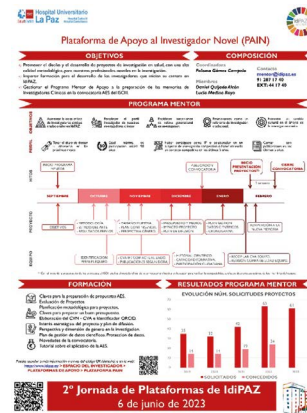


In its third year, all the actions developed in the Mentor Programme have led to an increase in the number of proposals applied to Acción Estratégica en Salud (AES) call for health research projects by IdiPAZ researchers:



OTHERS ACTIVITIES CARRIED IN 2023

Throughout 2023, the PAIN platform has participated in the 2nd Platform Infoday in IdiPAZ and in the Science and Innovation Week. In this dissemination activity, a conference entitled: ‘How to be a scientific Sherlock Holmes’ was given to secondary school students.



Informative Breakfast, organised by POP
 18th October 2023



2.6.15. Food, Nutrition and Health

The IdiPAZ Food, Nutrition and Health Platform (NUTRinvest) is a structure created to provide scientific-technical service and support in Human Research and Specialized Advice in Nutrition and Food issues.

The Platform provide service of Specialized Advice in Nutrition and Food at 3 levels:

1. Industries (agro-food or pharmaceutical sector) interesting in the new products development with an improved nutritional profile.
2. Companies interested in creating new technological tools to facilitate the acquisition of guidelines and healthy habits (web, app, etc.) and healthy habits.
3. Individual interested in knowing their nutritional status through a precision and individualized nutritional assessment.

Composition

Principal Researcher:

Bricia López Plaza, PhD, MSc
bricia.plaza@idipaz.es

Project manager

Samara Palma Milla, PhD, MD
samara.palma@salud.madrid.org

Clinical Research Associate

Laura Mola Reyes (Endocrinologist)
lmola@salud.madrid.org
 Rosa María García Moreno (Endocrinologist)
jMartin2@salud.madrid.org
 Lucía Arcos Castellanos (Nutricionist)

lucia.arcos.castellanos@idipaz.es
 Natalia García Vázquez (Pharmacist)
nGarcia.hulp@salud.madrid.org
 Marlhyn Valero Pérez (Nutricionist)
marlhyn.valero@salud.madrid.org

Main sectors

- Agri-food/pharmaceutical industries interested in designing or validating the effectiveness of new products.
- Institutions/government agencies with an interest in expanding knowledge in the area of nutrition for the generation/implementation of political measures in Public Health.
- Public or private institutions that want to develop computer applications, or information or communication programs in the field of Nutrition of interest to health professionals, consumers or patients.
- Researchers with interest in the inclusion of nutritional variables in their research projects.
- Individuals interested in obtain information about their nutritional health and who wish to receive precision and individualized nutrition through detailed analysis.

Portfolio service

- Scientific advice to improve nutritional profiles of foods or nutritional formulas.
- Scientific-technical support in the area of Human Nutrition research:
 - » Create well designed Project Plan for Clinical Trials and other human studies.

- » Management and Submission of applications to the Ethics Committee: The platform prepares and management all the documents required by obtain the approval of the Ethics Committee (Informed consent form, Letters from ethics committees. Study questionnaire (copies of any questionnaires or draft questionnaires), Case Record Forms (CRFs), Budget details, etc.)
- » Field work execution (all activities are carried out by members of the platform team with consolidated qualifications in the area):
 - Individualized dietary studies: through the use of validated tools (Food records (24h, 3-7 days), Food Frequency Questionnaires, Weighted food records, DIAL software, calorimetry ...)
 - Diagnostic and screening nutritional studies: using validated methodology (Subjective Global Assessment (SGA), Nutritional Status Assessment (NSA), Malnutrition Universal Screening Tool (MUST), Mini Nutrition Assessment (MNA).
 - Anthropometric studies: Weight, Height, Circumferences, Folds, Bioelectrical Impedance, DXA...
 - Biochemical studies (blood, urine, feces): measurements of health markers related to the area of nutrition (glucose metabolism parameters, curves for calculating the glycemic index, lipid metabolism, inflammation, oxidation and hormonal biomarkers...)



- Physical activity studies: through the use of validated questionnaires (IPAQ, MINNESOTA...).
- Evaluate the use of sensors, control devices and monitoring support (blood glucose, weight, eating disorders, food photographs, physical activity, etc.).
- Evaluate the use of specific nutrient modules, oral nutritional supplements and highly specialized artificial nutrition (enteral and parenteral).
- Functional capacity studies: through dynamometry and validated questionnaires.
- Sensory perception studies: through the use of validated questionnaires
- Satiety control studies: using biochemical markers and handling of validated questionnaires
- Quality of life studies: through the use of validated questionnaires.
- Tolerance Studies: through the use of validated questionnaires.
- Nutrigenetics and Metabolic Studies with our collaborating centers.
 - » Production of scientific and technical report
- Development of computer applications for websites or mobile apps in the nutrition / food area.
- Individual nutritional status evaluations and proposals for individualized nutrition intervention programs.
- To contribute and design components for nutrition education strategies and programs
- To implement clinical trials or epidemiological studies well designed in the area of human nutrition, in order to validate the activity and efficacy of bioactive compounds, nutrients, foods, dietary patterns or artificial nutrition, on different parameters related to the health promotion, the disease prevention or its therapeutic activity.
- composition measurement through Inbody device.
- Ultrasound machine for advanced high-resolution diagnosis.
- Holtain Skinfold Calipers
- Tanita digital healthcare scales
- Executive Diameter Tape
- Indirect calorimetry
- Accelerometers

External users

Food industry

- Medicinal Gardens S.L.

Pharmaceutical laboratories

- Abbott Laboratories S.A
- Adventia Pharma, S.L.
- Baxter S.L.
- B. Braun Medical S.A.
- Nestlé España S.A.
- Cantabria Lab Nutrición Médica S.L.
- Nutricia S.R.L.
- Lima Pharma S.R.L.

Equipment

- Dual-energy x-ray absorptiometry (DXA)
- Bioelectric Impedance System (BIA) for body





2.6.16. Simulation Platform (CEASEC)

Objectives

The CEASEC_HULP, Advanced Center for Clinical Simulation and Training at La Paz University Hospital, plays a fundamental role in the training and improvement of healthcare professionals' skills, as well as in patient care safety and quality. Clinical simulation emerges as a powerful tool for this purpose, enabling professionals to practice and refine their skills in a controlled and safe environment.

The center is designed to cater to a wide range of healthcare professionals, including physicians, nurses, and medical and nursing students. It is particularly beneficial for those working in critical or emergency environments, where teamwork and quick, accurate decision-making are crucial. Areas such as ICU, anesthesia and resuscitation, surgery, and emergency medicine are especially emphasized, but it also includes professionals who use complex or invasive technology in their practice.

At CEASEC_HULP, emphasis is placed not only on mastering technical skills but also on developing professional competencies such as effective communication, teamwork, and the ability to analyze and make decisions. This ensures that professionals are well-prepared to face critical situations and provide the highest level of patient care.

Furthermore, as part of the Institute of Health Research of La Paz University Hospital (IdiPAZ), the CEASEC is firmly committed to a clear research vocation. This dedication not only promotes the generation

and advancement of knowledge across various disciplines but also addresses complex problems to find effective solutions. From technological and scientific development to improving healthcare, fostering business innovation, and promoting sustainable development, research conducted at the CEASEC has a significant impact on society and the well-being of people.

Composition

Governing Council

Javier Cobas Gamallo
 Ana Coloma Zapatero
 Manuel Quintana Díaz
 Carlota Largo Aramburu
 Irene Cuevas Gordo
 D. Javier Rubio Bolívar
 Elena Martín de Castro
 Alicia Portas Martínez
 Ramón Cantero Cid
 Ana M^a Sánchez Torres
 Estela Sánchez Simón
 Esther Rey Cuevas
 Marta Cortés León

Chairman Governing Council

Manuel Quintana Díaz

Secretary Governing Council:

Ana Coloma Zapatero
 Estela Sánchez Simón

Contact:

D^a. Irene Cuevas Gordo
irene.cuevas@salud.madrid.org
 Phone: (+34) 91 727 71 54

Innovation projects in new technologies

The CEASEC collaborates with the Polytechnic University of Madrid in the development of new clinical training devices. During 2023, technological projects were carried out to train the technical skills of different medical specialties to address pathologies of various kinds: stroke, pulmonary ultrasound, hemorrhagic trauma, tracheotomies, intubation and lumbar punctures, and monitoring for the traceability of a transplant system organs, among others.

During this period, 5 biomedical engineering students have carried out their curricular internships and TFG work tutored by the Center's staff. All of them were clinically validated or are currently undergoing validation with great acceptance and projection for patents and publications to be developed in 2023. Some of them:

Pilot Test of a Pediatric Stroke Training System with Immersive Virtual Reality

The pilot test of a pediatric stroke training system using immersive virtual reality, developed by the Bioengineering and Telemedicine Group at the Technical University of Madrid in collaboration with La Paz University Hospital, has proven to be highly effective. The system allows doctors to learn and practice the protocol for managing pediatric stroke in a realistic virtual environment. The validation conducted with 50 physicians from the Neurology, Pediatric ICU, and Emergency services at La Paz Universi-



2. Executive summary

2.6 Platforms

ty Hospital showed very positive results: 94% of participants highlighted the realism of the simulation, 98% would use virtual reality for training, and 100% would use the program for training in the pediatric stroke code. The system's usability received a score of 86 out of 100, rating it as excellent. This study confirms that immersive virtual reality is an effective tool for training in critical and infrequent medical procedures.

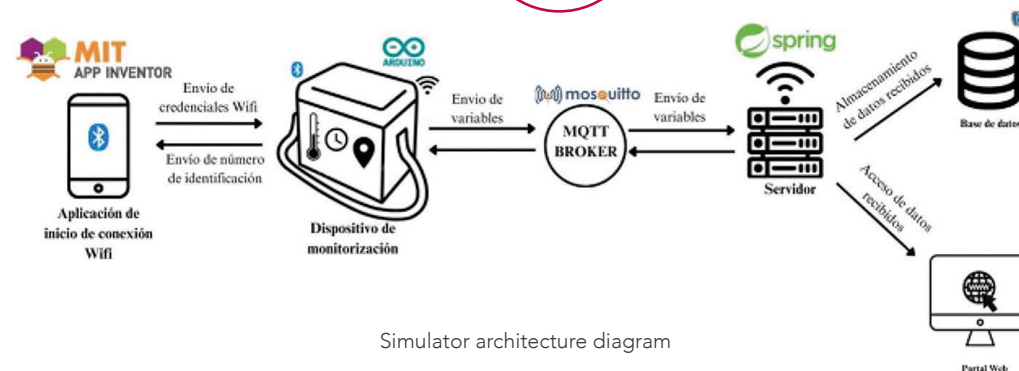
Optimization of a System for Tracking and Monitoring Transplanted Organs During the Transportation Phase

The system architecture consists of four elements: a mobile application, a monitoring device, an MQTT protocol broker server, and a dedicated server with a database and a restricted-access web portal.

The monitoring device, based on an Arduino MKR Wifi 1010 microcontroller, measures the internal temperature of the organ, its geographical position, and the preservation time. It includes temperature sensors, a GPS module, a pressure sensor, and a buzzer. Additionally, a perfusion system for organ preservation is incorporated, controlled by a relay connected to the Arduino.

The web server stores the metrics obtained by the sensors of each cooler. The MQTT protocol is used to send data to the server. The Wifi connection configuration of the Arduino is done via a mobile application using Bluetooth technology.

The web server allows for the storage and visualization of the data, managing the transplant routes and restricting access to registered clinical personnel. The platform allows the identification and configuration of the coolers, donor hospitals, recipient hospitals, and transplant dates. There are two user roles: administrative, which manages users and associated hospitals, and clinical, which configures transplants and available coolers.



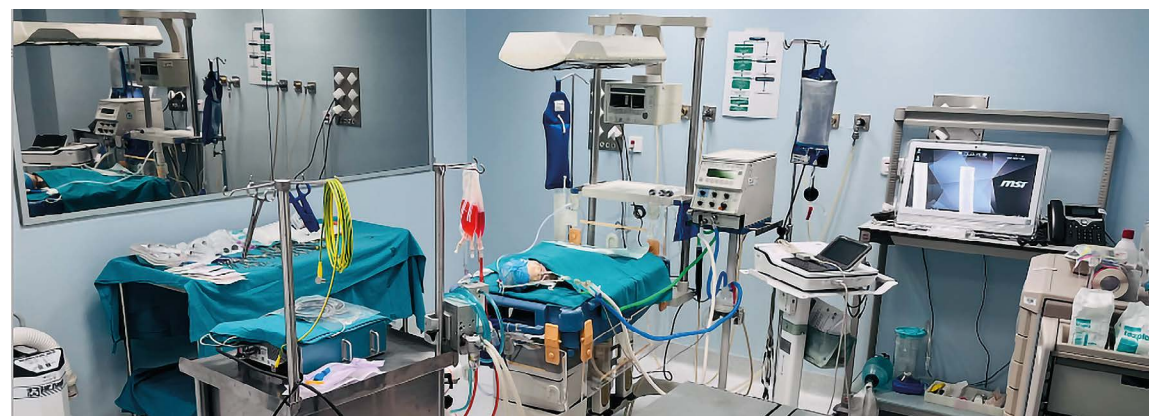
Simulator architecture diagram

Two technical validation tests were designed to evaluate static and dynamic preservation in hypothermic conditions and the communication between the server and the cooler during a transplant simulation. The clinical validation included ten clinical professionals who assessed the system's usability using the System Usability Scale (SUS), considering aspects such as expected frequency of use, ease of use, autonomy, consistency, and system security.

Activity of CEASEC

During 2023, we have introduced two new strategic training lines in ultrasound and polytrauma, repre-

senting a significant advancement in our educational offerings, addressing critical areas of current medical practice. In the field of ultrasound, our courses cover from fundamental concepts to advanced techniques, including image interpretation and clinical application across various medical specialties. On the other hand, the SEPA course in Acute Traumatic Pathology equips professionals to provide advanced and optimal care to patients with severe trauma. Through simulation and clinical training, participants gain a deep understanding and solid practice in managing this pathology, leading to tangible improvements in the quality and efficiency of medical care in critical situations.





2.6.17. Tissue Engineering and 3D Printing Platform

Objectives

The tissue engineering and 3D printing platform focuses on promoting the development of Biomedical Research and providing solutions based on Tissue Engineering and Bioprinting.

Main areas of activity:

- Tissue and Organ Bioprinting.
- Lab on a Chip (LOC) and Organ on a Chip (OOC) devices.
- Tissue and Organ Models through Tissue Engineering.
- Development of Medical Devices (Biomodels, Surgical Guides, Prostheses and Implants) by I3D.

Composition

Director:

Ramón Cantero Cid

Subdirector:

María P. de Miguel

PITI3D@idipaz.es

Phone: (+34) 91 207 15 12 (ext 2484)

Equipment and facilities

- Bioprinting Unit (V1 REGEMAT 3D). Use of thermoplastics, microextrusion, UV polymerisation, injection of biomaterials and cells.
- Fusion deposition modelling (FDM). 3D printer for prototyping.
- Bioreactor for tissue maturation.

Portfolio service

- TAC and MRI computerised imaging and tissue segmentation.
- 3D virtual planning.- Computer-aided design (CAD).
- 3D printing of biomodels, surgical guides, prostheses and implants in polymers and metals.- Processing and fabrication of biomaterials.
- Bioprinting of meshed structures with or without cells.
- 3D cell cultures.
- Development of biofabrication processes.
- Development of Lab on a Chip (LOC) and Organ on a Chip (OOC) devices p- Education and training in the areas of activities.

Projects and collaborations

During 2023/2024 we have been working on the characterisation of colon cancer organoids, both genetically and immunologically.

This has allowed us to perform several proofs of concept with the organoids as a basis for clinical experimentation, in our attempt to validate and replace animal experimentation.

Currently, the PITI3D Platform has established a collaboration with the University of Nebrija for the bioprinting of colon tumour organoids derived from biopsies of patients diagnosed with colon cancer.

As a result of this collaboration, it has been possible to validate the compatibility of various bioinks for use in organoid bioprinting. The multilayer construction bioprinting protocol has also been designed to reconstruct a 3D model that reproduces with high accuracy the epithelial and stromal compartments of the tumour, including fibroblasts and native immune cell infiltrates.

These models will be used for modelling different diseases, especially colon cancer, to test the anti-tumour potential of new drugs and immunotherapies and as a platform for future application in regenerative medicine.



2.7. Mentor and prementor program



2.7.1. Mentor Program

In 2023, IdiPAZ, with the support of La Paz University Hospital, has implemented the **3rd Mentor Program** with the purpose of supporting our clinical early career researchers in the achievement of competitive projects, mainly from the main national call for health research projects: "Acción Estratégica en Salud (AES)", granted by Instituto de Salud Carlos III.

The **Mentor Program** plans a scientific and technical support in the preparation and tracking of research proposals. Furthermore, it take into account the experience and scientific knowledge from our senior researchers to help our early-stage researchers from the beginning of their research career.

The objectives of the program are:

- Increasing the number of clinical research in IdiPAZ.
- Avoiding a generational leap of clinical researchers.
- Strengthening the research profile of our clinical staff.
- Becoming IdiPAZ a clinical research model, as the same level that IdiPAZ is in the clinical trials.
- Performing an internal cultural change in clinical research

Mentor Program included different action plans have been implemented: to update the standardized curriculum for researchers, enable synergies to create research groups, support from the different platforms of IdiPAZ, services of medical writing and stand out the impact and the strategic priorities of the projects for the National Health System.



In the 3rd Mentor Program 95 participants were included:

RESEARCHER	SERVICE/RESEARCH GROUP (RG)
LETICIA DE LA VECILLAS SÁNCHEZ	ALLERGOLOGY
BLANCA TAPIA SALINAS	ANESTHESIOLOGY
ISABEL VALBUENA GÓMEZ	ANESTHESIOLOGY
ALFONSO JURADO ROMÁN	CARDIOLOGY
LUCÍA FERNÁNDEZ GASSÓ	CARDIOLOGY
SERGIO CASTREJÓN CASTREJÓN	CARDIOLOGY
SANDRA OFELIA ROSILLO RODRÍGUEZ	CARDIOLOGY
JOAQUIN J. ALONSO MARTÍN	CARDIOLOGY
ENRIQUE VILLAGRAN MEDINILLA	CARDIOTHORACIC SURGERY
RAÚL SÁNCHEZ PÉREZ	CARDIOTHORACIC SURGERY
MARTA MOLERO LUIS	CLINICAL CHEMISTRY AND LABORATORY MEDICINE
PILAR NOZAL ARANDA	CLINICAL IMMUNOLOGY
IRENE GARCÍA GARCÍA	CLINICAL PHARMACOLOGY
CRISTINA MURANO	CLINICAL PHARMACOLOGY
ELENA VILLAMAÑÁN BUENO	CLINICAL PHARMACY
ALEJANDRO MARTÍN QUIRÓS	EMERGENCY MEDICINE
PAOLA ANDREA PARRA RAMÍREZ	ENDOCRINOLOGY
BEATRIZ BARQUIEL ALCALÁ	ENDOCRINOLOGY
PATRICIA MARTÍN ROJAS-MARCOS	ENDOCRINOLOGY
CARLOS RODRÍGUEZ ANTOLÍN	EXPERIMENTAL THERAPIES AND BIOMARKERS IN CANCER (RG)
OLGA VERA PUENTE	EXPERIMENTAL THERAPIES AND BIOMARKERS IN CANCER (RG)
ALICIA GUTIÉRREZ MISIS	FAMILY MEDICINE
CRISTINA JULIA SUÁREZ FERRER	GASTROENTEROLOGY
MARILÓ MARTÍN ARRANZ	GASTROENTEROLOGY
ROCÍO MENÉNDEZ COLINO	GERIATRICS
MARTA MORADO ARIAS	HEMATOLOGY
MERCEDES GASIOR KABAT	HEMATOLOGY
CARMEN RODRÍGUEZ JIMÉNEZ	HUMAN GENETICS
ADELA ESCUDERO LÓPEZ	HUMAN GENETICS
ANA FERNÁNDEZ SANTANDER	HUMAN GENETICS
FRANCISCO JAVIER CUETO RODRÍGUEZ	INNATE IMMUNE RESPONSE (RG)
LAURA CÓRDOBA GARCÍA	INNATE IMMUNE RESPONSE (RG)
LUNA RIDAN CORDEIRO MINUTE	INNATE IMMUNE RESPONSE (RG)
JOSÉ MANUEL AÑÓN ELIZALDE	INTENSIVE MEDICINE
MANUEL QUINTANA DÍAZ	INTENSIVE MEDICINE
ÓSCAR PEÑUELAS RODRÍGUEZ	INTENSIVE MEDICINE
ANGUS (M ^a ANGUSTIAS QUESADA SIMÓN)	INTERNAL MEDICINE
RAMÓN PUCHADES RINCÓN DE ARELLANO	INTERNAL MEDICINE

RESEARCHER	SERVICE/RESEARCH GROUP (RG)
YALE TUNG CHEN	INTERNAL MEDICINE
MARTA DÍAZ MENÉNDEZ	INTERNAL MEDICINE
ROCÍO MONTEJANO SÁNCHEZ	INTERNAL MEDICINE
BEATRIZ DÍAZ POLLÁN	INTERNAL MEDICINE
FERNANDO MARTÍN SÁNCHEZ	MEDICAL INFORMATICS
ANA BELÉN CUSTODIO CARRETERO	MEDICAL ONCOLOGY
ISMAEL GHANEM CAÑETE	MEDICAL ONCOLOGY
ELIAS DAHDOUH	MOLECULAR MICROBIOLOGY (RG)
BIBIANA CHINEA JIMÉNEZ	NEONATAL NURSERY
ESPERANZA ESCRIBANO PALOMINO	NEONATOLOGY
MARÍA OVIDIA LÓPEZ OLIVA	NEPHROLOGY
GEMA FERNÁNDEZ JUÁREZ	NEPHROLOGY
ÁNGEL MARTÍN MONTES	NEUROLOGY
INMACULADA PUERTAS MUÑOZ	NEUROLOGY
JAVIER DÍAZ DE TERÁN VELASCO	NEUROLOGY
LAURA LACRUZ BALLESTER	NEUROLOGY
SOLEDAD SERRANO LÓPEZ	NEUROLOGY
JUDITH HERNÁNDEZ ALONSO	OBSTETRIC NURSERY
ANA LÓPEZ CARRASCO	OBSTETRICS AND GYNECOLOGY
MARILÓ DIESTRO TEJEDA	OBSTETRICS AND GYNECOLOGY
VIRGINIA GARCÍA PINEDA	OBSTETRICS AND GYNECOLOGY
NURIA MARTÍNEZ SÁNCHEZ	OBSTETRICS AND GYNECOLOGY
MARCOS JAVIER CUERVA GONZÁLEZ	OBSTETRICS AND GYNECOLOGY
MARÍA DE LA CALLE FERNÁNDEZ-MIRANDA	OBSTETRICS AND GYNECOLOGY
SARA RUIZ MARTÍNEZ	OBSTETRICS AND GYNECOLOGY
VIRGINA ENGELS CALVO	OBSTETRICS AND GYNECOLOGY
EUGENIA ANTOLÍN ALVARADO	OBSTETRICS AND GYNECOLOGY
MARÍA NIEVES MORENO	OPHTHALMOLOGY
JOSÉ LUIS DEL CASTILLO PARDO DE VERA	ORAL AND MAXILLOFACIAL SURGERY
JAVIER PIZONES ARCE	ORTHOPAEDICS AND TRAUMATOLOGY
CARLOS DANIEL GRASA LOZANO	PAEDIATRICS AND INFECTIOUS DISEASES
TERESA DEL ROSAL RABÉS	PAEDIATRICS AND INFECTIOUS DISEASES
ALBERTO ALONSO BABARRO	PALLIATIVE CARE
LUCÍA DEIROS BRONTE	PEDIATRIC CARDIOLOGY
ROSARIO LÓPEZ LÓPEZ	PEDIATRIC EMERGENCY MEDICINE
ATILANO CARCAVILLA URQUI	PEDIATRIC ENDOCRINOLOGY
JULIO GUERRERO FERNÁNDEZ	PEDIATRIC ENDOCRINOLOGY
JUAN JOSÉ MENÉNDEZ SUSO	PEDIATRIC INTENSIVE CARE



2. Executive summary

2.7 Mentor and prementor program

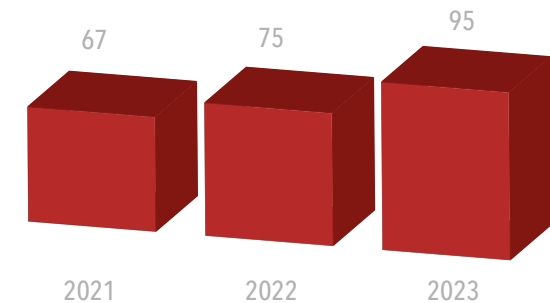
RESEARCHER	SERVICE/RESEARCH GROUP (RG)
BELÉN CALDERÓN LLOPIS	PEDIATRIC INTENSIVE CARE
PEDRO MARÍA RUBIO APARICIO	PEDIATRIC ONCOLOGY
OLGA DE LA SERNA BLÁZQUEZ	PEDIATRIC RESPIRATORY MEDICINE
CLARA UDAONDO GASCÓN	PEDIATRIC RHEUMATOLOGY
ROSA ALCOBENDAS RUEDA	PEDIATRIC RHEUMATOLOGY
JOSÉ LUIS ENCINAS HERNÁNDEZ	PEDIATRIC SURGERY
FRANCISCO HERNÁNDEZ OLIVEROS	PEDIATRIC SURGERY
PALOMA TRIANA JUNCO	PEDIATRIC SURGERY
LUIS LANDÍN JARILLO	PLASTIC, RECONSTRUCTIVE AND AESTHETIC SURGERY
LUIS ALBERTO GLARIA ENRIQUEZ	RADIATION ONCOLOGY

RESEARCHER	SERVICE/RESEARCH GROUP (RG)
ELISABET GONZÁLEZ DEL PORTILLO	RADIATION ONCOLOGY
PEDRO NAVÍA ÁLVAREZ	RADIOLOGY
ÁUREA DÍEZ TASCÓN	RADIOLOGY
JUAN JOSÉ BEUNZA NUIN	RESEARCH IN PEDIATRIC CARDIOLOGY (RG)
ALMUDENA VAL BLASCO	RESEARCH ON INVASIVE CLINICAL AND TRANSLATIONAL CARDIOLOGY (RG)
CARLOS JAVIER CARPIO SEGURA	RESPIRATORY MEDICINE
DANIEL LAORDEN ESCUDERO	RESPIRATORY MEDICINE
PABLO MARISCAL AGUILAR	RESPIRATORY MEDICINE
ADRIANA MAÑAS NÚÑEZ	TRANSLATIONAL RESEARCH IN PEDIATRIC ONCOLOGY, HEMATOPOIETIC TRANSPLANTATION AND CELL THERAPY (RG)



Since the launch of the Mentor Programme at IdiPAZ, the number of researchers who have participated in the programme has been increasing year by year, as can be seen in the following chart:

Number of mentorees per year



The program is supported by a network of senior mentors from different fields and professional expertise. The mentors provide mentees a constructive feedback, putting at their disposal all their experience, dedication and motivation, supporting the process of preparing their research projects.



2. Executive summary

2.7 Mentor and prementor program

In the 3rd Mentor Program 42 senior mentor have collaborated:

ALBERTO BOROBIA PÉREZ
AMELIA HESSHEIMER
ANA SASTRE PERONA
ANTONIO CARCAS SANSUÁN
ANTONIO PÉREZ MARTÍNEZ
BERTA RODÉS SOLDEVILA
BLANCA FUENTES GIMENO
CARLOS DEL FRESNO SÁNCHEZ
CRISTINA CALVO REY
DAVID VICENT LÓPEZ
EDUARDO LÓPEZ COLLAZO

EDUARDO LÓPEZ GRANADOS
ESTHER PÉREZ DAVID
EUGENIA ANTOLÍN ALVARADO
EXUPERIO DÍEZ TEJEDOR
INMACULADA IBÁÑEZ DE CÁCERES
ISABEL LASTRES BECKER
JESÚS MINGORANCE CRUZ
JOSÉ LUIS CEBRIÁN CARRETERO
JOSÉ LUIS LÓPEZ-SENDÓN HENTSCHEL
JOSÉ LUIS MERINO LLORENS
JOSÉ RAMÓN ARRIBAS LÓPEZ

JUAN CARLOS LÓPEZ GUTIÉRREZ
KAREN HEATH
LAURA OTERO ORTEGA
LAURA SALDAÑA QUERO
MARGARITA LÓPEZ TRASCASA
MARÍA FERNÁNDEZ VELASCO
MARÍA GUTIÉRREZ FERNÁNDEZ
MIGUEL ÁNGEL SALINERO
MIGUEL SÁENZ DE PIPAÓN MARCOS
NORA BUTTA COLL
NURIA VILABOA DÍAZ

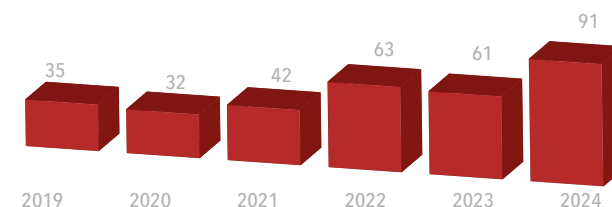
PILAR SÁNCHEZ-CORRAL
REBECA PÉREZ DE DIEGO
ROCÍO ROSAS ALONSO
RODOLFO ÁLVAREZ-SALA WALTHER
ROSA TORRES JIMÉNEZ
SANTIAGO QUIRCE GANCEDO
TALÍA SAINZ COSTA
TERESA BELLÓN HEREDIA

In order to ensure that the research project proposals submitted by our early-stage researchers have a high degree of excellence, the Mentor Programme has a training plan structured in webinars for each section of the application report.

In 2023, the following webinars were held as part of the Mentor Programme training plan:

TOPIC	DATE	SPEAKER
FIS PROJECT PREPARATION KEYS. PROJECT EVALUATION.	04/10/2023	Daniel Quijada
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METHODOLOGICAL PLANNING FOR CLINICAL TRIALS	31/10/2023	Alberto Borobia
CVN	07/11/2023	Raúl Román
HOW TO PREPARE A GOOD BUDGET	14/11/2023	Silvia Arce, Raquel Carmona
STRATEGIC INTEREST OF THE PROJECT, DISSEMINATION AND CITIZEN ENGAGEMENT PLAN	21/11/2023	Daniel Quijada
GENDER PERSPECTIVE AND DIMENSION IN RESEARCH	28/11/2023	Daniel Quijada
DATA MANAGEMENT PLAN. DATA PROTECTION	12/12/2023	Daniel Quijada, Estela Sánchez
ORCID IDENTIFIER	19/12/2023	Raúl Román
AES CALL INTERNAL INFODAY	22/02/2024	Daniel Quijada

In its third year, all the actions developed in the Mentor Programme have led to an increase in the number of proposals applied to Acción Estratégica en Salud (AES) call for health research projects by IdiPAZ researchers:



Every year, once the proposal deadline has expired, the Mentor Program organizes an event where all support offered by our mentors is recognized. The Mentor Program wants to thank all the time and selfless support and time that mentors provide to the Program and to the mentees. In this event, an experience conference of mentors and mentees were held, so the audience could know deeply how to prepare a AES proposal and how the Mentor Program works from different points of views.





2.7.2. Prementor Program

IdiPAZ, with the support of La Paz University Hospital, will implement the 1st Prementor Program with the purpose of supporting our predoctoral researchers in the achievement of their Doctorate.

The objectives of the program are:

- Increasing the number of researchers with a PhD in IdiPAZ.
- Promote high quality training of researchers.
- Performing an internal cultural change in translational research in biomedicine.

The Prementor Program plans a formative and technical support during the second and third tutorial courses of our predoctoral researchers' doctoral studies. The following webinars will be held as part of the Prementor Programme training plan:

DATE	TOPIC	SPEAKER
20/09/2024	1_ HOW TO ESTABLISH A RESEARCH QUESTION/HYPOTHESIS	DANIEL QUIJADA
18/10/2024	2_ ETHICS AND SCIENTIFIC FRAUD	NORA BUTTA
15/11/2024	3_ PREPARING AND CLEANING DATABASES	MARÍA TERESA GARÍA MORALES
20/12/2024	4_ FIGURES, VISUALIZATION AND DATA ANALYSIS	MARÍA JIMÉNEZ GONZÁLEZ
17/01/2025	5_ IdiPAZ SUPPORT PLATFORMS FOR EXPERIMENTAL WORK	GEMA VALLÉS
21/02/2025	6_ ORAL COMMUNICATIONS AND POSTER DESIGN	EMANUELA SPAGNOLO
21/03/2025	7_ TIPS FOR PUBLICATION AND SCIENTIFIC DISSEMINATION	EDUARDO LÓPEZ COLLAZO
25/04/2025	8_ PROTECTION OF RESULTS	ESTELA SÁNCHEZ SIMÓN
23/05/2025	9_ TOOLS FOR THE EMOTIONAL MANAGEMENT DURING THE DEVELOPMENT OF THE THESIS	PALOMA GÓMEZ CAMPELO
20/06/2025	10_ THESIS DEFENSE	REBECA PÉREZ DE DIEGO





2.8. Scientific Production



The journals whose titles are in bold type belong to the first decile of their category

JOURNAL	ISSN	TOTAL OF DOCUMENTS	IMPACT FACTOR	QUARTILE
Acta Anaesthesiológica Scandinavica	0001-5172	1	1,9	Q2
Acta Obstetrica et Gynecológica Scandinavica	0001-6349	2	3,5	Q1
Acta Otorhinolaryngológica Italica	0392-100X	1	2,1	Q2
Acta Otorhinolaryngológica Española	0001-6519	1	0,9	Q3
Acta Paediatrica	0803-5253	3	2,4	Q1
Actas Dermo-Sifiligráficas	0001-7310	6	3,8	Q1
Actas Urológicas Españolas	0210-4806	1	1,2	Q3
Advances in Laboratory Medicine	2628-491X	10	1,1	Q4
Advances in Nutrition	2161-8313	1	8	Q1
Advances in Therapy	0741-238X	2	3,4	Q2
Aging and Disease	2152-5250	1	7	Q1
Aging Clinical and Experimental Research	1594-0667	1	3,4	Q2
AI	2673-2688	1	Not indexed	Not indexed
AIDS	0269-9370	2	3,4	Q3
AIDS Care-Psychological and Socio-Medical Aspects of AIDS/HIV	0954-0121	1	1,2	Q4
AIDS Research and Human Retroviruses	0889-2229	1	1,5	Q4
AIDS Reviews	1139-6121	5	1,9	Q4
Alimentary Pharmacology & Therapeutics	0269-2813	1	6,6	Q1
Allergo Journal	0941-8849	1	1,1	Q4
Allergologia et Immunopathologia	0301-0546	1	2,5	Q3
Allergy	0105-4538	5	12,6	Q1
Allergy Asthma and Clinical Immunology	1710-1492	2	2,6	Q2
American Journal of Cardiology	0002-9149	1	2,3	Q2
American Journal of Clinical Pathology	0002-9173	1	2,3	Q2
American Journal of Dermatopathology	0193-1091	1	1,1	Q4
American Journal of Epidemiology	0002-9262	1	5	Q1
American Journal of Gastroenterology	0002-9270	2	8	Q1
American Journal of Hematology	0361-8609	1	10,1	Q1
American Journal of Kidney Diseases	0272-6386	1	9,4	Q1
American Journal of Medical Genetics Part A	1552-4825	1	1,7	Q3
American Journal of Medical Genetics Part C-Seminars in Medical Genetics	1552-4868	1	2,8	Q2
American Journal of Obstetrics & Gynecology Mfm	2589-9333	1	3,8	Q1

JOURNAL	ISSN	TOTAL OF DOCUMENTS	IMPACT FACTOR	QUARTILE
American Journal of Obstetrics and Gynecology	0002-9378	1	8,7	Q1
American Journal of Physical Medicine & Rehabilitation	0894-9115	3	2,2	Q1
American Journal of Psychiatry	0002-953X	1	15,1	Q1
American Journal of Respiratory and Critical Care Medicine	1073-449X	2	19,3	Q1
American Journal of Respiratory Cell and Molecular Biology	1044-1549	1	5,9	Q1
American Journal of Transplantation	1600-6135	3	8,9	Q1
Anaerobe	1075-9964	1	2,5	Q3
Anales de Pediatría	1695-4033	15	1,5	Q2
Anesthesia and Analgesia	0003-2999	1	4,6	Q1
Angiologia	0003-3170	2	0,1	Q4
Annals of Cardiac Anaesthesia	0971-9784	1	1,1	Q3
Annals of Clinical and Translational Neurology	2328-9503	1	4,4	Q1
Annals of Clinical Microbiology and Antimicrobials	1476-0711	1	4,6	Q1
Annals of Coloproctology	2287-9714	1	3	Q2
Annals of Diagnostic Pathology	1092-9134	1	1,5	Q3
Annals of Internal Medicine	0003-4819	3	19,6	Q1
Annals of Laboratory Medicine	2234-3806	1	4	Q1
Annals of Oncology	0923-7534	1	56,7	Q1
Annals of Surgery	0003-4932	6	7,5	Q1
Annals of Surgical Oncology	1068-9265	7	3,4	Q2
Annals of the Rheumatic Diseases	0003-4967	2	20,3	Q1
Annals of Translational Medicine	2305-5839	1	Not indexed	Not indexed
Anthropologischer Anzeiger	0003-5548	1	0,4	Q3
Antibiotics-Basel	2079-6382	4	4,3	Q1
Antimicrobial Agents and Chemotherapy	0066-4804	1	4,1	Q2
Antioxidants	2076-3921	6	6	Q1
Applied Clinical Informatics	1869-0327	1	2,1	Q4
Applied Sciences-Basel	2076-3417	4	2,5	Q2
Archives of Bone and Joint Surgery-Abjs	2345-4644	7	1,2	Q3
Archives of Cardiovascular Diseases	1875-2136	1	2,3	Q2



JOURNAL	ISSN	TOTAL OF DOCUMENTS	IMPACT FACTOR	QUARTILE
Archives of Disease in Childhood-Fetal and Neonatal Edition	1359-2998	2	3,9	Q1
Archives of Gynecology and Obstetrics	0932-0067	1	2,1	Q2
Archives of Medical Science	1734-1922	1	3	Q1
Archives of Pathology & Laboratory Medicine	0003-9985	1	3,7	Q2
Archivos de Bronconeumología	0300-2896	10	8,7	Q1
Archivos de Cardiología de México	1405-9940	1	0,7	Q4
ARP Rheumatology	2795-4552	1	1,4	Q3
Arteriosclerosis Thrombosis and Vascular Biology	1079-5642	1	7,4	Q1
Arthritis & Rheumatology	2326-5191	1	11,4	Q1
Arthritis Care & Research	2151-464X	1	3,7	Q1
Arthritis Research & Therapy	1478-6354	1	4,4	Q1
Atención Primaria	0212-6567	2	1,8	Q2
Atherosclerosis	0021-9150	1	4,9	Q1
Atlas of the Oral and Maxillofacial Surgery Clinics of North America	1558-4275	2	Not indexed	Not indexed
Australasian Journal of Dermatology	0004-8380	1	2,2	Q2
Autoimmunity Reviews	1568-9972	1	9,2	Q1
Behavioral Sciences	2076-328X	1	2,5	Q2
Best Practice & Research Clinical Obstetrics & Gynaecology	1521-6934	1	3,9	Q1
Biochimica et Biophysica Acta-Molecular Basis of Disease	0925-4439	1	4,2	Q2
Biology-Base	2079-7737	1	3,6	Q1
Biomarker Research	2050-7771	1	9,5	Q1
Biomaterials Science	2047-4830	1	5,8	Q1
Biomedicine & Pharmacotherapy	0753-3322	8	6,9	Q1
Biomedicines	2227-9059	6	3,9	Q2
Biomolecules	2218-273X	3	4,8	Q1
Biorxiv	2692-8205	1	Not indexed	Not indexed
Birth-Issues in Perinatal Care	0730-7659	1	2,8	Q1
Blood	0006-4971	2	21	Q1
Blood Advances	2473-9529	1	7,4	Q1
Blood Coagulation & Fibrinolysis	0957-5235	4	1,2	Q4
BMC Genomics	1471-2164	1	3,5	Q2
BMC Geriatrics	1471-2318	2	3,4	Q2
BMC Health Services Research	1472-6963	2	2,7	Q2
BMC Infectious Diseases	1471-2334	1	3,4	Q2
BMC Nursing	1472-6955	1	3,1	Q1
BMC Primary Care	2731-4553	1	2	Q2
BMC Psychology	2050-7283	1	2,7	Q1
BMC Public Health	1471-2458	1	3,5	Q1

JOURNAL	ISSN	TOTAL OF DOCUMENTS	IMPACT FACTOR	QUARTILE
BMC Pulmonary Medicine	1471-2466	1	2,6	Q2
BMC Rheumatology	2520-1026	1	2,1	Q3
BMC Sports Science Medicine and Rehabilitation	2052-1847	1	2,1	Q1
BMC Urology	1471-2490	1	1,7	Q3
BMC Womens Health	1472-6874	1	2,4	Q2
BMJ Mental Health	2755-9734	1	Not indexed	Not indexed
BMJ Open	2044-6055	7	2,4	Q1
BMJ Open Respiratory Research	2052-4439	1	3,6	Q1
BMJ Supportive & Palliative Care	2045-435X	1	2	Q3
Bone Marrow Transplantation	0268-3369	2	4,5	Q1
Brain	0006-8950	2	10,6	Q1
Brain and Spine	2772-5294	1	1,9	Q3
Brain Behavior and Immunity	0889-1591	1	8,8	Q1
Brain Research Bulletin	0361-9230	1	3,5	Q2
Brain Sciences	2076-3425	2	2,7	Q3
Breast Cancer Research	1465-5411	1	6,1	Q1
British Journal of Cardiology	1753-4313	1	Not indexed	Not indexed
British Journal of Clinical Pharmacology	0306-5251	1	3,1	Q2
British Journal of Dermatology	0007-0963	1	11	Q1
British Journal of Oral & Maxillofacial Surgery	0266-4356	2	1,7	Q3
British Journal of Surgery	0007-1323	4	8,6	Q1
Burns	0305-4179	1	3,2	Q2
Canadian Journal of Cardiology	0828-282X	1	5,8	Q1
Cancer	0008-543X	1	6,1	Q1
Cancer Imaging	1740-5025	1	3,5	Q2
Cancer Immunology Immunotherapy	0340-7004	1	4,6	Q2
Cancers	2072-6694	19	4,5	Q1
Cardiology	0008-6312	1	1,9	Q3
Cardiology Journal	1897-5593	2	2,5	Q2
Cardiovascular Diabetology	1475-2840	1	8,5	Q1
Cardiovascular Diagnosis and Therapy	2223-3652	1	2,1	Q3
Cardiovascular Toxicology	1530-7905	1	3,4	Q2
Catheterization and Cardiovascular Interventions	1522-1946	2	2,1	Q3
Cell Cycle	1538-4101	1	3,4	Q3
Cell Death & Disease	2041-4889	1	8,1	Q1
Cell Death and Differentiation	1350-9047	1	13,7	Q1
Cells	2073-4409	3	5,1	Q2
Cellular and Molecular Life Sciences	1420-682X	3	6,2	Q1
Cellular Oncology	2211-3428	1	4,9	Q2
Chest	0012-3692	2	9,5	Q1



JOURNAL	ISSN	TOTAL OF DOCUMENTS	IMPACT FACTOR	QUARTILE
Children-Basel	2227-9067	5	2	Q2
Chiropractic & Manual Therapies	2045-709X	1	2	Q2
Circulation	0009-7322	2	35,5	Q1
Circulation-Cardiovascular Interventions	1941-7640	1	6,1	Q1
Circulation-Cardiovascular Quality and Outcomes	1941-7705	1	6,2	Q1
Circulation-Heart Failure	1941-3289	1	7,8	Q1
Cirugía Cardiovascular	1134-0096	8	0,3	Q4
Cirugía Española	0009-739X	5	1,3	Q3
Cirugía Pediátrica	2445-2807	6	Not indexed	Not indexed
Cirugía y Cirujanos	0009-7411	1	0,5	Q4
Clínica e Investigación en Arteriosclerosis	0214-9168	3	1,9	Q3
Clínica e Investigación en Ginecología y Obstetricia	0210-573X	6	0,1	Q4
Clinical & Experimental Metastasis	0262-0898	1	4,2	Q2
Clinical & Translational Oncology	1699-048X	12	2,8	Q2
Clinical and Experimental Allergy	0954-7894	1	6,3	Q1
Clinical and Experimental Dermatology	0307-6938	3	3,7	Q1
Clinical and Experimental Nephrology	1342-1751	1	2,2	Q2
Clinical and Experimental Rheumatology	0392-856X	7	3,4	Q2
Clinical and Translational Allergy	2045-7022	2	4,6	Q2
Clinical Breast Cancer	1526-8209	1	2,9	Q2
Clinical Case Reports	2050-0904	1	0,6	Q3
Clinical Chemistry	0009-9147	2	7,1	Q1
Clinical Chemistry and Laboratory Medicine	1434-6621	2	3,8	Q1
Clinical Drug Investigation	1173-2563	1	2,9	Q2
Clinical Genetics	0009-9163	2	2,9	Q2
Clinical Genitourinary Cancer	1558-7673	2	2,3	Q3
Clinical Infectious Diseases	1058-4838	4	8,2	Q1
Clinical Interventions in Aging	1178-1998	1	3,5	Q2
Clinical Journal of Pain	1536-5409	1	2,6	Q2
Clinical Journal of the American Society of Nephrology	1555-9041	1	8,5	Q1
Clinical Kidney Journal	2048-8505	6	3,9	Q1
Clinical Microbiology and Infection	1198-743X	2	10,9	Q1
Clinical Nutrition Espen	2405-4577	2	2,9	Q3
Clinical Pathology	2632-010X	1	1,9	Q3
Clinical Pediatrics	0009-9228	1	1	Q3
Clinical Rheumatology	0770-3198	1	2,9	Q2
Clinicoeconomics and Outcomes Research	1178-6981	1	2,1	Q3
Clinics in Liver Disease	1089-3261	1	2,9	Q2
Colorectal Disease	1462-8910	1	2,9	Q2

JOURNAL	ISSN	TOTAL OF DOCUMENTS	IMPACT FACTOR	QUARTILE
Computer Methods and Programs in Biomedicine	0169-2607	1	4,9	Q1
Computers in Biology and Medicine	0010-4825	1	7	Q1
Cornea	0277-3740	1	1,9	Q2
Critical Care	1364-8535	2	8,8	Q1
Critical Care Medicine	0090-3493	1	7,7	Q1
CTS-Clinical and Translational Science	1752-8054	2	3,1	Q2
Cureus Journal of Medical Science	2168-8184	4	1	Q3
Current Anesthesiology Reports	2167-6275	1	1,6	Q2
Current Heart Failure Reports	1546-9530	2	3,8	Q1
Current Issues in Molecular Biology	1467-3037	2	2,8	Q3
Current Medical Research and Opinion	0300-7995	1	2,4	Q1
Current Opinion in Anesthesiology	0952-7907	1	2,3	Q2
Current Opinion in Hematology	1065-6251	1	3,1	Q2
Current Opinion in Oncology	1040-8746	1	2,8	Q2
Current Psychiatry Reports	1523-3812	1	5,5	Q1
Current Psychology	1046-1310	1	2,5	Q2
Current Treatment Options in Allergy	2196-3053	1	1,9	Q3
Current Urology Reports	1527-2737	1	2,5	Q2
Cytotherapy	1465-3249	1	3,7	Q2
Database-The Journal of Biological Databases and Curation	1758-0463	2	3,4	Q1
Dermatology and Therapy	2193-8210	1	3,5	Q1
Development	0950-1991	1	3,7	Q1
Developmental Biology	0012-1606	1	2,5	Q2
Diabetes	0012-1797	1	6,2	Q1
Diagnostic Cytopathology	8755-1039	1	1	Q4
Diagnostic Microbiology and Infectious Disease	0732-8893	1	2,1	Q3
Diagnostics	2075-4418	3	3	Q1
Digestive and Liver Disease	1590-8658	1	4	Q1
Digestive Diseases and Sciences	0163-2116	1	2,5	Q2
Digital Health	2055-2076	3	2,9	Q2
Disease Markers	1875-8630	1	Not indexed	Not indexed
Diseases of the Colon & Rectum	0012-3706	1	3,2	Q2
Drug Discovery Today	1359-6446	1	6,5	Q1
Drugs in R&D	1174-5886	1	2,2	Q3
Ebiomedicine	2352-3964	4	9,7	Q1
EClinicalmedicine	2589-5370	4	9,6	Q1
Efort Open Reviews	2396-7544	2	4,3	Q1
Egyptian Journal of Radiology and Nuclear Medicine	2090-4762	1	0,7	Q4
EJSO	0748-7983	3	3,5	Q2



JOURNAL	ISSN	TOTAL OF DOCUMENTS	IMPACT FACTOR	QUARTILE
Elife	2050-084X	1	6,4	Q1
EMBO Reports	1469-221X	1	6,5	Q1
Emergencias	1137-6821	9	5,4	Q1
Emerging Infectious Diseases	1080-6040	2	7,2	Q1
Emerging Microbes & Infections	2222-1751	1	8,4	Q1
Endocrine	1355-008X	2	3	Q2
Endocrine Connections	2049-3614	1	2,6	Q3
Endocrine Reviews	0163-769X	1	22	Q1
Endocrinología Diabetes y Nutrición	2530-0180	6	1,8	Q4
Enfermedades Infecciosas y Microbiología Clínica	0213-005X	17	2,6	Q3
Enfermería Clínica	1130-8621	2	0,7	Q4
Enfermería Intensiva	1130-2399	2	1,1	Q3
Epilepsia Open	2470-9239	1	2,8	Q2
ERJ Open Research	2312-0541	2	4,3	Q1
ESC Heart Failure	2055-5822	1	3,2	Q2
ESMO Open	2059-7029	3	7,1	Q1
Eurointervention	1774-024X	2	7,6	Q1
Europace	1099-5129	8	7,9	Q1
European Archives of Oto-Rhino-Laryngology	0937-4477	1	1,9	Q2
European Cardiology Review	1758-3756	2	3,2	Q2
European Child & Adolescent Psychiatry	1018-8827	1	6	Q1
European Geriatric Medicine	1878-7649	2	3,5	Q2
European Heart Journal	0195-668X	7	37,6	Q1
European Heart Journal Open	2752-4191	1	Not indexed	Not indexed
European Heart Journal. Imaging Methods and Practice	2755-9637	1	Not indexed	Not indexed
European Heart Journal-Acute Cardiovascular Care	2048-8726	1	3,9	Q1
European Heart Journal-Cardiovascular Imaging	2047-2404	2	6,7	Q1
European Heart Journal-Quality of Care and Clinical Outcomes	2058-5225	3	4,8	Q1
European Journal of Anaesthesiology	0265-0215	2	4,2	Q1
European Journal of Cancer	0959-8049	3	7,6	Q1
European Journal of Cardio-Thoracic Surgery	1010-7940	1	3,1	Q2
European Journal of Clinical Investigation	0014-2972	2	4,4	Q1
European Journal of Geriatrics and Gerontology	2687-2625	1	0,3	Q4
European Journal of Gynaecological Oncology	0392-2936	1	0,5	Q4
European Journal of Haematology	0902-4441	2	2,3	Q2
European Journal of Heart Failure	1388-9842	2	16,9	Q1
European Journal of Human Genetics	1018-4813	3	3,7	Q2
European Journal of Internal Medicine	0953-6205	3	5,9	Q1

JOURNAL	ISSN	TOTAL OF DOCUMENTS	IMPACT FACTOR	QUARTILE
European Journal of Medical Genetics	1769-7212	3	1,6	Q3
European Journal of Nuclear Medicine and Molecular Imaging	1619-7070	1	8,6	Q1
European Journal of Obstetrics & Gynecology and Reproductive Biology	0301-2115	3	2,1	Q2
European Journal of Pediatric Surgery Reports	2194-7619	1	0,6	Q4
European Journal of Pediatrics	0340-6199	8	3	Q1
European Journal of Preventive Cardiology	2047-4873	1	8,4	Q1
European Journal of Vascular and Endovascular Surgery	1078-5884	1	5,7	Q1
European Respiratory Journal	0903-1936	5	16,6	Q1
European Review of Aging and Physical Activity	1813-7253	1	3,7	Q2
European Spine Journal	0940-6719	8	2,6	Q2
European Stroke Journal	2396-9873	1	5,8	Q1
European Urology	0302-2838	1	25,3	Q1
European Urology Open Science	2666-1691	1	3,2	Q1
Eurosurveillance	1025-496X	2	9,9	Q1
Expert Opinion on Biologícal Therapy	1471-2598	1	3,6	Q2
Expert Opinion on Drug Safety	1474-0338	1	3	Q2
Expert Opinion on Pharmacotherapy	1465-6566	1	2,5	Q3
Expert Review of Cardiovascular Therapy	1477-9072	3	1,8	Q3
Expert Review of Hematology	1747-4086	8	2,3	Q2
Facts Views and Vision in Obygn	2032-0418	2	1,7	Q3
Farmacia Hospitalaria	1130-6343	6	1	Q4
Fems Microbiology Letters	0378-1097	1	2,2	Q3
Free Radical Biology and Medicine	0891-5849	1	7,1	Q1
Frontiers in Cardiovascular Medicine	2297-055X	3	2,8	Q2
Frontiers in Cell and Developmental Biology	2296-634X	2	4,6	Q2
Frontiers in Cellular and Infection Microbiology	2235-2988	5	4,6	Q2
Frontiers in Cellular Neuroscience	1662-5102	1	4,2	Q2
Frontiers in Endocrinology	1664-2392	5	3,9	Q2
Frontiers in Genetics	1664-8021	2	2,8	Q2
Frontiers in Immunology	1664-3224	20	5,7	Q1
Frontiers in Medicine	2296-858X	3	3,1	Q1
Frontiers in Microbiology	1664-302X	3	4	Q2
Frontiers in Neuroinformatics	1662-5196	1	2,5	Q2
Frontiers in Nutrition	2296-861X	2	4	Q2
Frontiers in Oncology	2234-943X	1	3,5	Q2
Frontiers in Pediatrics	2296-2360	9	2,1	Q2
Frontiers in Pharmacology	1663-9812	3	4,4	Q1
Frontiers in Psychiatry	1664-0640	2	3,2	Q2



2. Executive summary

2.8 Scientific Production

JOURNAL	ISSN	TOTAL OF DOCUMENTS	IMPACT FACTOR	QUARTILE
Frontiers in Public Health	2296-2565	11	3	Q2
Future Cardiology	1479-6678	3	1,6	Q3
Future Oncology	1479-6694	2	3	Q2
Gaceta Clínica	0304-4866	1	0,1	Q4
Gastroenterología y Hepatología	0210-5705	8	2,2	Q3
Gels	2310-2861	2	5	Q1
General Hospital Psychiatry	0163-8343	2	4,1	Q1
Genes	2073-4425	12	2,8	Q2
Genetics in Medicine	1098-3600	2	6,6	Q1
Genome Medicine	1756-994X	2	10,4	Q1
Gerontology	0304-324X	2	3,1	Q3
Geroscience	2509-2715	1	5,3	Q1
Gut	0017-5749	1	23	Q1
Gut Microbes	1949-0976	1	12,2	Q1
Gynecologic Oncology	0090-8258	2	4,5	Q1
Haematológica	0390-6078	3	8,2	Q1
Haemophilia	1351-8216	3	3	Q2
Head & Neck Pathology	1936-055X	1	3,2	Q2
Health and Quality of Life Outcomes	1477-7525	1	3,2	Q1
Health Information Science and Systems	2047-2501	1	4,7	Q1
Healthcare	2227-9032	4	2,4	Q2
Heart	1355-6037	1	5,1	Q1
Heart & Lung	0147-9563	2	2,4	Q2
Heart Rhythm	1547-5271	1	5,6	Q1
Heliyon	2405-8440	1	3,4	Q1
Hemasphere	2572-9241	3	7,6	Q1
Hepatobiliary Surgery and Nutrition	2304-3881	1	6,1	Q1
Hepatology Communications	2471-254X	1	5,6	Q1
Hipertensión y Riesgo Vascular	1889-1837	3	1,2	Q3
Histopathology	0309-0167	1	3,9	Q2
HIV Medicine	1464-2662	2	2,8	Q2
HLA	2059-2302	1	5,9	Q2
HPB	1365-182X	2	2,7	Q2
Human Immunology	0198-8859	2	3,1	Q3
Human Molecular Genetics	0964-6906	1	3,1	Q3
Human Reproduction Update	1355-4786	1	14,8	Q1
Human Vaccines & Immunotherapeutics	2164-5515	1	4,1	Q2
Hypertension	0194-911X	2	6,9	Q1
IEEE 23rd International Conference on Nanotechnology, Nano	1944-9399	1	Not indexed	Not indexed
IEEE 36th International Conference on Micro Electro Mechanical Systems, Mems	1084-6999	1	Not indexed	Not indexed
IEEE Access	2169-3536	1	3,4	Q2

JOURNAL	ISSN	TOTAL OF DOCUMENTS	IMPACT FACTOR	QUARTILE
IEEE Computer Graphics and Applications	0272-1716	1	Not indexed	Not indexed
IEEE Journal of Biomedical and Health Informatics	2168-2194	1	6,7	Q1
Indian Journal of Otolaryngology and Head & Neck Surgery	2231-3796	1	0,6	Q4
Indian Journal of Pediatrics	0019-5456	1	2,1	Q2
Indian Journal of Surgery	0972-2068	1	0,4	Q4
Infection and Immunity	0019-9567	1	2,9	Q3
Influenza and Other Respiratory Viruses	1750-2640	2	4,3	Q1
Injury-International Journal of the Care of the Injured	0020-1383	3	2,2	Q3
Intensive Care Medicine	0342-4642	1	27,1	Q1
Internal and Emergency Medicine	1828-0447	1	3,2	Q1
International Archives of Allergy and Immunology	1018-2438	1	2,5	Q3
International Journal of Antimicrobial Agents	0924-8579	4	4,9	Q1
International Journal of Bipolar Disorders	2194-7511	1	2,8	Q2
International Journal of Cardiology	0167-5273	3	3,2	Q2
International Journal of Cardiology Cardiovascular Risk and Prevention	2772-4875	1	1,9	Q3
International Journal of Cardiology Congenital Heart Disease	2666-6685	1	0,8	Q4
International Journal of Environmental Research and Public Health	1660-4601	10	Not indexed	Not indexed
International Journal of Gynecological Cancer	1048-891X	10	4,1	Q1
International Journal of Gynecological Pathology	0277-1691	1	1,6	Q3
International Journal of Gynecology & Obstetrics	0020-7292	2	2,6	Q2
International Journal of Infectious Diseases	1201-9712	3	4,8	Q1
International Journal of Interactive Multimedia and Artificial Intelligence	1989-1660	1	3,4	Q2
International Journal of Medical Informatics	1386-5056	1	3,7	Q1
International Journal of Medical Robotics and Computer Assisted Surgery	1478-5951	1	2,3	Q2
International Journal of Molecular Sciences	1422-0067	41	4,9	Q1
International Journal of Nursing Knowledge	2047-3087	1	1,4	Q3
International Journal of Obstetric Anesthesia	0959-289X	2	2,6	Q2
International Journal of Spine Surgery	2211-4599	1	1,7	Q2
International Journal of Surgery	1743-9191	2	12,5	Q1
International Journal of Surgery Case Reports	2210-2612	1	0,6	Q4
International Ophthalmology	0165-5701	1	1,4	Q3
International Orthopaedics	0341-2695	2	2	Q2
International Urogynecology Journal	0937-3462	1	1,8	Q3



JOURNAL	ISSN	TOTAL OF DOCUMENTS	IMPACT FACTOR	QUARTILE
Iscience	2589-0042	1	4,6	Q1
JACC: Case Reports	2666-0849	1	Not indexed	Not indexed
JACC: Cardiooncology	2666-0873	2	12	Q1
JACC-Cardiovascular Imaging	1936-878X	1	12,8	Q1
JACC-Cardiovascular Interventions	1936-8798	2	11,7	Q1
JAMA Network Open	2574-3805	3	10,5	Q1
JAMA Oncology	2374-2437	1	22,5	Q1
JAMA Surgery	2168-6254	2	15,7	Q1
JAMA - Journal of the American Medical Association	0098-7484	1	63,1	Q1
JHEP Reports	2589-5559	2	9,5	Q1
JIMD Reports	2192-8304	1	Not indexed	Not indexed
JMIR Research Protocols	1929-0748	1	1,4	Q3
JNCI Cancer Spectrum	2515-5091	1	3,4	Q2
JNCI - Journal of the National Cancer Institute	0027-8874	1	9,9	Q1
Joint Bone Spine	1297-319X	1	3,8	Q1
Journal Der Deutschen Dermatologischen Gesellschaft	1610-0379	1	5,5	Q1
Journal of Affective Disorders	0165-0327	1	4,9	Q1
Journal of Allergy and Clinical Immunology	0091-6749	1	11,4	Q1
Journal of Allergy and Clinical Immunology- In Practice	2213-2198	4	8,2	Q1
Journal of Antimicrobial Chemotherapy	0305-7453	1	3,9	Q1
Journal of Asthma	0277-0903	1	1,7	Q3
Journal of Asthma and Allergy	1178-6965	1	3,7	Q2
Journal of Bone and Mineral Research	0884-0431	1	5,1	Q1
Journal of Cancer Research and Clinical Oncology	0171-5216	1	2,7	Q3
Journal of Child Neurology	0883-0738	1	2	Q3
Journal of Clinical and Experimental Dentistry	1989-5488	3	Not indexed	Not indexed
Journal of Clinical Endocrinology & Metabolism	0021-972X	2	5	Q1
Journal of Clinical Immunology	0271-9142	1	7,2	Q1
Journal of Clinical Lipidology	1933-2874	1	3,6	Q2
Journal of Clinical Medicine	2077-0383	32	3	Q1
Journal of Clinical Microbiology	0095-1137	3	6,1	Q1
Journal of Clinical Neuroscience	0967-5868	1	1,9	Q3
Journal of Clinical Oncology	0732-183X	3	42,1	Q1
Journal of Clinical Psychiatry	0160-6689	1	4,5	Q1
Journal of Clinical Virology	1386-6532	1	4	Q2
Journal of Cutaneous Pathology	0303-6987	1	1,6	Q3
Journal of Diabetes Science and Technology	1932-2968	2	4,1	Q2

JOURNAL	ISSN	TOTAL OF DOCUMENTS	IMPACT FACTOR	QUARTILE
Journal of Ect	1095-0680	1	1,8	Q3
Journal of Endocrinological Investigation	0391-4097	1	3,9	Q2
Journal of Experimental & Clinical Cancer Research	1756-9966	1	11,4	Q1
Journal of Experimental Medicine	0022-1007	1	12,6	Q1
Journal of Functional Foods	1756-4646	2	3,8	Q2
Journal of Functional Morphology and Kinesiology	2411-5142	1	2,6	Q1
Journal of Gastrointestinal Oncology	2078-6891	1	2	Q3
Journal of Gastrointestinal Surgery	1091-255X	1	2,2	Q3
Journal of General Virology	0022-1317	1	3,6	Q2
Journal of Gynecologic Oncology	2005-0380	1	3,4	Q1
Journal of Hand Surgery-European Volume	1753-1934	1	2	Q2
Journal of Headache and Pain	1129-2369	1	7,3	Q1
Journal of Healthcare Quality Research	2603-6479	1	1,1	Q4
Journal of Heart and Lung Transplantation	1053-2498	1	6,4	Q1
Journal of Hematology & Oncology	1756-8722	1	29,5	Q1
Journal of Hepato-Biliary-Pancreatic Sciences	1868-6974	3	3,2	Q2
Journal of Hepatology	0168-8278	5	26,8	Q1
Journal of Hospital Infection	0195-6701	1	3,9	Q1
Journal of Human Evolution	0047-2484	1	3,1	Q2
Journal of Immunology	0022-1767	1	3,6	Q2
Journal of Infection	0163-4453	2	14,3	Q1
Journal of Infectious Diseases	0022-1899	1	5	Q2
Journal of Inherited Metabolic Disease	0141-8955	1	4,2	Q1
Journal of Intensive Care Medicine	0885-0666	1	3	Q2
Journal of Internal Medicine	0954-6820	2	9	Q1
Journal of Interventional Cardiac Electrophysiology	1383-875X	1	2,1	Q3
Journal of Invasive Cardiology	1042-3931	3	1,6	Q3
Journal of Investigational Allergology and Clinical Immunology	1018-9068	21	6,1	Q1
Journal of Investigative Dermatology	0022-202X	1	5,7	Q1
Journal of Medical Economics	1369-6998	1	2,9	Q2
Journal of Medical Genetics	0022-2593	1	3,5	Q2
Journal of Medical Internet Research	1438-8871	1	5,8	Q1
Journal of Medical Ultrasound	0929-6441	1	0,9	Q4
Journal of Medical Virology	0146-6615	5	6,8	Q1
Journal of Microbiological Methods	0167-7012	1	1,7	Q4
Journal of Molecular Medicine	0946-2716	1	4,8	Q1
Journal of Molecular Pathology	2673-5261	1	Not indexed	Not indexed
Journal of Musculoskeletal & Neuronal Interactions	1108-7161	1	1,7	Q4
Journal of Neuroengineering and Rehabilitation	1743-0003	1	5,2	Q1
Journal of Neurology	0340-5354	1	4,8	Q1



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JOURNAL	ISSN	TOTAL OF DOCUMENTS	IMPACT FACTOR	QUARTILE
Journal of Neuromuscular Diseases	2214-3599	1	3,2	Q2
Journal of Neurovirology	1355-0284	1	2,3	Q3
Journal of Nutrition Health & Aging	1279-7707	4	4,3	Q1
Journal of Obstetrics and Gynaecology Research	1341-8076	1	1,6	Q3
Journal of Oncology Pharmacy Practice	1078-1552	1	1	Q4
Journal of Pain and Symptom Management	0885-3924	1	3,2	Q2
Journal of Pathology	0022-3417	1	5,6	Q1
Journal of Patient-Reported Outcomes	2509-8020	1	2,4	Q2
Journal of Pediatric Gastroenterology and Nutrition	0277-2116	3	2,4	Q3
Journal of Pediatric Orthopaedics	0271-6798	1	1,4	Q3
Journal of Pediatric Surgery	0022-3468	3	2,4	Q1
Journal of Pediatric Urology	1477-5131	2	2	Q2
Journal of Personalized Medicine	2075-4426	8	3	Q2
Journal of Photochemistry and Photobiology B-Biology	1011-1344	1	3,9	Q2
Journal of Rheumatology	0315-162X	1	3,6	Q2
Journal of Science and Medicine in Sport	1440-2440	1	3	Q1
Journal of Sexual Medicine	1743-6095	1	3,3	Q1
Journal of Shoulder and Elbow Surgery	1058-2746	1	2,9	Q1
Journal of Sport and Health Science	2095-2546	1	9,7	Q1
Journal of Stroke & Cerebrovascular Diseases	1052-3057	1	2	Q3
Journal of Supercomputing	0920-8542	1	2,5	Q2
Journal of Surgical Case Reports	2042-8812	1	0,4	Q4
Journal of Surgical Oncology	0022-4790	1	2	Q3
Journal of the American Academy of Dermatology	0190-9622	2	12,8	Q1
Journal of the American College of Cardiology	0735-1097	1	21,7	Q1
Journal of the American Heart Association	2047-9980	1	5	Q1
Journal of the American Medical Directors Association	1525-8610	1	4,2	Q2
Journal of the European Academy of Dermatology and Venereology	0926-9959	3	8,4	Q1
Journal of the Pediatric Infectious Diseases Society	2048-7193	2	2,5	Q3
Journal of Thoracic Disease	2072-1439	1	2,1	Q3
Journal of Translational Medicine	1479-5876	1	6,1	Q1
Journal of Travel Medicine	1195-1982	6	9,1	Q1
Journal of Voice	1873-4588	1	2,5	Q1
Journals of Gerontology Series A-Biological Sciences and Medical Sciences	1079-5006	2	4,3	Q1
JSES International	2666-6383	1	Not indexed	Not indexed
Kardiologia Polska	0022-9032	2	3,7	Q1
Kidney International Reports	2468-0249	1	5,7	Q1
Kidney360	2641-7650	1	3,2	Q1

JOURNAL	ISSN	TOTAL OF DOCUMENTS	IMPACT FACTOR	QUARTILE
Laboratory Animals	0023-6772	1	1,3	Q2
Lancet	0140-6736	3	98,4	Q1
Lancet Child & Adolescent Health	2352-4642	1	19,9	Q1
Lancet Gastroenterology & Hepatology	2468-1253	2	30,9	Q1
Lancet Haematology	2352-3026	2	15,4	Q1
Lancet Healthy Longevity	2666-7568	1	13,4	Q1
Lancet HIV	2352-3018	1	12,8	Q1
Lancet Infectious Diseases	1473-3099	2	36,4	Q1
Lancet Microbe	2666-5247	1	20,9	Q1
Lancet Oncology	1470-2045	1	41,6	Q1
Lancet Public Health	2468-2667	2	25,4	Q1
Lancet Regional Health-Europe	2666-7762	2	13,6	Q1
Lancet Respiratory Medicine	2213-2600	2	38,7	Q1
Lancet Rheumatology	2665-9913	1	15	Q1
Lancet. Haematology	2352-3026	1	15,4	Q1
Langenbecks Archives of Surgery	1435-2443	3	2,1	Q2
Leukemia & Lymphoma	1042-8194	1	2,2	Q3
Life Science Alliance	2575-1077	1	3,3	Q1
Life-Basel	2075-1729	4	3,2	Q1
Liver Transplantation	1527-6465	1	4,7	Q1
Lung	0341-2040	1	4,6	Q1
Lupus	0961-2033	1	1,9	Q3
LWT-Food Science and Technology	0023-6438	2	6	Q1
Medical Physics	0094-2405	1	3,2	Q1
Medical Ultrasonography	1844-4172	1	1,8	Q3
Medicina Clínica	0025-7753	8	2,6	Q1
Medicina Intensiva	0210-5691	2	2,7	Q2
Medicina Interna	0872-671X	1	Not indexed	Not indexed
Medicinal Research Reviews	0198-6325	1	10,9	Q1
Medicina-Lithuania	1010-660X	3	2,4	Q1
Medicine & Science in Sports & Exercise	0195-9131	1	4,1	Q1
Melanoma Research	0960-8931	1	1,5	Q3
Metabolism-Clinical and Experimental	0026-0495	1	10,8	Q1
Metabolites	2218-1989	1	3,4	Q2
Metabolomics	1573-3882	1	3,5	Q2
Methods in Molecular Biology (Clifton, N.J.)	1940-6029	1	Not indexed	Not indexed
Microbiology Spectrum	2165-0497	4	3,7	Q2
Microorganisms	2076-2607	4	4,1	Q2
Microvascular Research	0026-2862	1	2,9	Q2
Minerva Cardiology and Angiology	2724-5683	1	1,4	Q3
Minerva Urology and Nephrology	2724-6051	1	4,9	Q1
Molecular Cancer	1476-4598	2	27,7	Q1
Molecular Genetics and Metabolism	1096-7192	1	3,7	Q2
Molecular Genetics and Metabolism Reports	2214-4269	1	1,8	Q3
Molecular Metabolism	2212-8778	1	7	Q1
Molecular Nutrition & Food Research	1613-4125	1	4,5	Q1



JOURNAL	ISSN	TOTAL OF DOCUMENTS	IMPACT FACTOR	QUARTILE
Molecular Oncology	1574-7891	1	5	Q1
Molecular Therapy Nucleic Acids	2162-2531	1	6,5	Q1
Molecules	1420-3049	1	4,2	Q2
Monthly Notices of the Royal Astronomical Society	0035-8711	1	4,7	Q1
Multiple Sclerosis Journal-Experimental Translational and Clinical	2055-2173	1	2,5	Q2
Musculoskeletal Care	1478-2189	1	1,5	Q3
Mycopathologia	0301-486X	2	3,6	Q2
Nature	0028-0836	3	50,5	Q1
Nature Communications	2041-1723	4	14,7	Q1
Nature Medicine	1078-8956	2	58,7	Q1
Nature Microbiology	2058-5276	1	20,5	Q1
Nefrología	0211-6995	9	2	Q2
Neonatology	1661-7800	1	2,6	Q1
Nephrology Dialysis Transplantation	0931-0509	3	4,8	Q1
NeuroCirugía	1130-1473	1	0,7	Q4
Neurocritical Care	1541-6933	1	3,1	Q2
Neurodegenerative Diseases	1660-2854	1	1,9	Q3
Neuroendocrinology	0028-3835	1	3,2	Q2
Neurología	0213-4853	11	2,9	Q2
Neurology	0028-3878	2	7,7	Q1
Neurology and Clinical Neuroscience	2049-4173	1	0,4	Q4
Neurology and Therapy	2193-8253	1	3,9	Q1
Neurology, Clinical Practice	2163-0402	1	2,3	Q3
Neuro-Ophthalmology	0165-8107	1	0,8	Q4
Neuropharmacology	0028-3908	1	4,6	Q1
Neurosurgery	0148-396X	1	3,9	Q1
New England Journal of Medicine	0028-4793	9	96,2	Q1
New Microbes and New Infections	2052-2975	1	2,9	Q2
NPJ Digital Medicine	2398-6352	1	12,4	Q1
NPJ Genomic Medicine	2056-7944	1	4,7	Q1
NPJ Systems Biology and Applications	2056-7189	1	3,5	Q1
Nurse Education Today	0260-6917	1	3,6	Q1
Nursing Open	2054-1058	1	2	Q2
Nursing Reports	2039-439X	2	2,4	Q1
Nutrients	2072-6643	12	4,8	Q1
Obesity Surgery	0960-8923	1	2,9	Q1
Obstetrics and Gynecology	0029-7844	1	5,7	Q1
Oncogenesis	2157-9024	1	5,9	Q1
Oncologist	1083-7159	1	4,8	Q1
Oncology in Clinical Practice	2450-1654	1	0,3	Q4
Open Forum Infectious Diseases	2328-8957	1	3,8	Q2
Open Respiratory Archives	2659-6636	5	Not indexed	Not indexed
Orphanet Journal of Rare Diseases	1750-1172	3	3,4	Q2

JOURNAL	ISSN	TOTAL OF DOCUMENTS	IMPACT FACTOR	QUARTILE
Otology & Neurotology	1531-7129	1	1,9	Q3
PACE-Pacing and Clinical Electrophysiology	0147-8389	2	1,7	Q3
Pain Management	1758-1869	1	1,4	Q4
Pain Medicine	1526-2375	2	2,9	Q1
Pathogens	2076-0817	3	3,3	Q2
Pediatric Allergy and Immunology	0905-6157	2	4,3	Q2
Pediatric and Developmental Pathology	1093-5266	1	1,3	Q3
Pediatric Blood & Cancer	1545-5009	1	2,4	Q2
Pediatric Critical Care Medicine	1529-7535	1	4	Q1
Pediatric Dermatology	0736-8046	1	1,2	Q3
Pediatric Infectious Disease Journal	0891-3668	7	2,9	Q3
Pediatric Nephrology	0931-041X	1	2,6	Q1
Pediatric Neurology	0887-8994	1	3,2	Q2
Pediatric Pulmonology	8755-6863	6	2,7	Q1
Pediatric Research	0031-3998	4	3,1	Q1
Pediatric Surgery International	0179-0358	3	1,5	Q2
Pediatric Transplantation	1397-3142	2	1,2	Q3
PEERJ	2167-8359	1	2,3	Q2
Pharmaceuticals	1424-8247	5	4,3	Q2
Pharmaceutics	1999-4923	1	4,9	Q1
Pharmacological Research	1043-6618	4	9,1	Q1
Phlebology	1286-0107	1	0,2	Q4
Physical Therapy	0031-9023	1	3,5	Q1
Pituitary	1386-341X	1	3,3	Q2
Plos One	1932-6203	5	2,9	Q1
Polish Archives of Internal Medicine-Polskie Archiwum Medycyny Wewnetrznej	0032-3772	1	3,8	Q1
Polymers	2073-4360	1	4,7	Q1
Postgraduate Medicine	0032-5481	2	2,6	Q1
Proceedings of the National Academy of Sciences of the United States of America	0027-8424	1	9,4	Q1
Progress in Cardiovascular Diseases	0033-0620	1	5,6	Q1
Proteomes	2227-7382	1	4	Q2
Psychology Health & Medicine	1354-8506	1	2,3	Q2
Radiologia	0033-8338	6	1,1	Q3
Radiology	0033-8419	1	12,1	Q1
Radiotherapy and Oncology	0167-8140	2	4,9	Q1
REC-Interventional Cardiology	2604-7306	14	1,2	Q3
Redox Biology	2213-2317	3	10,7	Q1
Research and Practice in Thrombosis and Haemostasis	2475-0379	5	3,4	Q2
Respiratory Care	0020-1324	1	2,4	Q2
Respiratory Medicine	0954-6111	5	3,5	Q2
Respiratory Research	1465-993X	4	4,7	Q1
Results in Chemistry	2211-7156	1	2,5	Q2



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JOURNAL	ISSN	TOTAL OF DOCUMENTS	IMPACT FACTOR	QUARTILE
Reumatología Clínica	1699-258X	9	1,2	Q4
Revista Clínica Española	0014-2565	7	2,3	Q2
Revista de Neurología	0210-0010	2	0,8	Q4
Revista de Senología y Patología Mamaria	0214-1582	1	0,3	Q4
Revista Española de Anestesiología y Reanimación	0034-9356	6	0,9	Q3
Revista Española de Cardiología (English Ed.)	1885-5857	12	7,2	Q1
Revista Española de Cirugía Ortopédica y Traumatología	1988-8856	1	Not indexed	Not indexed
Revista Española de Enfermedades Digestivas	1130-0108	7	2,7	Q2
Revista Española de Geriátria y Gerontología	1578-1747	10	Not indexed	Not indexed
Revista Española de Medicina Nuclear e Imagen Molecular	2253-654X	1	1,6	Q3
Revista Española de Nutrición Humana y Dietética	2173-1292	1	0,4	Q4
Revista Española de Quimioterapia	0214-3429	10	1,9	Q4
Revista Española de Patología	1988-561X	4	Not indexed	Not indexed
Revista Española de Salud Pública	1135-5727	6	0,9	Q4
Revista Iberoamericana de Micología	1130-1406	1	1,5	Q4
Revista ORL	2444-7986	1	0,1	Q4
Revista Portuguesa de Cardiología	0870-2551	1	1,6	Q3
Rheumatology and Therapy	2198-6576	5	2,9	Q2
RMD Open	2056-5933	5	5,1	Q1
Schizophrenia Research	0920-9964	1	3,6	Q1
Science	0036-8075	1	44,7	Q1
Science Advances	2375-2548	3	11,7	Q1
Science Immunology	2470-9468	1	17,6	Q1
Science of the Total Environment	0048-9697	1	8,2	Q1
Science Signaling	1945-0877	1	6,7	Q1
Science Translational Medicine	1946-6234	1	15,8	Q1
Scientific Reports	2045-2322	7	3,8	Q1
Seizure-European Journal of Epilepsy	1059-1311	2	2,7	Q2
Seminars in Arthritis and Rheumatism	0049-0172	4	4,6	Q1
Seminars in Musculoskeletal Radiology	1089-7860	1	0,9	Q4
Sensors	1424-8220	1	3,4	Q2
Shoulder & Elbow	1758-5732	6	1,5	Q3
Signal Transduction and Targeted Therapy	2095-9907	1	40,8	Q1
Sleep Medicine	1389-9457	1	3,8	Q1
Spanish Journal of Psychiatry and Mental Health	2950-2861	4	Not indexed	Not indexed
Spinal Cord	1362-4393	1	2,1	Q3
Spine Deformity	2212-134X	1	1,6	Q3
Spine Journal	1529-9430	2	4,9	Q1

JOURNAL	ISSN	TOTAL OF DOCUMENTS	IMPACT FACTOR	QUARTILE
Stroke Research and Treatment	2090-8105	1	1,8	Q3
Surgery	0039-6060	4	3,2	Q1
Surgical and Radiologic Anatomy	0930-1038	1	1,2	Q3
Surgical Endoscopy and Other Interventional Techniques	0930-2794	1	2,4	Q2
Surgical Innovation	1553-3506	1	1,2	Q3
Targeted Oncology	1776-2596	1	4,4	Q2
Techniques in Coloproctology	1123-6337	1	2,7	Q2
Therapeutic Advances in Hematology	2040-6207	1	3,4	Q2
Therapeutic Advances in Medical Oncology	1758-8340	3	4,3	Q2
Thoracic Cancer	1759-7706	1	2,3	Q3
Thrombosis Research	0049-3848	2	3,7	Q1
Thyroid	1050-7256	1	5,8	Q1
Tobacco Induced Diseases	1617-9625	1	2,2	Q2
Transboundary and Emerging Diseases	1865-1674	1	3,5	Q2
Translational Pediatrics	2224-4336	2	1,5	Q2
Translational Psychiatry	2158-3188	1	5,8	Q1
Translational Stroke Research	1868-4483	1	3,8	Q1
Transplant International	0934-0874	5	2,7	Q1
Transplantation	0041-1337	6	5,3	Q1
Transplantation and Cellular Therapy	2666-6375	5	3,6	Q2
Transplantation Reviews	0955-470X	1	3,6	Q2
Travel Medicine and Infectious Disease	1477-8939	2	6,3	Q1
Trials	1745-6215	5	2	Q3
Tropical Medicine & International Health	1360-2276	1	2,6	Q2
Tropical Medicine and Health	1348-8945	1	3,6	Q1
Tropical Medicine and Infectious Disease	2414-6366	1	2,8	Q2
Updates in Surgery	2038-131X	1	2,4	Q2
Urologia Internationalis	0042-1138	1	1,5	Q3
Urology	0090-4295	1	2,1	Q2
Vaccine	0264-410X	2	4,5	Q2
Vaccines	2076-393X	3	5,2	Q1
Virchows Archiv	0945-6317	1	3,4	Q1
Viruses-Basel	1999-4915	3	3,8	Q2
Vox Sanguinis	0042-9007	1	1,8	Q3
Work-A Journal of Prevention Assessment & Rehabilitation	1051-9815	1	1,7	Q3
World Allergy Organization Journal	1939-4551	1	3,9	Q2
World Journal of Emergency Surgery	1749-7922	2	6	Q1
World Journal of Orthopedics	2218-5836	1	2	Q2
World Neurosurgery	1878-8750	2	1,9	Q3
Wound Management & Prevention	2640-5237	1	1	Q4
Wound Repair and Regeneration	1067-1927	1	3,8	Q2










2.9. CIBERs and RETICs



CIBER- Biomedical Research Networking Centers




Throughout 2023, IdiPAZ has participated in the following thematic networks and research consortiums legally recognized by the Carlos III Health Institute.

PROJECT	ACRONYM	CIBER	FUNDING ORGANISATIONS	PRINCIPAL RESEARCHER	IdiPAZ GROUP	END DATE
CB06/05/0007	 Centro Investigación Biomédica en Red Enfermedades Neurodegenerativas	Networked Biomedical Research Center for Neurodegenerative Diseases	Carlos III Health Institute	Bullido Gómez-Heras, María Jesús	Neurology and cerebrovascular diseases	31/12/2023
CB06/05/0010			Carlos III Health Institute	Cuadrado Pastor, Antonio	Neuroprotective Strategies in Neurodegenerative Diseases	31/12/2023
CB07/08/0033	 Centro de Investigación Biomédica en Red Diabetes y Enfermedades Metabólicas Asociadas	Networked thematic area of Diabetes and Associated Metabolic Diseases	Carlos III Health Institute	Martínez Valverde, Ángela María	Neuroprotective Strategies in Neurodegenerative Diseases	31/12/2023
CB15/00037	 Centro de Investigación Biomédica en Red Enfermedades Respiratorias	Networked Biomedical Research Center for Respiratory Diseases	Carlos III Health Institute	García Río, Francisco	Respiratory Diseases	31/12/2023
CB16/10/00464	 Centro de Investigación Biomédica en Red	Centro de Investigación Biomédica en Red en Fragilidad y Envejecimiento Saludable.	Carlos III Health Institute	Rodríguez Mañas, Leocadio	Fragilidad y Envejecimiento Saludable	31/12/2023
CB06/01/0008	 Centro de Investigación Biomédica en Red	Networked Biomedical Research Center for Bio-engineering, Biomaterials and Nanomedicine	Carlos III Health Institute	Vilaboa Díaz, Nuria Elda	Bone Pathophysiology and biomaterials	31/12/2024
CB06/04/0083	 Centro de Investigación Biomédica en Red Enfermedades Hepáticas y Digestivas	Networked Biomedical Research Center for Hepatic and Digestive Diseases	Carlos III Health Institute	García-Samaniego Rey, Javier	Translational Hepatology	31/12/2023
CB06/04/0011				Fondevila Campo, Constantino	Translacional Research and Innovation in general and Digestive Surgery	31/12/2023
CB06/07/1033			Carlos III Health Institute	Caballero Molina, María Teresa	Diagnosis and Treatment of Allergic Diseases	31/12/2023
CB06/07/1005			Carlos III Health Institute	Lapunzina Badía, Pablo	INGEMM Institute of Medical and Molecular Genetics	31/12/2025
CB06/07/0004	 Centro de Investigación Biomédica en Red Enfermedades Raras	Networked Biomedical Research Center for Rare Diseases	Carlos III Health Institute	Pérez González, María Belén	Research and Diagnosis of Inherited Metabolic Diseases	31/12/2024
CB06/07/1021			Carlos III Health Institute	Varela Nieto, María Isabel	Oto-Neurosurgery Research	31/12/2024
CB19/07/00042			Carlos III Health Institute	López Granados, Eduardo	Lymphocyte Pathophysiology in Immunodeficiencies	31/12/2023



2. Executive summary

2.9 CIBERs and RETICs

PROJECT	ACRONYM	CIBER	FUNDING ORGANISATIONS	PRINCIPAL RESEARCHER	IdiPAZ GROUP	END DATE
CB16/11/00286	 Centro de Investigación Biomédica en Red Enfermedades Cardiovasculares	Networked Biomedical Research Center for Cardiovascular Diseases	Carlos III Health Institute	Salaices Sánchez, Mercedes	Vascular Physiology and Pharmacology	31/12/2023
CB16/12/00295	 Centro de Investigación Biomédica en Red Cáncer	Networked Biomedical Research Center for Cancer	Carlos III Health Institute	Moreno Bueno, Gema	Mechanisms of Tumour Progression	31/12/2023
CB16/12/00273			Carlos III Health Institute	Muñoz Terol, Alberto	Mechanisms of Tumour Progression	31/12/2024
CB16/12/00398			Carlos III Health Institute	Feliú Batlle, Jaime	Translational Oncology	31/12/2023
CB21/13/00039	 Centro de Investigación Biomédica en Red Enfermedades Infecciosas	Networked Biomedical Research Center for Infectious Diseases	Carlos III Health Institute	Arribas López, José Ramón	AIDS and Infectious Diseases	31/12/2024
CB21/13/00025				Calvo Rey, Cristina	Pediatric Respiratory, Systemic and Neurological Infections & Host Immune Response	31/12/2024

<https://www.ciberisciii.es/areas-tematicas/%C3%A1reas-tematicas>

Networks and Platforms

IdiPAZ is also part of the following Platforms and Networks for Cooperative Research in Health are organisational structures which seek to conduct cooperative research projects of transversal character.

PROJECT	ACRONYM	CIBER	FUNDING ORGANISATIONS	PRINCIPAL RESEARCHER	IdiPAZ GROUP	END DATE
PT20/00002	 Plataforma de Innovación en Tecnologías Médicas y Sanitarias	Plataforma ITEMAS	Carlos III Health Institute	de Castro Carpeño, Javier	Experimental Therapies and Biomarkers in Cancer	31/12/2023
PT20/00004	 Spanish Biobank Network	Plataforma de biobanco y biomodelos (organoides)	Carlos III Health Institute	Gómez Campelo, Paloma	Frailty, Multimorbidity Patterns and Mortality in the Elderly Population Residing in the Community	31/12/2024
RD21/0016/0027	 Red de Investigación en Cronicidad, Atención Primaria y Promoción de la Salud	Red de Investigación en Cronicidad, Atención Primaria y Promoción de la Salud. (RICAPPS)	Carlos III Health Institute	Salinero Fort, Miguel Ángel	Frailty, Multimorbidity Patterns and Mortality in the Elderly Population Residing in the Community	31/12/2023
RD21/0016/0027				Castell Alcalá, María Victoria	Frailty, Multimorbidity Patterns and Mortality in the Elderly Population Residing in the Community	31/12/2023
PT20/00036	 Spanish Clinical Research Network ISCIII	Plataforma de Unidades de Investigación Clínica y Ensayos Clínicos	Carlos III Health Institute	Carcas Sansuán, Antonio	Clinical Pharmacology	31/12/2023
PTC20/00018		Plataforma ISCIII de soporte para la Investigación Clínica	Carlos III Health Institute	Carcas Sansuán, Antonio	Clinical Pharmacology	31/12/2023
RD21/0006/0012				Red de Enfermedades Vasculares Cerebrales	Carlos III Health Institute	Fuentes Gimeno, Blanca



2. Executive summary

2.9 CIBERs and RETICs

PROJECT	ACRONYM	CIBER	FUNDING ORGANISATIONS	PRINCIPAL RESEARCHER	IdiPAZ GROUP	END DATE
RD21/0002/CRG11	 Red de Enfermedades Inflamatorias RICORS (RD21/0002)	Red de enfermedades inflamatorias	Carlos III Health Institute	Laura Otero, Ortega	Neurology and Cerebrovascular Diseases	31/12/2024
RD21/0012/0014	 RED SAMID	Red de Salud Materno Infantil y del Desarrollo	Carlos III Health Institute	Cabañas González, Fernando	Neonatology	31/12/2024
RD21/0005/0018	 RICORS2040	Inflamación e inmunopatología de órganos y sistemas	Carlos III Health Institute	Bajo Rubio, María Auxiliadora	Nephrology	31/12/2024
RD21/0005/0030		Inflamación e inmunopatología de órganos y sistemas	Carlos III Health Institute	Fernández Juárez, Gemma María	Nephrology	31/12/2024
RD21/0017/0025	 Terav Red Española de Terapias Avanzadas - TerCe	Red de Terapias Avanzadas - TerCel	Carlos III Health Institute	Pérez Martínez, Antonio	Translational Research in Pediatric Oncology, Hematopoietic Transplantation and Cell Therapy	31/12/2024
	 European Consortium of Lipodystrophies (ECLIP)	The European Consortium of Lipodystrophies (ECLIP)	European Network	López Trascasa, Margarita	Diagnosis and Treatment of Diseases Associated with Abnormalities of the Complement System	31/12/2023
CA19117	 ReMO Researcher Mental Health Observatory	Researcher Mental Health Observatory	Horizon Europe COST Action	Gómez Campelo, Paloma	Aging and Fragility in the Elderly	31/12/2024
CA18211	 DEVOTION COST ACTION CA18211	Perinatal Mental Health and Birth-Related Trauma	Horizon Europe COST Action	Bravo Laguna, María Carmen	Neonatology	31/12/2023
CA20121	 BenBedPhar	Bench to bedside transition for pharmacological regulation of NRF2 in noncommunicable diseases	Horizon Europe COST Action	Cuadrado Pastor, Antonio	Neuroprotective Strategies in Neurodegenerative Diseases	18/10/2025
	 European Reference Network Hepatological Diseases (ERN RARE-LIVER)	ERN Hepatological diseases	ERN European Reference Network	Hierro Llanillo, Loreto	Molecular Hepatology	31/12/2023
	 European Reference Network Transplantation in Children (ERN TRANSPLANT-CHILD)	ERN Paediatric Transplants	ERN European Reference Network	Jara Vega, Paloma	Molecular Hepatology	31/12/2023
	 eatris European Infrastructure for translational medicine	EATRIS European Infrastructure for Translational Medicine	EATRIS European Infrastructure	Ibáñez de Cáceres, Inmaculada	Experimental Therapies and Biomarkers in Cancer	31/12/2023
	 ECRIN EUROPEAN CLINICAL RESEARCH INFRASTRUCTURE NETWORK	ECRIN European Clinical Research Infrastructure Network	ERIN European Research Infrastructure Consortium	Carcas Sansuán, Antonio	Clinical Pharmacology	31/12/2023
	 ISCIII Instituto de Salud Carlos III and ecdc European Centre for Disease Prevention and Control	Red de Laboratorios Españoles de secuenciación Genómica de SARS-CoV-2	European Union	Casas Flecha, Inmaculada	Pediatric Respiratory, Systemic and Neurological Infections & Host Immune Response	31/12/2023



2.10. Communication and public engagement



The Scientific Communications have as main tasks the publication of the research carried out by IdiPAZ's scientists and the strengthening of bonds with other institutions and the general public too.

We have increased the media coverage of our research and activities, with a significant increase in appearances in press, and also in social networks. This increase is thanks to the involvement of many of IdiPAZ's researchers.

Thanks to the many collaboration of the centre's scientists, IdiPAZ has participated in activities within the European Researcher's Night, the Science and Innovation Week or the celebration of the International Day of Women and Girls in Science. We have also organized guided visits for high school students, some virtual and some face-to-face visits, talks and workshops for kids and schools.

We would like to acknowledge the collaboration of **La Paz University Hospital** communication office.

2.10.1. Selected media appearances

In 2023, we have issued 32 press releases highlighting the scientific achievements by IdiPAZ. Below is a summary of the top headlines of the year:

	02/02/2023 El Hospital La Paz atendió 1.200 casos de enfermedades importadas en adultos y 120 en niños durante 2022.
	07/02/2023 El Hospital La Paz incorpora el Consejo Experiencia del Paciente para mejorar el abordaje de las cardiopatías congénitas.
	03/03/2023 La Paz, 12 de Octubre y Gregorio Marañón, renuevan en el 'top 100' de los mejores hospitales del mundo.
	21/03/2023 En el corazón (enorme) del mejor hospital de España, La Paz

	23/03/2023 El Hospital La Paz acoge la reunión anual de la Red Europea de Referencia en Anomalías Hereditarias y Congénitas Raras Intestinales.
	27/03/2023 La Paz inaugura 'La Aceleradora', primera unidad de tratamiento no farmacológico de cáncer infantil.
	28/03/2023 El Hospital La Paz de Madrid inaugura la primera unidad de terapia no farmacológica para pacientes de oncología pediátrica.
	29/03/2023 El Hospital La Paz de la Comunidad de Madrid, el que más trasplantes pediátricos practicó de toda España en 2022.



2. Executive summary

2.10 Communication & public engagement

	19/04/2023 El Hospital La Paz usa inteligencia artificial para diagnosticar a los astronautas
	18/05/2023 El Hospital La Paz participa en un estudio internacional que revela variantes genéticas asociadas a COVID-19 grave y posibles dianas terapéuticas.
	22/05/2023 La Paz organiza en el metaverso un curso de simulación clínica en el manejo de la vía aérea.
	22/05/2023 El Hospital La Paz abre sus puertas en el metaverso para formar a sus anestesiólogos.
	26/05/2023 El Hospital La Paz y su Instituto de Investigación, IdiPAZ, participan en el diseño de un robot para la ablación de arritmias cardíacas.
	24/06/2023 El hospital La Paz trata las secuelas del covid con una unidad especial.
	27/06/2023 Jornada de sensibilización sobre el cáncer de próstata en el Hospital La Paz.
	28/06/2023 La Paz, centro pionero en integrar la plataforma de formación MedStream360 en España y Europa.
	26/07/2023 El Hospital La Paz acoge la reunión del consorcio europeo ERICA, que coordina la investigación en enfermedades raras

	03/07/2023 El Hospital La Paz, único centro español integrado en la plataforma de formación 'MedStream360'.
	28/07/2023 El Hospital Universitario La Paz es el mejor en cardiología de España
	07/09/2023 La Comunidad de Madrid, galardonada por la labor de la Unidad de Cardiopatías Congénitas del Hospital público La Paz
	27/09/2023 El Hospital La Paz promueve la participación de la familia en el cuidado del recién nacido que requiere atención especializada.
	10/10/2023 El Hospital La Paz celebra el Día Mundial de la Salud Mental
	19/10/2023 El Hospital La Paz, elegido centro de referencia internacional para la formación en radioterapia adaptativa guiada por resonancia magnética.
	27/10/2023 El Hospital La Paz da un importante paso en el diagnóstico de tumores del sistema nervioso central.
	27/10/2023 El Hospital Universitario La Paz-IdiPAZ avanza en el diagnóstico de tumores del SNC.
	07/11/2023 El Hospital de la Paz realizará sin cita previa diagnósticos precoces de cáncer de próstata por el 'Movember'



2. Executive summary

2.10 Communication & public engagement



14/11/2023

Inteligencia Artificial en sanidad: La Paz como polo español



21/11/2023

La Paz humaniza su área de Oncología transformando su arquitectura.



11/12/2023

La calidad en la información al paciente con cáncer, un "modelo de éxito" que aplica el Hospital La Paz.



13/12/2023

Los hospitales públicos La Paz y Fundación Alcorcón de la Comunidad de Madrid, certificados por su compromiso con la disfgaja



14/12/2023

Seis de los Diez mejores hospitales de España están en Madrid: La Paz, a la cabeza del ranking.



19/12/2023

Una nueva unidad de cáncer pediátrico en el CNIO investiga para llevar terapias personalizadas también a pacientes infantiles.

2.10.2. Scientific Newsletter: IdiPAZ+i News

Throughout 2023, the scientific culture unit has published four newsletters on different issues of interest to researchers.

IdiPAZ+i News

Nº 19
Abril 2023

BOLETÍN DE INFORMACIÓN CIENTÍFICA E INNOVACIÓN DEL IDIPAZ

Nuevos grupos de investigación

La estructura científica de IdiPAZ está en un continuo avance y tras la última reunión y aprobación del Comité Científico Externo se han incorporado tres nuevos "los nuevos grupos o sus respectivas áreas estratégicas".

Los nuevos grupos se han incorporado al Área de Enfermedades Infecciosas, Patología de Grandes Sistemas, y al Área Materno-Infantil y del Adolescente.

Con los nuevos grupos la composición de estas áreas queda de la siguiente manera:

Enfermedades Infecciosas e Inmunidad

- SIDA y enfermedades infecciosas.
- Microbiología molecular.
- Inmunogenética.
- Respuesta inmune innata.
- Diagnóstico y tratamiento de patologías asociadas a alteraciones del sistema del complemento.
- Psicopatología infecciosa en inmunodeficiencias.
- Hipersensibilidad a medicamentos y respuesta inmune innata.
- Enfermedades inmunomediadas gastrointestinales y otras patologías digestivas.
- Regulación por microRNAs de la respuesta inmunológica, autoinmunidad y cáncer.

Materno-Infantil y del Adolescente

- Neonatología.
- Hepatología molecular.
- Medicina materno fetal.
- Patología infecciosa respiratoria, sistémica y neurológica en la infancia, y respuesta inmunológica del feto/placenta.
- Infecciones sistémicas en neonatos, VIH, tuberculosis, patología reproductiva y enfermedades emergentes.
- Investigación traslacional en cáncer infantil, trasplante hematopoyético y terapia celular.
- Maternidades conérgicas y trasplante.
- Investigación en endometriosis.
- Investigación en obesidad integral de niños y adolescentes trasplantados.

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IdiPAZ+i News

Nº 20
Julio 2023

BOLETÍN DE INFORMACIÓN CIENTÍFICA E INNOVACIÓN DEL IDIPAZ

II Jornada de Plataformas de IdiPAZ

El pasado 6 de junio se celebró la II Jornada de Plataformas de Apoyo a la investigación de IdiPAZ, con una exposición de posters a través de los cuales se dieron a conocer los servicios y trabajos que las plataformas aportan a la investigación que se realiza en el IdiPAZ.

El acto fue presentado por Estera Sánchez, responsable de la Unidad de Apoyo a la Innovación, y Patricia Ortega investigadora senior de la UCLIC.

Las Plataformas son estructuras que tienen la finalidad de proporcionar un soporte científico, técnico o tecnológico a los investigadores del Instituto. Han sido creadas para responder a las distintas necesidades que surgen durante la preparación y ejecución de los proyectos de investigación.

IdiPAZ tiene actualmente constituidas veintinueve plataformas que dan un servicio multidisciplinar a los grupos de investigación. Algunos llevan más de 10 años ofreciendo su servicio, mientras que otros son de reciente creación.

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IdiPAZ+i News

Nº 21
Octubre 2023

BOLETÍN DE INFORMACIÓN CIENTÍFICA E INNOVACIÓN DEL IDIPAZ

II Jornada HUB de Plataformas Estratégicas de IdiPAZ-ISCIII

Las Plataformas son estructuras que tienen la finalidad de proporcionar un soporte científico, técnico o tecnológico a los investigadores del Instituto. Han sido creadas para responder a las distintas necesidades que surgen durante la preparación y ejecución de los proyectos de investigación.

El jueves 26 de octubre tuvo lugar la II Jornada del HUB de Plataformas Estratégicas IdiPAZ-ISCIII organizado por la Unidad de Investigación Clínica y Ensayos Clínicos (UICEC), el Biobanco y la Plataforma de Innovación. Las tres plataformas trabajan en coordinación con las plataformas médicas del Instituto de Salud Carlos III que son, respectivamente, la Plataforma de Apoyo a la Investigación Clínica SCIRNH, la plataforma Biobancos y Biomodelos y la Plataforma IEMAS para la dinamización e innovación de las capacidades industriales del Sistema Nacional de Salud.

El Dr. Cristóbal Belzán, Director del Instituto de Salud Carlos III presentó el acto y aprovechó para anunciar las próximas convocatorias de financiación del ISCIII.

Durante el acto la Dra. Ana Húa Laguna recientemente nombrada subdirectora general de Investigación en Terapia Celular y Medicina Regenerativa del ISCIII, realizó el trabajo de las plataformas a nivel nacional de los últimos años y puso en valor el modelo de trabajo conjunto para asegurar y acelerar el éxito del soporte a los proyectos de investigación.

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IdiPAZ+i News

Nº 22
Diciembre 2023

BOLETÍN DE INFORMACIÓN CIENTÍFICA DEL IDIPAZ

PRESENTACIÓN MEMORIA CIENTÍFICA DEL IDIPAZ 2022

La memoria científica recoge el balance de actividad y la recopilación de proyectos y publicaciones científicas desarrolladas por los grupos de investigación del Instituto en el año.

El pasado mes de noviembre se presentó la memoria científica del IdiPAZ correspondiente a la actividad de 2022 y los resultados han vuelto a superarse con respecto al año anterior.

Las publicaciones científicas del IdiPAZ han tenido una progresión en alza con un total de 1.620 publicaciones y 1.295 artículos originales en el año 2022.

Es importante destacar la calidad de las revistas en las que se han publicado los artículos: más del 13% fueron publicados en revistas del primer cuartil y las publicaciones en revistas del primer cuartil superan el 40%.

Resaltamos también la participación en redes de investigación competitivas activas, durante el año 2022 nuestros investigadores/as han participado en 278 de los cuales 58 están activos.

Además de estos proyectos de investigación, se han llevado a cabo 411 ensayos clínicos en diversas áreas de investigación.

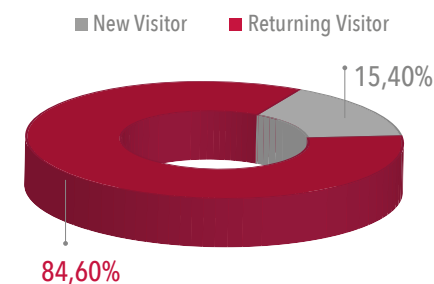
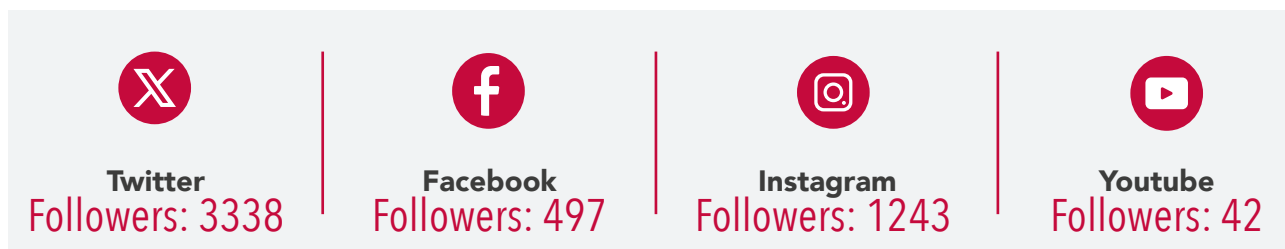
Categoría	2022	2021	2020
Publicaciones	1.620	39.94	13.27
Open Access Publications	684	30.85	7.02
Un-covered Publications	936	46.36	17.64
Artículos	1.295	39.81	18.96
Open Access Originals	501	29.94	5.79
Un-covered Originals	794	45.21	17.38
Ensayos Clínicos Competitivos Activos	278	46.44	13.04
Open Access "JCR Indexed" Articles and Reviews	544	35.91	6.26
Un-covered "JCR Indexed" Articles and Reviews	808	46.45	13.39

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2.10.3. Social networks

On the other hand, news that includes the work of our researchers, data about courses, grants and other news of interest to the public, are published in the main social networks. Our Twitter account, @IdiPAZscience, has the largest number of followers among the institutes of the Community of Madrid. IdiPAZ has its own profiles:



2.10.4. Formative Pills about Sustainable Development Goals and Responsible Research and Innovation

We work to promote the Sustainable Development Goals (SDG) good practices through the small training pills. We sent 73 training pills over the 2030 Agenda, SDG and Responsible Research and Innovation:



- 03 Ene. Nº 01/2023: "Gestión de Residuos y Contribución a los ODS"
- 04 Ene. Nº 02/2023: Cursos sobre ciencia abierta
- 09 Ene. Nº 03/2023: Plan de Prevención
- 10 Ene. Nº 04/2023: Día Día Mundial de la Lucha contra la Depresión
- 11 Ene. Nº 05/2023: Nueva versión de la norma CVN en abierto
- 25 Ene. Nº 06/2023: Acción contra el tabaquismo
- 30 Ene. Nº 07/2023: Día Mundial de las Enfermedades Tropicales Desatendidas
- 01 Feb. Nº 08/2023: El uso de la Copia Oculta y la Protección de Datos
- 03 Feb. Nº 09/2023: Día Mundial contra el Cáncer
- 06 Feb. Nº 10/2023: Gestión de datos en REDCap
- 10 Feb. Nº 11/2023: Programa de Ciencia por la Calle
- 13 Feb. Nº 12/2023: Ayuda humanitaria para Turquía y Siria



- 01 Mar. Nº 14/2023: Día de la cero discriminación
- 12 Mar. Nº 15/2023: Enfermedades Raras
- 18 Mar. Nº 16/2023: IdiPAZ se tiñe de morado
- 09 Mar. Nº 17/2023: Plataforma de Transformación Sostenible y Agenda 2030
- 13 Mar. Nº 18/2023: Encuesta sobre la implementación del sello HRS4R en el IdiPAZ
- 14 Mar. Nº 19/2023: Encuesta sobre los Objetivos de Desarrollo Sostenible del IdiPAZ
- 15 Mar. Nº 20/2023: Cuídate (programas formativos FREMAP)
- 21 Mar. Nº 21/2023: ¿Qué es la estrategia HRS4R?
- 11 Abr. Nº 22/2023: Día Mundial de la Salud
- 18 Abr. Nº 23/2023: XVI Maratón de donación de sangre
- 19 Abr. Nº 24/2023: Jornada sobre el Sistema Integral de Calidad





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2.10 Communication & public engagement

25 Abr. Nº 25/2023:	Día de la Propiedad Intelectual	
04 May. Nº 26/2023:	¡Cuidate! Programas formativos de FREMAP	
08 May. Nº 27/2023:	Política RSC y compromiso con los ODS	
12 May. Nº 28/2023:	Día Internacional de la Enfermería	
16 May. Nº 29/2023:	Mes de la Diversidad	
17 May. Nº 30/2023:	Día del Reciclaje	
25 May. Nº 31/2023:	Fase de Implementación HRS4R	
29 May. Nº 32/2023:	Memoria de Sostenibilidad	
30 May. Nº 33/2023:	Día de la investigación hospitalaria	
31 May. Nº 34/2023:	Día Mundial Sin Tabaco	
02 Jun. Nº 35/2023:	Encuesta sobre la diversidad generacional	
07 Jun. Nº 36/2023:	Día nacional del donante de órganos	



FORMACIÓN EN INVESTIGACIÓN E INNOVACIÓN RESPONSABLE Y ODS
Píldora formativa nº 29/2023

Día Internacional de la Enfermería

Hoy 12 de mayo se celebra el Día Internacional de la Enfermería, con el objetivo de rendir un merecido homenaje a todos los profesionales de Enfermería, que realizan una labor imprescindible a nivel mundial, en un sector vital para la sociedad como es el sanitario. Desde el hospital queremos felicitar a todos los profesionales de Enfermería del centro por su labor diaria incansable e indispensable.



Como tributo a Florence Nightingale, nacida en esta fecha, es considerada la fundadora de la enfermería moderna. Los cuidados con una calidad humana. Dice Arriaga, paleoantropólogo español, que "en la naturaleza sólo se da muerte o plantar" no hay enfermedad entre otros seres vivos porque mueren por un depredador o porque no puede subsistir. Hace más de 600.000 años en Castilla y en algunas zonas de San Vito vestes de homínidos con enfermedades por las que tuvieron que ser cuidados. El cuidado forma parte del proceso de hominización. Iguel, estudiante profesora sanitaria le que cuida, pues todos tienen aspecto de

08 Jun. Nº 37/2023:	Mes del Orgullo LGTBIQ+	
12 Jun. Nº 38/2023:	Cáncer de próstata	
13 Jun. Nº 39/2023:	Participación Semana de la Ciencia 2023	
14 Jun. Nº 40/2023:	Día Mundial del Donante de sangre	
16 Jun. Nº 41/2023:	Formación FREMAP	
21 Jun. Nº 42/2023:	Soslitio de verano	
28 Jun. Nº 43/2023:	Día Internacional del Orgullo LGBTBI	
07 Jul. Nº 44/2023:	Teléfono contra la LGTBifobia	
13 Jul. Nº 45/2023:	Encuesta ODS	
19 Jul. Nº 46/2023:	Picaduras de garrapatas	
07 Sep. Nº 47/2023:	Programas formativos de FREMAP	
08 Sep. Nº 48/2023:	Día Mundial de la Prevención del Suicidio	



FORMACIÓN EN INVESTIGACIÓN E INNOVACIÓN RESPONSABLE Y ODS
Píldora formativa nº 40/2023

Semana de la ciencia y la Innovación 2023

Como parte de la Iniciativa Ciencia por la Calle, se anima a participar en la nueva edición de la Semana de la Ciencia y la Innovación 2023, organizada por la Comunidad de Madrid, a través de la Fundación para el Conocimiento Científico y que se celebrará del 6 al 19 de noviembre.



IdiPAZ ha colaborado activamente en jornadas anteriores y este año no podía faltar a su cita. Por ello, animamos la colaboración a los investigadores e investigadoras, plataformas y grupos de investigación, que se animen a participar en esta edición. Para asegurarnos, simplemente, debéis recordar un correo a investacion@idiipaz.es antes del 24 de junio y se os indicará cómo proceder.

(¡Muchas gracias!)

11 Sep. Nº 49/2023:	Huella de carbono	
12 Sep. Nº 50/2023:	Noche europea de los investigadores	
13 Sep. Nº 51/2023:	Renovación del compromiso con la Carta de la Diversidad	
14 Sep. Nº 52/2023:	Día Internacional del Donante de Médula Ósea	
18 Sep. Nº 53/2023:	RRI en los proyectos de investigación	
19 Sep. Nº 54/2023:	Día de la Seguridad del Paciente	
20 Sep. Nº 55/2023:	Curso Plataforma de Transformación Sostenible	
21 Sep. Nº 56/2023:	Noche de los investigadores	
27 Sep. Nº 57/2023:	Curso de Igualdad en el entorno laboral	
28 Sep. Nº 58/2023:	VII Jornada del Comité de Ética Asistencial	
29 Sep. Nº 59/2023:	Jornada por el Día Mundial de la Salud Mental	



FORMACIÓN EN INVESTIGACIÓN E INNOVACIÓN RESPONSABLE Y ODS
Píldora formativa nº 49/2023

Día Internacional del Donante de Médula Ósea

El Hospital Universitario La Paz celebra una de las actividades organizadas en España que coincide en las celebraciones por el Día Internacional del Donante de Médula Ósea y reanuda el curso de formación. Se trata de una iniciativa que pretende sensibilizar a la población sobre la importancia de la donación de médula ósea.

El objetivo de las actividades de la donación de médula ósea es la creación de un banco de células madre que sirva de reserva para el tratamiento de enfermedades hematológicas y algunas enfermedades autoinmunes y cáncer. Estas células madre se utilizan para reemplazar las células dañadas o destruidas por enfermedades y lesiones, así como para tratar a pacientes con leucemia y otros tipos de cáncer.

El objetivo de esta acción es aumentar el número de personas que forman parte del registro de donantes de médula ósea a la hora de realizar pruebas y recibir los pacientes las mejores posibilidades de encontrar un donante compatible inmunológicamente para el trasplante.



Para poder donar se debe ser mayor de 18 años y cumplir con un conjunto de requisitos. En IdiPAZ se ha creado un espacio de información y ayuda a través de un equipo de trabajo que se encuentra en el Hospital Universitario La Paz y que puede ser contactado a través de un correo electrónico o por teléfono. Para más información y asistencia se puede contactar con el equipo de trabajo.

03 Oct. Nº 60/2023:	Formación FREMAP	
13 Oct. Nº 61/2023:	Jornada de Reanimación Cardiopulmonar	
16 Oct. Nº 62/2023:	Actividades de la semana de la ciencia	
19 Oct. Nº 63/2023:	Campaña de vacunación	
23 Oct. Nº 64/2023:	Día Internacional de la Gestión de Proyectos	
26 Oct. Nº 65/2023:	Política OTM-R	
27 Oct. Nº 66/2023:	Actividades de la Semana de la Ciencia	
08 Nov. Nº 67/2023:	November	
16 Nov. Nº 68/2023:	Píldora formativa REGIC sobre Ciencia Abierta	
24 Nov. Nº 69/2023:	Día contra la violencia de género	



FORMACIÓN EN INVESTIGACIÓN E INNOVACIÓN RESPONSABLE Y ODS
Píldora formativa nº 60/2023

Día Mundial de la Salud Mental

El próximo 10 de octubre, conmemoramos el Día Mundial de la Salud Mental. Se trata de una jornada organizada por la Organización Mundial de la Salud (OMS) y que tiene como objetivo concienciar a la población sobre la importancia de la salud mental y promover la atención y el apoyo a las personas con problemas de salud mental.

En IdiPAZ, nos comprometemos a trabajar en conjunto con la comunidad científica y profesional para mejorar la atención y el apoyo a las personas con problemas de salud mental. Para ello, estamos organizando una serie de actividades y campañas de sensibilización que tendrán lugar durante el mes de octubre.



El programa encontrará más información: <https://www.who.int/es/news-room/events/2023/03/23-24-2023>



FORMACIÓN EN INVESTIGACIÓN E INNOVACIÓN RESPONSABLE Y ODS
Píldora formativa nº 72/2023

IdiPAZ finalista en la IX edición de los Premios Fundación Diversidad

El pasado 30 de noviembre, IdiPAZ fue seleccionada finalista en los IX Premios Fundación Diversidad por su compromiso con la diversidad e inclusión en la institución, en la categoría de entornos académicos.

La falta de entornos de diversidad puede ser un obstáculo para el avance de la ciencia y la innovación. Por ello, es fundamental que las instituciones académicas y profesionales trabajen en conjunto para mejorar la diversidad en todos sus niveles.

Además, queremos agradecer al equipo de trabajo de IdiPAZ por su compromiso con la diversidad y su contribución a la creación de un entorno de trabajo más inclusivo y equitativo. Gracias a su esfuerzo, IdiPAZ ha sido reconocida como una de las instituciones más diversas de España.



27 Dic. Nº 73/2023:	Canales de denuncia	
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2.11. Responsible Research and Innovation



Responsible Research and Innovation (RRI) is the Science with and for Society framework that encompasses all key actions aimed to anticipate and assess potential implications and societal expectations with regard to research and innovation, with the aim to Foster the design of inclusive and sustainable research and innovation. Based on RRI principles, IdiPAZ is growing to imply societal actors to work together for the research process in order to align both the process and its outcomes with the values, needs and expectations of society.

IdiPAZ has continued and development new several RRI actions:

Ethics and Research Integrity



HR EXCELLENCE IN RESEARCH

- **Human Resources Strategy for Researchers- HRS4R:** comprises the Charter and Code principles, gap analysis, OTM-R and action Plan design. In 2020, the European Commission awarded the 'HR Excellence in Research Award' to the institution. In 2022, we worked on the implementation of the second phase of the HRS4R strategy which is based on the development of the Action Plan and its revised version after the mid-term evaluation, reaching the intermediate

phase of this strategy.

Today, we remain committed to achieving the key advantages offered by this strategy:

- Foster a favorable working environment for research staff.
- Fostering a change in the work culture.
- To be part of the European network of research centers.
- Strengthen human resources policies.
- To facilitate the international visibility of the institute.
- Own Ethic Committee: *Research Ethics Committee with Medical Products and Animal Welfare Organ*
- *International Organisation for Standardisation (ISO) 9001 Certification for Committees and Platforms of IdiPAZ.*
- Good Practice Recommendations Guidelines

Open Access

- Review and update of our own *Open access Guideline of IdiPAZ (15/12/2022)*.
 - Information notes about our Open Science Policy have been sent through our communication channel.
- Promotion and encouragement of researchers to upload in the institutional Open-Access Repositories their papers and research data:
 - *Repisalud* of the "Carlos III" Institute of Health,
 - *Institutional Repository of the Regional Health*

System of the Madrid Autonomous Region (AR),

- *Biblos-e Archivo*, of the Autonomous University of Madrid. Repositories allow researchers to collect, preserve and make available to any interested person the scientific production generated by the professionals as result of their assistance, research and teaching activity, thus guaranteeing their conservation and open access and promoting their visibility and dissemination.
- Creation and promotion of the *Scientific Seminars web archive*, with online video recording to connect to the scientific community and the society.
- Since 2020, IdiPAZ participates as a member of the *European Open Science Cloud (EOSC) Association* (<https://eosc.eu>) to:
 - accelerate the creation of open knowledge,
 - increase the re-use of research databases by the larger community,
 - inspire ways for ways to share medical data that ensures respect to privacy of personal information,
 - promote education in Open Science practices,
 - spur innovation and foster new jobs aimed to sustain openness and curation of research.
- Implementation of Act 19/2013, of December 9, 2013, on transparency, access to public information and good governance. FIBHULP is registered in the *Transparency Register of the*



Madrid AR since March 4, 2021 with registration number 202100170.

- **European Union Transparency Register.** FIBHULP is currently listed in the **European Union Register** as of May 10, 2021 under registration number 86699642652-90.
- The Institute informs all its members of IdiPAZ's commitments to current European policies regarding Open Sciences and RRI through its *website*.
- The following training and conferences related to Open Science and RRI have been held:
 - 25/04/2022 to 28/04/2022- *Responsible Research and Innovation (RRI) In Biomedicine*
 - 29/04/2022 - Equal opportunities in today's society course
 - 05/05/2022 - Participation in the Infoday CVN conference organised by FECYT
 - 23/06/2022- *RRI in IdiPAZ*
 - 27/09/2022 to 04/11/2022 - Participation in the course Formando para Formar given by the Instituto de Salud Carlos III in which participants were trained in Open Science.
 - 28/10/2022 - 11th Inflammatory Bowel Disease Patient Training Day
 - 07/11/2022 to 20/11/2022 - Science and Innovation Week
 - 22/11/2022 - Waste Management and Contribution to the SDGs Course
 - 24/11/2022 - *Seminars CVN and ORCID Identifier within the Mentor Programme*
 - 28/11/2022 to 02/12/2022 *Smart time management course*
 - 15/12/2022 - *Seminars Gender Perspective and Dimension in Research within the Mentor Programme*

Science Education

- **Scientific divulgation activities:** At IdiPAZ we have a communication plan focused on planning the Institute's communication actions, both internal and external. In this way, the *Commission for Humanization and Social and Scientific Responsibility* of IdiPAZ carries out activities and workshops with educational centres, associations and the public, bringing science closer to society in a more humane way.
 - Activities for International Day of Women and Girls in Science
 - Activities for international women's day
 - Activities for Science and Innovation Week
 - Activities for European Researchers' Night
 - Science on the street
- Scientific Culture and Innovation Unit of IdiPAZ

Public engagement



- Current information about *Clinical Trials* research studies in different phases for Patients
- The society has the opportunity to collaborate with IdiPAZ via sponsorship and our Patronage Strategy - *Pazito: colabora*
- *IdiPAZ+i News* is an information bulletin focus to translated the society that the hospital is not only a place to treat the patients, otherwise the researchers try to improve the health and well-being of our population with the research and innovation projects.

Governance

- IdiPAZ is a participating member of the *Coalition for Advancing Research Assessment* The Coalition will help all kinds of research performing organisations to abandon or reposition uninformative metrics (Journal Impact Factor, *h*-index, Shanghai rankings etc.) towards a more comprehensive system of scientific quality evaluation, aligned with *DORA* and *HRS4R*.
 
- Participative Governance: European Reference Network on paediatric transplantation (*ERN TransplantChild*), coordinated by our institution, TransplantChild Patients Committee.
- Research Ethics Committee with Medical Products
- *Commission for Humanisation and Social & Scientific Responsibility* of IdiPAZ: This commission aims to ensure compliance with the principles of Responsible Research and Innovation (RRI) and Open Science, following the recommendations of the European Commission. It is also committed to promoting the social and scientific responsibility of our researchers, aimed at promoting research and innovation for society. Through this committee, we have launched a process of integration of the Sustainable Development Goals and the 2030 Agenda, receiving certification in June 2022 in sustainable strategy by AENOR and certifying us again in 2023 in maintaining our commitment. The members of the commission include representatives of patients' associations, representatives of the district council, the hospital and FIBHULP/IdiPAZ.
- Complaint Channels: As part of the IdiPAZ so-



cial responsibility management system and attention to our stakeholders, we have enabled the following reporting channels

- Conduct Code
- Code of Ethics and Good Scientific Practices
- Protocol Against Harassment
- Action Against Fraud, Corruption and Conflict of Interest
- Claim or Suggestions of Job Offers
- Complaint Channels: At IdiPAZ we have created a channel through which our stakeholders can communicate suggestions and complaints with the aim of improving the performance of the company.

Gender Equality

- Design of the **II Equality and Diversity Plan**, registered with REGCON (*Registro y Depósito de Convenios Colectivos, acuerdos colectivos de trabajo y Planes de Igualdad*)- Code 28109182112021
- Creation of the *Equality and Diversity Committee*
- IdiPAZ's Commission for Equality and Diversity developed the *Protocol for the prevention of and action against discriminatory harassment, moral and sexual harassment and harassment based on gender* to recognize, prevent, and if necessary, eradicate all those behaviours and organizational factors that reveal violent behaviour in the workplace and promote a healthy work environment and climate, both physically and psychologically.
- *Preventing and dealing with situations of inter-*

nal conflict, violence and harassment in Biomedical Research Foundations

- *Human Resources Strategy for Researchers-HRS4R*: endorsed the Charter and Code principles, gap analysis, OTM-R and action Plan design.
- Participation in the International Day of Women and Girls in Science

Social Responsibility



In 2020, IdiPAZ/FIBHULP obtained the IQNet SR10 international certification, as a mark of confidence to shareholders and other stakeholders that reliable, recognised and value-focused management practices are in place, and returning to obtain this certification in 2022 and 2023..

In addition, we have continued with our a commitment to the sustainable *development goals and the 2030 agenda* , as well as with our *corporate social responsibility policy*, which includes the the activities and guidelines that are carried out to fulfil this commitment.

Goals to Transform Our World

In line with the Social Responsibility Strategy, IdiPAZ began in 2021 to on the Sustainable Development Goals proposed by the 2030 Agenda for Sustainable Development, adopted by all Member States of the United Nations. This is a shared plan for peace and prosperity for people and planet, now and in the fu-



ture, and 17 Sustainable Development Goals (SDGs) were proposed. After months of work, in June 2022, IdiPAZ achieved AENOR certification in sustainable strategy.



A materiality study was conducted through a process of sending questionnaires to the institute's stakeholders, identifying and mapping all the institute's lines of research and projects. As a result of the analysis, IdiPAZ prioritised four Sustainable Development Goals that were included in its Strategic Plan for research and innovation as follows:

Strategic ODS:

- 3. Good Health
- 5. Gender Equality
- 8. Decent work and Economic Growth
- 9. Innovation and Infrastructure
- 10. Reduced inequalities
- 12. Responsible consumption and production
- 17. Partnerships for the goals

Relevant ODS:

- 4. Quality education
- 7. Affordable and clean energy
- 13. Climate action
- 16. Peace, justice and strong institutions



The prioritized SDGs have been aligned and integrated with the objectives and axes of the Strategic Plan for Research and Innovation 2020-2024. In addition, a first Sustainability Report was drawn up, which has been updated year after year and includes the entire process of implementing the SDGs in the institute and the actions to be developed since their implementation. The intention is that IdiPAZ contributes to the implementation of the SDGs through its work on the seven strategic goals and targets. The objectives we are going to work on in the short and long term are the following:



3.3 By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases.

3.4 By 2030, reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being.

3.5 Strengthen the prevention and treatment of substance abuse, including narcotic drug abuse and harmful use of alcohol.

3.A Strengthen the implementation of the World Health Organisation Framework Convention on Tobacco Control in all countries, as appropriate.

3.B Support the research and development of vaccines and medicines for the communicable and non-communicable diseases that primarily affect developing countries, provide access to affordable essential medicines and vaccines, in accordance with the Doha Declaration on the TRIPS

Agreement and Public Health, which affirms the right of developing countries to use to the full the provisions in the Agreement on Trade Related Aspects of Intellectual Property Rights regarding flexibilities to protect public health, and, in particular, provide access to medicines for all.

3.C Substantially increase health financing and the recruitment, development, training and retention of the health workforce in developing countries, especially in least developed countries and small island developing States.



5.1 End all forms of discrimination against all women and girls everywhere

5.2 Eliminate all forms of violence against all women and girls in the

public and private spheres, including trafficking, sexual, and other types of exploitation

5.4 Recognize and value unpaid care and domestic work through the provision of public services, infrastructure and social protection policies and the promotion of shared responsibility within the household and the family as nationally appropriate

5.5 Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision making in political, economic and public life

5.B Enhance the use of enabling technology, in particular information and communications technology, to promote the empowerment of women

5.C Adopt and strengthen sound policies and enforceable legislation for the promotion of gender equality and the empowerment of all women and girls at all levels



8.3 Promote development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity and innovation, and encourage the formalisation and growth of micro-, small- and medium-sized enterprises, including through access to financial services

8.5 By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value

8.6 By 2020, substantially reduce the proportion of youth not in employment, education or training

8.7 Take immediate and effective measures to eradicate forced labour, end modern slavery and human trafficking and secure the prohibition and elimination of the worst forms of child labour, including recruitment and use of child soldiers, and by 2025 end child labour in all its forms

8.8 Protect labour rights and promote safe and secure working environments for all workers, including migrant workers, in particular women migrants, and those in precarious employment

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9.1 Develop quality, reliable, sustainable and resilient infrastructure, including regional and trans-border infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all

9.2 Promote inclusive and sustainable industrialization and, by 2030, significantly increase the contribution of industry to employment and gross domestic product, in accordance with na-

9.2 Promote inclusive and sustainable industrialization and, by 2030, significantly increase the contribution of industry to employment and gross domestic product, in accordance with na-



tional circumstances, and double that contribution in the least developed countries.

9.3 Increase access of small industries and other enterprises, particularly in developing countries, to financial services, including affordable credit, and their integration into value chains and markets.

9.5 Enhance scientific research, upgrade the technological capabilities of industrial sectors in all countries, in particular developing countries, including, by 2030, encouraging innovation and substantially increasing the number of research and development workers per 1 million people and public and private research and development spending

10 REDUÇÃO DAS DESIGUALDADES

10.2 By 2030, empower and promote the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status

10.3 Ensure equal opportunity and reduce inequalities of outcome, including by eliminating discriminatory laws, policies and practices and promoting appropriate legislation, policies and action in this regard

10.4 Adopt policies, especially fiscal, wage and social protection policies, and progressively achieve greater equality

12.2 By 2030, achieve the sustainable management and efficient use of natural resources

12.4 By 2020, achieve the environmentally

12 CONSUMO E PRODUÇÃO RESPONSÁVEIS

sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimise their adverse impacts on human health and the environment

12.5 By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse

12.8 By 2030, ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature

17 PARCERIAS E MEIOS DE IMPLEMENTAÇÃO

17.6 Enhance North-South, South-South and triangular regional and international co-operation on and access to science, technology and innovation and enhance knowledge sharing on mutually agreed terms, including through improved coordination among existing mechanisms, in particular at the United Nations level, and through a global technology facilitation mechanism

17.17 Encourage and promote effective public, public-private and civil society partnerships, building on the experience and resourcing strategies of partnerships.

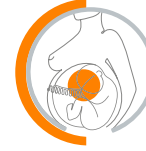
In our sustainability report you can find our sustainability management and the implementation of the Sustainable Development Goals in our institute, as

well as all the action plans that will be carried out in the coming years.

In relation to our commitment to the SDGs, throughout this 2023 we have developed a series of campaigns that favor their achievement and support the environmental and social improvement of our surroundings. Some of the campaigns we have carried out or in which we have collaborated have been:



3 Information groups by area





3.1 Neurosciences Area

Documents: 140 | Originals: 107 | D1: 24 | Q1: 76

Area coordinator: Exuperio Díez Tejedor

coordinadorneurociencias@idipaz.es

RESEARCH GROUPS

3.1.1 Psychiatry and Mental Health - María Fe Bravo Ortíz

3.1.2 Neurology and Cerebrovascular Diseases - Exuperio Díez Tejedor/María Gutiérrez Fernández

3.1.3 Neuroprotective Strategies in Neurodegenerative Diseases - Ana Isabel Rojo Sanchís

3.1.4 Involvement of Glycinergic and Glutamatergic Systems in Central Nervous System Pathologies
Francisco Zafra Gómez

3.1.5 Mechanisms and Biomarkers in Neurodegenerative Diseases - Isabel Lastres Becker

3.1.6 Multiple Sclerosis Research - Yolanda Aladró Benito



3.1 Neurosciences Area

Strategic Objectives	Development forecast for the coming years:	Actions
Neuroscience Area is composed of 5 research groups and has as general objectives the promotion of teaching, research and dissemination of knowledge in the field of neurosciences and neurological diseases, particularly in relation to clinical neurosciences.	Cohesion between different disciplines (biomedical research, engineering).	Performing annual workshops and seminars science
	Encourage and promote research among the healthcare staff who sometimes perceive research as something negative.	Training in research methodology in specialized health personnel and in training
	Innovation and technology transfer	Innovation promotion program that involves health organizations, research institutions and companies

HIGH IMPACT PUBLICATIONS

Ferreira V, Folgueira C, García-Altare M, Guillén M, Ruíz-Rosario M, DiNunzio G, García-Martínez I, Alen R, Bookmeyer C, Jones JG, Cigudosa JC, López-Larrubia P, Correig-Blanchar X, Davis RJ, Sabio G, Rada P, **Valverde AM**. Hypothalamic JNK1-hepatic fatty acid synthase axis mediates a metabolic rewiring that prevents hepatic steatosis in male mice treated with olanzapine via intraperitoneal: Additional effects of PTP1B inhibition. *Redox Biol.* 2023; 63: 102741. Article. IF: 10.7; D1

García-Martínez I, Alen R, Pereira L, Povo-Retana A, Astudillo AM, Hitos AB, Gómez-Hurtado I, López-Col-lazo E, Boscá L, Francés R, Lizasoain I, Moro MA, Balsinde J, Izquierdo M, **Valverde AM**. Saturated fatty acid-enriched small extracellular vesicles mediate a crosstalk inducing liver inflammation and hepatocyte insulin resistance. *Jhep Rep.* 2023; 5(8): 100756. Article. IF: 9.5; D1

Iglesias GT, Fernández-Fournier M, Botella L, Piniella D, Laso-García F, Frutos MCGD, Chamorro B, Puer-tas I, Barranco AT, Fuentes B, de Leciñana MA, Alonso-López E, Bravo SB, Miranda-Carús ME, Monte-ro-Calle A, Barderas R, Díez-Tejedor E, **Gutiérrez-Fernández M, Otero-Ortega L**. Brain and immune system-derived extracellular vesicles mediate regulation of complement system, extracellular matrix remodeling, brain repair and antigen tolerance in Multiple sclerosis. *Brain Behav Immun.* 2023; 113: 44-55. Article. IF: 8.8; D1

del Puerto A, López-Fonseca C, Simón-García A, Martí-Prado B, Barrios-Muñoz AL, Pose-Utrilla J, López-Menéndez C, Alcover-Sánchez B, Cesca F, Schiavo G, Campanero MR, Farinas I, Iglesias T, **Porlan E**. Kidins220 sets the threshold for survival of neural stem cells and progenitors to sustain adult neurogenesis. *Cell Death Dis.* 2023; 14(8): 500. Article. IF: 8.1; Q1

La Touche R, Fierro-Marrero J, Sánchez-Ruiz I, de Rivera-Romero BR, Cabrera-López CD, Lerma-Lara S, Requejo-Salinas N, de Asís-Fernández F, Elizagaray-García I, Fernández-Carnero J, Matesanz-García L, Pardo-Montero J, Paris-Aleman A, Reina-Varona A. Prescription of therapeutic exercise in migraine, an evidence-based clinical practice guideline. *J Headache Pain.* 2023; 24(1): 68. Article. IF: 7.3; D1

Scientific Events by Neurosciences Area

- **24/03/2023.** Scientific Seminar - Neuroprotective strategies based on ECS modulation in ALS and FTD
- **24/04/2023.** Novedades en el conocimiento de los trastornos cognitivos y del comportamiento
- **02/06/2023.** Scientific Seminar - Discovering molecular alterations associated with sporadic ALS and ALS-SOD1 to develop new multi-targeted drugs as potential treatments for the disease
- **25/09/2023.** Innovaciones en el conocimiento de los Trastornos Neurológicos Funcionales: Cambios de paradigma
- **10/10/2023.** Jornada por el Día Mundial de la Salud Mental 2023
- **17/10/2023.** Innovaciones en el diagnóstico y tratamiento de las enfermedades de motoneurona
- **25/10/2023.** Jornada de actualización sobre coordinación entre Atención Primaria y Salud Mental para la prevención de la conducta suicida
- **14/11/2023.** Jornadas en Manejo de la Espasticidad en Pacientes con Esclerosis Múltiple
- **29/11/23.** XII Symposium - Neuroinmunología y Esclerosis Múltiple
- **18/12/23** Neurosonología Avanzada
- **15/12/2023** Scientific Seminar - Ultrasonidos Focal en Neurología y Neurociencias: Posibilidades y Obstáculos



3.1.1 Psychiatry and Mental Health Group



Publications: 24 | Q1:13

COMPOSITION

María Fe Bravo Ortíz.

Jefa del servicio de Psiquiatría, Psicología Clínica y Salud Mental. Hospital Universitario La Paz. Profesora Asociada CCSS. Facultad de Medicina. Universidad Autónoma de Madrid

- **Teresa Alonso Poza.** Investigadora Predoctoral. FIBHULP
- **Blanca Amador Sastre.** Facultativo Especialista de Área en Psicología Clínica. Hospital Universitario La Paz
- **Jorge Andreo Jover.** Investigador Predoctoral. FIBHULP

- **Carmen Bayón Pérez.** Jefa de Sección de Psiquiatría. Hospital Universitario La Paz. Profesora Asociada. CCSS. Facultad de Medicina. Universidad Autónoma de Madrid
- **Katya Barros March.** Investigadora Predoctoral. FIBHULP
- **Laura Caraballo Romero.** Enfermera Especialista en Salud Mental. Hospital Universitario La Paz
- **Susana Cebolla Lorenzo.** Facultativo Especialista de Área en Psiquiatría. Hospital Universitario La Paz
- **Ana Pilar Collado Blanco.** Investigadora Predoctoral. FIBHULP
- **Javier Curto Ramos.** Facultativo Especialista de Área en Psiquiatría. Hospital Universitario La Paz
- **Consuelo de Dios Perrino.** Jefa de sección de Psiquiatría. Hospital Universitario La Paz. Profesora Asociada. Facultad de Medicina. Universidad Autónoma de Madrid
- **Eduardo Fernández Jiménez.** Facultativo Especialista de Área en Psicología Clínica. Hospital Universitario La Paz
- **Omar Ariel Gaona Casas.** Investigador Predoctoral. FIBHULP
- **Ignacio García Cabeza.** Jefe de Servicio de Psiquiatría. Hospital Rodríguez Lafora
- **Blanca García Vázquez.** Psicóloga Interna Residente. Hospital Universitario La Paz
- **Jessica Garrido Boltón.** Psicóloga Interna Residente. Hospital Universitario La Paz
- **Nieves González Suárez.** Facultativo Especialista de Área en Psiquiatría. Hospital Universitario La Paz
- **Ana Hospital Moreno.** Facultativo Especialista de Área en Psicología Clínica. Hospital Universitario La Paz
- **Eduardo Jiménez Sola.** Facultativo Especialista de Área en Psiquiatría. Hospital Universitario La Paz
- **Jesús Martí Esquitino.** Facultativo Especialista de Área en Psicología Clínica. Hospital Universitario La Paz
- **Gonzalo Martínez-Ales García.** Investigador Postdoctoral. Universidad de Harvard
- **Manuel Agustín Morillas Romerales.** Facultativo Especialista en Psiquiatría. Hospital Universitario La Paz

- **Ainoa Muñoz San José.** Facultativo Especialista de Área en Psiquiatría. Hospital Universitario La Paz. Profesora Asociada CCSS. Facultad de Medicina. Universidad Autónoma de Madrid
- **Patricia Nieva Tejado.** Enfermera Especialista en Salud Mental. Hospital Universitario La Paz
- **Luis Nocete Navarro.** Facultativo Especialista de Área en Psiquiatría. Hospital Universitario La Paz
- **Óscar Pajares González-Gallego.** Enfermero Especialista en Salud Mental CSM Fuencarral. Hospital Universitario La Paz
- **Ángela Palao Tarrero.** Jefa de Sección de Psiquiatría. Hospital Universitario La Paz. Profesora Asociada CCSS Facultad de Medicina. Universidad Autónoma de Madrid

- **Pau Pérez Sales.** Facultativo Especialista de Área en Psiquiatría. Hospital Universitario La Paz
- **Cristina Rocamora González.** Psicóloga. Residencia Asistida San Camilo
- **Beatriz Rodríguez Vega.** Facultativo Especialista de Área en Psiquiatría. Hospital Universitario La Paz. Profesora Asociada. Facultad de Medicina. Universidad Autónoma de Madrid
- **María Paz Vidal Villegas.** Técnico de Apoyo. Hospital Universitario La Paz
- **Rosa Villanueva Peña.** Facultativo Especialista de Área en Psiquiatría. Hospital Universitario La Paz. Profesora Asociada CCSS. Facultad de Medicina. Universidad Autónoma de Madrid

STRATEGIC OBJECTIVES

- The group is devoted to assess the efficacy of psychotherapeutic techniques as adjunctive to other therapeutic measures in mental disorders and other medical diseases.
- Their main areas of investigation are: research in severe mental disorder, psychosis and bipolar disorder, suicide prevention and other medical disorders such as cancer and chronic pain. We participate in clinical trials on new treatments and specific therapies in order to improve the prognosis of these disorders.
- It also focuses on the investigation of the interaction of genetic and environmental factors in the etiology and evolution of mental disorders, especially psychosis.
- Moreover, the group is involved in the evaluation of new treatments or new indications in mental disorders through the participation in clinical trials.
- We are specially focused in the assessment of the efficacy and effectiveness of third generation psychotherapies, including mindfulness, and other low intensity psychological intervention.

RESEARCH LINES

- Psychotherapeutic interventions in mental disorders
- Suicide prevention
- Psychological and social impact of the COVID-19 pandemic
- e-Health interventions
- Mindfulness-based interventions
- Environment/gene interaction in First Episode Psychosis



RESEARCH ACTIVITY

Doctoral Theses

- Montero Ruiz S. Aplicabilidad, seguridad y eficacia de una intervención basada en mindfulness, en pacientes portadores de desfibrilador automático implantable: estudio piloto aleatorizado [dissertation]. Madrid: UAM: 2023(26/06/2023). Director: Rodríguez Vega B.
- Nocete Navarro L. La experiencia de los profesionales de salud mental en el uso de sujeciones mecánicas en la Comunidad de Madrid: una investigación cualitativa con personal en formación. [dissertation]. Madrid: UAM: 2023(18/05/2023). Director: Bravo Ortiz MF.
- Orosa Duarte A. Eficacia de una intervención digital basada en mindfulness en el desarrollo de empatía y autocompasión en estudiantes de ciencias de la salud [dissertation]. Madrid: UAM: 2023(30/11/2023). Director: Rodríguez Vega B.

Rocamora González C. Eficacia de una intervención basada en el mindfulness a través de una aplicación móvil "en calma en el quirófano" para personas en espera de cirugía colorrectal: ensayo clínico aleatorizado. [dissertation]. Madrid: UAM: 2023(20/01/2023). Director: Palao Tarrero A, Rodríguez Vega B.

Publications

- Arias-de la Torre J, Vilagut G, Ronaldson A, Bakolis I, Dregan A, Martín V, Martínez-Alés G, Molina AJ, Serrano-Blanco A, Valderas JM, Viana MC, Alonso J. Prevalence and variability of depressive symptoms in Europe: update using representative data from the second and third waves of the European Health Interview Survey (EHIS-2 and EHIS-3). *Lancet Public Health*. 2023; 8(11): E889. Article. IF: 25.4. D1
- de Dios C, Carracedo-Sanchidrián D, Bayón C, Rodríguez-Vega B, Bravo-Ortiz MF, González-Pintod AM, Lahera G. Mindfulness-based cognitive therapy versus psychoeducational intervention in bipolar outpatients: Results from a randomized controlled trial. *Span J Psychiatry Ment Health*. 2023; 16(4): 251-8. Article. Not Indexed
- de la Torre-Luque A, Pemau A, Ayad-Ahmed W, Borges G, Fernández-Sevillano J, Garrido-Torres

- N, Garrido-Sánchez L, Garriga M, González-Ortega I, González-Pinto A, Grande I, Guinovart M, Hernández-Calle D, Jiménez-Treviño L, López-Sola C, Mediavilla R, Pérez-Aranda A, Ruiz-Veguilla M, Seijo-Zazo E, Toll A, Pérez-Sola V, Ayuso-Mateos JL. Risk of suicide attempt repetition after an index attempt: A systematic review and meta-analysis. *Gen Hosp Psychiat*. 2023; 81: 51-6. Review. IF: 4.1; Q1
- de la Vega R, Serrano-Ibáñez ER, Ruiz-Párraga GT, Palermo TM, Wicksell R, Fernández-Jiménez E, Oliva S, Roldán S, Monfort L, Peláez MJ, Carmona ML, Ramírez-Maestre C, López-Martínez AE, Miró J, Esteve R. Protocol for a multi-phase multi-center real-world hybrid effectiveness-implementation study of a digital intervention for pediatric chronic pain co-designed with patients (Digital SPA). *Digit Health*. 2023; 9: 20552076231219500. Article. IF: 2.9; Q2
- Izquierdo A, Cabello M, Leal I, Torio I, Madrigal JLM, MacDowell KS, Rodríguez-Jiménez R, Rentero D, Ibáñez A, Ayora M, Díaz-Caneja CM, Abregii-Crespo R, Mellor-Marsá B, Díaz-Marsá M, Malpica N, Bravo-Ortiz MF, Baca-García E, Arango C, Ayuso-Mateos JL, AGES-CM Grp. Neighborhood vulnerability and disability in first episode of psychosis: a multilevel study. *J Clin Psychiat*. 2023; 84(2): 22m14401. Article. IF: 4.5; Q1
- Joséph VA, Martínez-Ales G, Olsson M, Shaman J, Gould MS, Gimbrone C, Keyes KM. Trends in suicide among black women in the United States 1999-2020. *Am J Psychiat*. 2023; 180(12): 914-7. Editorial Material. IF: 15.1; D1
- Kandula S, Martínez-Alés G, Rutherford C, Gimbrone C, Olsson M, Gould MS, Keyes KM, Shaman J. County-level estimates of suicide mortality in the USA: a modelling study. *Lancet Public Health*. 2023; 8(3): E184-93. Article. IF: 25.4; D1
- López-Cuadrado T, Szmulewicz A, Öngür D, Martínez-Alés G. Clinical characteristics and outcomes of people with severe mental disorders hospitalized due to COVID-19: A nationwide population-based study. *Gen Hosp Psychiat*. 2023; 84: 234-40. Article. IF: 4.1; Q1
- Lotito C, Turrini G, Purgato M, Bryant RA, Fellez-Nobrega M, Haro JM, Lorant V, McDaid D, Mediavilla R, Melchior M, Nicaise P, Nosè M,

- Park AL, McGreevy KR, Roos R, Tortelli A, Underhill J, Martínez JV, Witteveen A, Sijbrandij M, Barbui C. Views and experiences of migrants and stakeholders involved in social and health care for migrants in Italy during the COVID-19 pandemic: a qualitative study. *BMC Psychol*. 2023; 11(1): 164. Article. IF: 2.7; Q1
- Martínez-Alés G, Bello I, Basaraba C, Van der Ven E, Mascayano F, Nossel I, Labouliere C, Susser E, Wall M, Stanley B, Dixon LB. Incidence prevalence and trajectories of suicidal ideation among clients enrolled in early intervention services for first episode psychosis in New York State. *Schizophr Res*. 2023; 256: 17-25. Article. IF: 3.6; Q1
- Martínez-Alés G, López-Cuadrado T, Morrison C, Keyes K, Susser E. The impact of the COVID-19 pandemic on suicide mortality in Spain: Differences by sex and age. *J Affect Disorders*. 2023; 329: 315-23. Article. IF: 4.9; Q1
- Martínez-Alés G, Szmulewicz A, López-Cuadrado T, Morrison CN, Keyes KM, Susser ES. Suicide following the COVID-19 pandemic outbreak: variation across place over time and across sociodemographic groups. a systematic integrative review. *Curr Psychiat Rep*. 2023; 25(7): 283-300. Review. IF: 5.5; D1
- Martínez-Nicolás I, Molina-Pizarro CA, Franco AR, Castañeda PAE, Maya C, Barahona I, Martínez-Alés G, Bisquert FA, Delgado-Gómez D, Dervic K, López-Fernández O, Baca-García E, Barrigón ML. What seems to explain suicidality in Yucatan Mexican young adults? Findings from an app-based mental health screening test using the SMART-SCREEN protocol. *Curr Psychol*. 2023; 42(35): 30767-79. Article. IF: 2.5; Q2
- Mediavilla R, Fellez-Nobrega M, McGreevy KR, Monistrol-Mula A, Bravo-Ortiz MF, Bayón C, Giné-Vázquez I, Villaescusa R, Muñoz-Sanjosé A, Aguilar-Ortiz S, Figueiredo N, Nicaise P, Park AL, Petri-Romao P, Purgato M, Witteveen AB, Underhill J, Barbui C, Bryant R, Kalisch R, Lorant V, McDaid D, Melchior M, Sijbrandij M, Haro JM, Ayuso-Mateos JL. Effectiveness of a mental health stepped-care programme for healthcare workers with psychological distress in crisis settings: a multicentre randomised controlled trial.

- BMJ Ment Health*. 2023; 26(1): e300697. Article. Not Indexed
- Mediavilla R, Fernández-Jiménez E, Andreo J, Morán-Sánchez I, Muñoz-Sanjosé A, Moreno-Küstner B, Mascayano F, Ayuso-Mateos JL, Bravo-Ortiz MF, Martínez-Alés G. Association between perceived discrimination and mental health outcomes among health workers during the initial COVID-19 outbreak. *Span J Psychiatry Ment Health*. 2023; 16(4): 221-4. Article. Not Indexed
- Mediavilla R, Martínez-Alés G, Andreo-Jover J, Louzao-Rojas I, Cebolla S, Muñoz-Sanjosé A, Fernández-Jiménez E, Aguirre P, Ayuso-Mateos JL, Bravo-Ortiz MF, Bayón-Pérez C. Mental health service requirements after COVID-19 hospitalization: A 1-year follow-up cohort study using electronic health records. *Span J Psychiatry Ment Health*. 2023; 16(1): 58-9. Letter. Not Indexed
- Pérez V, Elices M, Toll A, Bobes J, López-Solà C, Diaz-Marsá M, Grande I, López-Peña P, Rodríguez-Vega B, Ruiz-Veguilla M, de la Torre-Luque A. The Suicide Prevention and Intervention Study (SURVIVE): Study protocol for a multisite cohort study with nested randomized-controlled trials. *Span J Psychiatry Ment Health*. 2023; 16(1): 16-23. Article. Not Indexed
- Purgato M, Turrini G, Tedeschi F, Serra R, Tarsitani L, Compri B, Muriago G, Cadorin C, Ostuzzi G, Nicaise P, Lorant V, Sijbrandij M, Witteveen AB, Ayuso-Mateos JL, Mediavilla R, Haro JM, Fellez-Nobrega M, Figueiredo N, Pollice G, McDaid D, Park AL, Kalisch R, Petri-Romao P, Underhill J, Bryant RA, Nosè M, Barbui C. Effectiveness of a stepped-care programme of WHO psychological interventions in migrant populations resettled in Italy: Study protocol for the RESPOND randomized controlled trial. *Front Public Health*. 2023; 11: 1100546. Article. IF: 3.0; Q2
- Reneses B, Escudero A, Tur N, Agera-Ortiz L, Moreno DM, Saiz-Ruiz J, Rey-Bruguera M, Pando MF, Bravo-Ortiz MF, Moreno A, Rey-Mejas A, Singh SP. The black hole of the transition process: dropout of care before transition age in adolescents. *Eur Child Adolesc Psy*. 2023; 32(7): 1285-95. Article. IF: 6.0; D1
- Ruiz SM, Vega BR, Pérez CB, Peinado RP. Mindfulness-based emotional regulation for patients



3.1 Neurosciences Area

- with implantable cardioverter-defibrillators: A randomized pilot study of efficacy applicability and safety. *Cardiol J.* 2023; 30(3): 401-10. Article. IF: 2.5; Q2
- **Ruiz-Parra E, Manzano-García G, Mediavilla R, Rodríguez-Vega B, Lahera G, Moreno-Pérez AI, Torres-Cantero AM, Rodado-Martínez J, Bilbao A, González-Torres MA.** The Spanish version of the reflective functioning questionnaire: Validity data in the general population and individuals with personality disorders. *Plos One.* 2023; 18(4): e0274378. Article. IF: 2.9; Q1
 - **Vázquez-García B, Martínez-Alés G, Fernández-Jiménez E, Andreo-Jover J, Moreno-Küstner B, Minué S, Jaramillo F, Morán-Sánchez I, Martínez-Morata I, Ayuso-Mateos JL, Bayón C, Bravo-Ortiz MF, Mediavilla R.** Use of psychological interventions among healthcare workers over the 2-year period following the COVID-19 pandemic: A longitudinal study. *Plos One.* 2023; 18(10): e0292932. Article. IF: 2.9; Q1
 - **Villanueva R.** Advances in the knowledge and therapeutics of schizophrenia major depression disorder and bipolar disorder from human brain organoid research. *Front Psychiatry.* 2023; 14: 1178494. Review. IF: 3.2; Q2
 - **Zorrilla I, López-Zurbano S, Alberich S, Barbero I, López-Pena P, García-Corres E, Pascual JPC, Crespo JM, de Dios C, Balanzá-Martínez V, González-Pinto A.** Lithium levels and lifestyle in patients with bipolar disorder: a new tool for self-management. *Int J Bipolar Disord.* 2023; 11(1): 11. Article. IF: 2.8; Q2

Research projects

- **Bravo Ortiz MF.** Ambiente y genes en esquizofrenia. (S2022/BMD-7216 AGES 3-CM). CM. 2023-2026. *Management centre: FIBHULP*
- **Bravo Ortiz MF.** Contrato garantía juvenil ayudante de investigación. (PEJ-2021-AI/SAL-22352). CM. 2023-Ongoing. *Management centre: FIBHULP*
- **Bravo Ortiz MF.** Estudio longitudinal de una cohorte representativa: superando la heterogeneidad clínica y biológica en primeros episodios psicóticos. (PI20/01113). ISCIII. 2021-2025. *Management centre: FIBHULP*

- **Bravo Ortiz MF.** Estudio sobre el impacto de la implantación del programa ARSUIIC en la prevención de la conducta suicida en el área de influencia del Hospital Universitario La Paz. (BRAVO ORTIZ PI-2116). UCICEC. 2015-Ongoing. *Management centre: FIBHULP*
- **Bravo Ortiz MF.** Impacto de la pandemia de COVID-19 en la salud mental de trabajadores en dispositivos sanitarios. Estudio internacional multicéntrico: the COVID-19 Heroes Study. (PI-4099-BRAVO ORTIZ). Sociedad Española de Psiquiatría. 2020-Ongoing. *Management centre: FIBHULP*
- **Bravo Ortiz MF.** Improving the Preparedness of Health Systems to Reduce Mental Health and Psychosocial Concerns resulting from the COVID-19 Pandemic. (RESPOND). UE. 2020-2024. *Management centre: FIBHULP*
- **Fernández Jiménez E.** Identificación de necesidades pre- y post-quirúrgica y evolución neuropsicológica y biopsicosocial en población infantojuvenil sometida a cirugía de trasplante de órgano sólido y pectus excavatum. proyecto psycmajorsurgeries. (PI-5223/2022014). Fundación Alicia Koplowitz. 2022-Ongoing. *Management centre: FIBHULP*
- **Fernández Jiménez E.** Marcadores neurocognitivos y perfil psicológico en población infantil, adolescente y en adultos jóvenes receptores de terapia con células CAR-T y trasplante hematopoyético: estudio observacional comparativo. (PI-5562/2023.063). FIBHULP. Hospital Universitario La Paz. 2022-Ongoing. *Management centre: FIBHULP*
- **Fernández Jiménez E.** Marcadores neurocognitivos y perfil psicológico en población infantil, adolescente y en adultos jóvenes receptores de terapia con células CAR-T y trasplante hematopoyético: Estudio observacional comparativo. FIBHULP. 2023-2024. *Management centre: FIBHULP*
- **Palao Tarrera A.** Intensificación de la actividad investigadora de investigadores participantes del programa mentor. FIBHULP. 2023-2024. *Management centre: FIBHULP*
- **Palao Tarrera A.** Prevención e intervención en suicidio (SURVIVE): estudio de cohorte y ensayos clínicos controlados anidados de programas de prevención secundaria para intentos de sui-

- cidio. (PI19/00941). ISCIII. 2020-2024. *Management centre: FIBHULP*
- **Rodríguez Vega B.** Traducción y validación de los instrumentos reflective functioning questionnaire e inventory of personality organization. (Rodríguez VEGA PI-2956). Fundación Vasca de Innovación e Investigación Sanitarias. 2018-Ongoing. *Management centre: FIBHULP*
 - **Villanueva Peña R. A** Randomized, Double-blind, Multicenter, Parallel-group, Placebo-controlled. Study to evaluate the efficacy, safety, and tolerability of aticaprant 10 mg as adjunctive therapy in adult participants with major depressive disorder (MDD) with moderate-to-severe anhedonia and inadequate response to current antidepressant therapy protocol 67953964MDD3001 VENTURA-1;PAHASE 3. Janssen Pharmaceutica. 2023-2024. *Management centre: FIBHULP*

Clinical Trials

- **Villanueva Peña R.** A phase 2/3, multicenter, randomized, double-blind, placebo-controlled trial of the safety and efficacy of flexible doses of sep-363856 as adjunctive therapy in the treatment of adults with major depressive disorder. *Type/Phase: II*
Sponsored by: Otsuka Pharmaceutical Development & Commercialization, Inc
Signed date: 08/02/2023
- **Villanueva Peña R.** estudio de las características de la enfermedad y la eficacia del tratamiento habitual en la vida real en pacientes con trastorno depresivo mayor (tdm) con anhedonia y respuesta inadecuada al tratamiento antidepressivo actual, incluido un isrs o un irsn. *Type/Phase: E0m prospectivo*
Sponsored by: Janssen Research & Development, LLC
Signed date: 13/12/2023
- **Villanueva Peña R.** Estudio multicéntrico, doble ciego, aleatorizado, de grupos paralelos, controlado con placebo, para evaluar la eficacia y la seguridad de seltorexant 20 mg como tratamiento complementario a los antidepressivos en pacientes adultos y de edad avanzada con trastorno depresivo mayor con síntomas de insomnio que respondieron de manera inadecuada al tratamiento con antidepressivos y un tratamiento

de extensión de seguridad abierto a largo plazo con seltorexant.

Type/Phase: III
Sponsored by: Janssen Pharmaceutica Nv
Signed date: 12/01/2023

- **Villanueva Peña R.** Un estudio abierto y a largo plazo para evaluar la seguridad y la eficacia de aticaprant como tratamiento complementario en participantes adultos y de edad avanzada con trastorno depresivo mayor (tdm). *Type/Phase: III*
Sponsored by: Janssen Cilag International Nv
Signed date: 09/08/2023
- **Villanueva Peña R.** Un estudio aleatorizado, doble ciego, multicéntrico, de grupos paralelos y controlado con placebo para evaluar la eficacia, la seguridad y la tolerabilidad de aticaprant 10 mg como tratamiento complementario en participantes adultos con trastorno depresivo mayor (tdm) con anhedonia moderada o grave y una respuesta insuficiente al tratamiento antidepressivo actual. *Type/Phase: III*
Sponsored by: Janssen Cilag International Nv
Signed date: 11/07/2023

Patents and Trademarks



Rodríguez Vega B, authors; FIBHULP, assignee. Brand name: En calma; ESM 3.695.071; 2017 December 12.



Rodríguez Vega B, Mediavilla Torres R, Bravo Ortiz MF, Muñoz San José A, Bayón Pérez C, Lahera Forteza G, Palao Tarrero A. authors; FIBHULP, assignee. Brand name: SocialMind; ESM 3.748.550; 2018 December 17.



3.1.2 Neurology and Cerebrovascular Diseases Group

Publications: 62 | Q1:35

COMPOSITION

Exuperio Díez Tejedor.

Investigador Emerito. FIBHULP. Catedrático Neurología. Departamento de Medicina. Universidad Autónoma de Madrid

María Dolores Gutiérrez Fernández.

Investigadora. Miguel Servet tipo II. Laboratorio de Ciencias Neurológicas y Cerebrovascular. FIBHULP



- **María José Aguilar-Amat Prior.** Facultativo Especialista de Área en Neurología. Hospital Universitario La Paz
- **María Alonso de Leciñana Cases .** Facultativo Especialista de Área en Neurología Profesora Asociada Neurología. Hospital Universitario La Paz
- **Elisa Alonso López.** Investigadora Río Hortega. Hospital Universitario La Paz
- **Francisco Javier Arpa Gutiérrez.** Profesor Honorario. Universidad Autónoma de Madrid
- **María Jesús Bullido Gómez-Heras.** Profesor Titular. Departamento de Biología Molecular. Facultad de Ciencias. CBM "Severo Ochoa"
- **Fernando Carceller Benito.** Facultativo Especialista de Área en Neurocirugía. Hospital Universitario La Paz
- **Laura Casado Fernández.** Investigadora Río Hortega. FIBHULP
- **Elena de Celis Ruiz.** Contrato Río Hortega. Hospital Universitario La Paz
- **Jorge Eduardo Collazos Castro.** Jefe de Laboratorio de Reparación Neural y Biomateriales. Hospital Nacional de Paraplégicos de Toledo
- **Clara Correa Paz.** Investigadora Sara Borrell. FIBHULP

- **Francisco Javier Díaz de Terán Velasco.** Facultativo Especialista de Área en Neurología. Hospital Universitario La Paz
- **Josué Fernández Carnero.** Profesor e Investigador Postdoctoral. Centro Superior de Estudios Universitarios La Salle
- **Andrés Francisco Fernández Prieto.** Facultativo Especialista de Área en Radiología . Hospital Universitario La Paz
- **Mireya Fernández-Fournier Fernández.** Facultativo Especialista de Área en Neurología. Hospital Universitario La Paz
- **Raúl Ferrer Peña.** Profesor Titular. Centro Superior de Estudios Universitarios La Salle
- **Ana Frank García.** Jefe de Sección en Servicio de Neurología. Hospital Universitario La Paz. Profesora Titular de Neurología. Facultad de Medicina. Universidad Autónoma de Madrid
- **Remedios Frutos Martínez.** Facultativo Especialista de Área en Radiología. Hospital Universitario La Paz
- **Blanca Fuentes Gimeno.** Jefe de Sección en Neurología. Hospital Universitario La Paz. Profesora Asociada. Universidad Autónoma de Madrid

- **Rebeca Gallego Ruiz.** Investigadora Predoctoral. Laboratorio de Ciencias Neurológicas y Cerebrovascular. FIBHULP
- **María Luisa Gandía González.** Facultativa Especialista de Área en Neurocirugía. Hospital Universitario La Paz
- **Iván García Suárez.** Facultativo Especialista de Área en Urgencias. Hospital Universitario San Agustín
- **Alfonso Gil Martínez.** Fisioterapeuta. Hospital Universitario La Paz
- **Ana Cristina Guadaño Ferraz.** Científico Titular. Departamento de Fisiopatología Endocrina y del Sistema Nervioso. IIB "Alberto Sols"
- **María Hernández Barral.** Facultativo Especialista de Área en Neurología. Hospital Universitario La Paz
- **David Hernández Herrero.** Facultativo Especialista de Área en Rehabilitación y Medicina Física. Hospital Universitario La Paz
- **Laura Lacruz Ballester.** Facultativo Especialista de Área en Neurología. Hospital Universitario La Paz
- **Manuel Lara Lara.** Facultativo Especialista de Área en Neurología. Hospital Universitario La Paz

- **Fernando Laso García.** Investigador Predoctoral. Laboratorio de Ciencias Neurológicas y Cerebrovascular. FIBHULP
- **María Pilar López Larrubia.** Científica Titular. CSIC. IBB "Alberto Sols"
- **María Paz López Molina.** Investigador Predoctoral. Laboratorio de Ciencias Neurológicas y Cerebrovascular. FIBHULP
- **Begoña Marín Aguilera.** Facultativo Especialista de Área en Radiología. Hospital Universitario La Paz
- **Juan Andrés Martín Gonzalo.** Profesor Titular. Escuela Universitaria de Fisioterapia de la ONCE
- **Ángel Martín Montes.** Facultativo Especialista de Área en Neurología. Hospital Universitario La Paz
- **Marta María Martínez Martínez.** Facultativo Especialista de Área en Neurología. Hospital Infanta Sofía. Profesora Asociada. Universidad Europea de Madrid
- **Javier Pedro Mascias Cadavid.** Facultativo Especialista de Área de Neurología. Hospital Universitario La Paz



STRATEGIC OBJETIVES

CEREBROVASCULAR

- Development of translational research studies (both animal and clinical studies) in cerebrovascular diseases, with the objectives of increasing the understanding of the pathogenesis of both cerebral infarction (with cortical and subcortical affectation) and cerebral hemorrhage. To analyze the influence of hyperglycemia, diabetes and glycemic variability in the evolution of stroke. To identify prognostic biomarkers and therapeutic targets mainly aimed at the promotion of brain protection and repair, with a special interest on the development of cell therapy as well as in trophic factors, extracellular vesicles and remyelinating drugs. To analyze the contribution of comorbidities in the mechanisms that occur after stroke, and the effect of therapies (protective, reparative ...) in animal models of stroke associated with hypertension, hyperglycemia and diabetes.
- Clinical trials of cell therapy in acute cerebral infarction (clinical trial AMASCIS and European Consortium RESSTORE-H2020).
- Development of innovative strategies in the diagnosis and treatment of ischemic stroke, through the development of an independent operator-ultrasound device for brain visualization and for enhancement by ultrasound of drug therapies (BDNF, extracellular vesicles) in the ischemic area.
- Evaluation of the benefit of the implementation of prehospital clinical scales able to identify of patients of cerebral artery occlusion susceptible to mechanical thrombectomy in order to shorten treatment delay and improve the prognosis of patients.
- Study of the clinical (neurological and neuropsychological) and anthropological factors influencing functional recovery and reintegration of stroke patients as well as the compliance with the recommendations for secondary stroke prevention.
- To analyze the recovery of post-stroke aphasia through a dubbing tool for television series and the development of a communication app. To evaluate the use of virtual reality in the recovery of motor and cognitive sequelae post-stroke, as well as the computational analysis of movement.
- To evaluate the effectiveness of keeping oral or parenteral anticoagulation in the acute phase of cardioembolic ischemic stroke
- To discover factors anticipating the development of atrial fibrillation through EKG and echocardiographic abnormalities in cryptogenic stroke.
- Impact of COVID-19 pandemic in stroke care and in stroke outcomes
- Analysis of Patient Reported Outcome Measures (PROM) and Patient Reported Experience Measures (PREM) in stroke
- To analyze the differences between general anesthesia and sedation with high flow nasal canula in the endovascular treatment of ischemic stroke.

HEADACHES AND NEUROPATHIC PAIN

- Analysis of the expression of the phenomenon central painful awareness in different primary and secondary headaches.
- Central Sensitization and pain perception in patients with cluster headache.
- Features and outcome of migraine in patients with fibromyalgia.
- Response to OnabotulinumtoxinA in High Frequency Episodic Migraine.

- **Marta Naranjo Castresana.** Facultativo Médico Especialista de Área en Neurofisiología Clínica. Hospital Universitario La Paz
- **Pedro Navía Álvarez.** Facultativo Especialista de Área en Radiología. Hospital Universitario La Paz
- **Pilar Negro Madrigal.** Profesor Interino. Departamento de Anatomía, Histología y Neurociencia. Universidad Autónoma de Madrid
- **Jesús Oliván Palacios.** Facultativo Especialista de Área en Neurofisiología Clínica. Hospital Universitario La Paz
- **Laura Otero Ortega.** Investigadora. Miguel Servet Tipo I. Laboratorio de Ciencias Neurológicas y Cerebrovascular. FIBHULP
- **María del Valle Palomo Ruiz.** Coordinador del Laboratorio de Biosensores en Neurociencia. Fundación IMDEA Nanociencia
- **Joaquín Pardo Montero.** Profesor Titular. Centro Superior de Estudios Universitarios La Salle
- **José Francisco Paz Solís.** Facultativo Especialista de Área en Neurocirugía. Hospital Universitario La Paz
- **Irene Peirotn Pascual.** Enfermera. FIBHULP
- **Javier Pozo Novoa.** Investigador Predoctoral. Laboratorio de Ciencias Neurológicas y Cerebrovascular. FIBHULP
- **Inmaculada Puertas Muñoz.** Facultativo Especialista de Área en Neurología. Hospital Universitario La Paz
- **Estrella Rausell Tamayo.** Catedrática. Departamento de Anatomía, Histología y Neurociencias. Facultad de Medicina. Universidad Autónoma de Madrid
- **Ricardo Jaime Rigual Bobillo.** Facultativo Especialista de Área de Neurología. Hospital Universitario La Paz
- **Ivón Yamileth Rivera Derás.** Facultativo Especialista de Área en Geriatria. Hospital Universitario La Paz
- **Irene Rodríguez Andonaegui.** Profesor Ayudante. Escuela Universitaria de Fisioterapia de la ONCE
- **Jorge Rodríguez de Pardo de Donlebún.** Facultativa Especialista de Área en Neurología. Hospital Universitario La Paz
- **Francisco Javier Rodríguez de Rivera Garrido.** Facultativo Especialista de Área en Neurología. Hospital Universitario La Paz
- **Ana Rodríguez Sanz.** Facultativo Especialista de Área en Neurología. Hospital Universitario La Paz
- **Aranzazu Royo Orejas.** Jefe de Sección de Radiología. Hospital Universitario La Paz
- **Gerardo Ruiz Ares.** Facultativo Especialista de Área en Neurología. Hospital Universitario La Paz
- **María Teresa Salas Campos.** Técnico Superior Psicología. Servicio de Neurología. Hospital Universitario La Paz
- **Susana Santiago Pérez.** Facultativo Especialista de Área en Neurofisiología. Hospital Universitario La Paz
- **Soledad Serrano López.** Facultativa Especialista de Área en Neurología. Hospital Universitario La Paz
- **Gabriel Torres Iglesias.** Contrato Río Hortega. FIBHULP
- **Gema Torrijos Barbero.** Especialista en Neuropsicología. Unidad de Memoria y Demencias. Hospital de Cantoblanco-Hospital Universitario La Paz
- **Arturo Ugalde Canitrot.** Facultativo Especialista de Área en Neurofisiología Clínica. Hospital Universitario La Paz



- Refractory migraine database.
- Short Term Prophylaxis of Cluster Headache: A Comparative Study.
- Study of neuropathic and chronic craniofacial pain
- Photophobia management using greater occipital nerve blocks in migraine patients
- CGRP-pathway drugs in patients with refractory migraine and medication overuse headache
- CGRP-pathway drugs in patients with refractory migraine and autoimmune diseases
- CGRP-pathway drugs in elderly patients with refractory migraine
- Multicentric collaboration in post-COVID related headache investigation
- Features and outcome of chronic refractory cluster headache treated with greater occipital nerve stimulation
- Chronic cluster headache registry

Alzheimer's disease

- Study of the lysosomal pathway involvement in a model of neurodegeneration and cholesterol dysregulation in Alzheimer's disease.
- Study of genetic polymorphism related with PSP in the context of a multicentre Genome Wide Association study (GWAS)

Parkinson's disease

- Tremor as a negative predictive factor in developing dementia associated with Parkinson's disease.
- Evaluation of the benefits and risks of continuous infusion of intraduodenal levodopa in idiopathic Parkinson's disease.

Hereditary ataxias

- Assessment of therapeutic response to Frenkel training exercises enhanced by Wii game console in patients with cerebellar ataxia.
- Participation in the Registry of the European Consortium EFACTS (European Friedreich's Ataxia Consortium for Translational Studies) aimed at improve the knowledge of the epigenetic mechanisms related to silencing the expression of frataxin and the pathogenesis of the disease, identification of biomarkers and genes modifying the clinical expression of the disease, development of new therapies as well as cellular and animal models for the study of Friedreich's Ataxia.

NEUROIMMUNOLOGY/NEUROINFLAMMATION

Multiple sclerosis

- Analysis of extracellular vesicles as biomarkers in multiple sclerosis patients.
- Analysis of molecular and neuroimaging biomarkers of brain damage and repair in Multiple Sclerosis.
- Search for diagnostic biomarkers, disease monitoring and response to treatment in Multiple Sclerosis
- Development of parametric test in multiple sclerosis by photometric strategies.

Autoimmune encephalitis and other autoimmune neurological diseases

- Neurological syndromes associated to antiGAD antibodies
- Paraneoplastic syndromes and other neurological diseases associated to antibodies.

Infectious diseases

- Study of neurological symptoms after COVID19 recovery in patients refer to specific consultation
- Analysis of brain volumetry in patients with cognitive symptoms after COVID19
- COVID-19 associated encephalopathy. Risk factors and outcomes

AUTONOMIC NERVOUS SYSTEM

- Evaluation of the Autonomic Nervous System in movement disorders.
- Evaluation of the Autonomic Nervous System in focal autonomic neuropathies and in Fabry disease.

NEUROMUSCULAR DISEASES

- Develop a hand thermography tool for the diagnosis of fine fiber neuropathy.
- Amyotrophic Lateral Sclerosis (ALS)
- Analysis of the different profiles of cognitive impairment in ALS patients. Adaptation and validation of cognitive ALS specific scales for Spanish patients. Study of cognitive potentials for identification of possible specific EEG endophenotypes in ALS patients.
- Study of biomarkers in ALS and other motor neuron diseases. Genetic, metabolomic and proteomic profiling combined with clinical parameters.

- Participation In Project MinE: International program analyzing the genoma of 15000 patients and controls by the same genotyping platform.
- Participación en ensayos clínicos en Miastenia Gravis
- Participación en el Registro nacional de Enfermedad de Pompe
- Desarrollo de técnicas de ultrasonografía en las enfermedades neuromusculares

SLEEP

- Development and evaluation of intervention protocols in childhood insomnia treatment.
- Analysis of sleep microstructure in newborns with Prader Willi Syndrome.
- Study on the efficacy of child insomnia treatment with oral iron supplements against placebo.

EPILEPSY

- Analysis of factors influencing the recurrence of seizures, tolerance and adherences to drugs, during the first monotherapy in patients with epilepsy.
- Analysis of neuropsychological disorders in the primary generalized epilepsy.
- Obstructive sleep apnea in Epilepsy.
- Impact of perampanel in patients with epileptic encephalopathies. A multicentric study.
- Approach to refractory status epilepticus. Analysis of the different anesthetic agents commonly used in an intensive care unit
- Epilepsy in the elderly patient: peculiarities and treatment alternatives, with a special focus in refractory cases.

DIGITAL TECHNOLOGIES APPLIED TO NEUROLOGICAL DISEASES.

- Objective assessment of motor or other functional deficits (stroke, movement disorders, multiple sclerosis)
- Environmental enrichment to promote early stroke recovery
- Virtual reality in promoting cognitive and motor recovery
- New applications of ultrasound for diagnosis and research in neurological diseases
- Artificial Intelligence applied to diagnosis and clinical management



NEUROSTIMULATION

- Neurostimulation in brain and spinal cord injuries

BRAIN DEVELOPMENT DISORDERS

- Study and functional classification of the gait of pediatric patients with cerebral palsy.
- Study and functional classification of the gait of patients with familial spastic paraparesis.
- Gait analysis as a tool for the differential diagnosis between child cerebral palsy and PEF in paediatric patients.

BRAIN PLASTICITY AND REPAIR AFTER CERE-BRAL DAMAGE. TRASLATIONAL RESEARCH

- Therapies with trophic factors, stem cells and extracellular vesicles
- Biomarkers of damage and repair in neurological diseases
- Ultrasound monitoring and visualization of the brain and peripheral organs in animal models

RESEARCH LINES

- Cerebrovascular diseases.
- Headache and neuropathic pain.
- Neurodegenerative diseases: cognitive disorders, movement disorders and spinocerebellar ataxias.
- Neuroimmunology. Multiple sclerosis.
- Neuromuscular diseases. Motor neuron diseases Amyotrophic lateral sclerosis.
- Digital Technologies applied to neurological diseases
- Neurostimulation in brain and spinal cord injuries
- Developmental disorders and neurological maturation (TRADEs-MA).
- Brain plasticity and repair after cerebral damage. Traslational research

RESEARCH ACTIVITY

Doctoral Theses

- **Haro Martínez AM.** Terapia de Entonación Melódica en el tratamiento de la afasia postictus. Adaptación al idioma español y análisis de eficacia[dissertation]. *Madrid: UAM: 2023(20/09/2023). Director: Fuentes Gimeno B, Díez Tejedor E.*
- **de Celis Ruiz E.** Terapia reparadora cerebral con células troncales alogénicas derivadas de tejido adiposo en el ictus isquémico[dissertation]. *Madrid: UAM: 2023(16/10/2023). Director: Fuentes Gimeno B, Díez Tejedor E. EC2010/171*
- **Elizagaray García I.** Distinguiendo entre pacientes con migraña crónica y cefalea tensional crónica a través de la exploración somatosensorial y musculoesquelética cervical[dissertation]. *Madrid: UAM: 2023(17/01/2023). Director: Gil Martínez A. International Mention*
- **Martín Montes A.** Implicación del metabolismo del colesterol en la patogenia de la enfermedad de Alzheimer[dissertation]. *Madrid: UAM: 2023(01/06/2023). Director: Frank García A, Bullido Gómez-Heras MJ.*
- **García Romero MM.** Estudio de una cohorte de pacientes con enfermedad de Lesch Nyhan: valoración clínica y manejo terapéutico de las complicaciones neurológicas.[dissertation]. *Madrid: UAM: 2023(12/05/2023). Director: Pascual Pascual SI.*
- **Palpán Flores AJ.** Evaluación de la supervivencia del Glioblastoma IDH no mutado con métodos de estadística multivariante y algoritmos de inteligencia artificial, basados en su presentación clínica, histológica, imagen de resonancia magnética, volumetría tumoral y espectroscopia ex vivo.[dissertation]. *Madrid: UAM: 2023(23/03/2023). Director: Roda Frade, José María.*
- **Laso García F.** Vesículas extracelulares y su contenido proteico como efectores de recuperación en un modelo preclínico de hemorragia intracerebral[dissertation]. *Madrid: UAM: 2023(45126). Director: Alonso De Leciñana Cases M.*
- **Wang Y.** Distribución de los transportadores de hormonas tiroideas MCT8 y OATP1C1 en la corteza motora de macaco y humano[dissertation]. *Madrid: UAM: 2023(06/06/2023). Director: Guadaño Ferraz AC.*
- **Barcía Aguilar C.** Factores asociados a las secuelas a largo plazo en el estatus epiléptico refractario pediátrico.[dissertation]. *Madrid: UAM: 2023(06/05/2023). Director: Pascual Pascual SI.*
- **Valcarcel Hernández V.** Desentrañando los mecanismos de la enfermedad, desarrollando modelos preclínicos y estrategias terapéuticas dirigidas a la deficiencia de MCT8[dissertation]. *Madrid: UAM: 2023(30/06/2023). Director: Guadaño Ferraz AC.*

Master Theses

- **Martín Martínez I.** Design and implementation of a system for the automation of the Fugl Meyer Assessment scale in stroke patients[dissertation]. *Madrid: UAM: 2023(17/07/2023). Director: Larraga García B, Alonso de Leciñana M*

- **Yagüe Novoa N.** Design and implementation of a virtual reality platform for upper limb rehabilitation using a haptic robot[dissertation]. *Madrid: UPM: 2023(17/07/2023). Director: Larraga García B, Alonso de Leciñana M*

Final Degree Theses

- **Maroto Cidfuentes C.** Papel de las vesículas extracelulares derivadas del sistema nervioso en un modelo preclínico de hemorragia intracerebral[dissertation]. *Madrid: UAM: 2023(30/06/2023). Director: Gutiérrez Fernández M.*
- **Schümmer Bengoa P.** Desarrollo y análisis de un sistema de movimiento basado en redes neuronales artificiales para la evaluación de la prueba Ledge Beam Walking Test en modelos experimentales murinos de ictus[dissertation]. *Madrid: UAM: 2023(15/07/2023). Director: Gutiérrez Fernández M.*
- **Botella Cruces L.** Análisis de las vesículas extracelulares circulantes como biomarcador en pacientes de Esclerosis Múltiple[dissertation]. *Madrid: UAM: 2023(15/07/2023). Director: Otero Ortega L.*
- **Ruiz González A.** Diseño e implementación de un sistema de análisis de correlación de datos de imagen, clínicos y cinemáticos en pacientes de ictus agudo[dissertation]. *Madrid: UPM: 2023(30/01/2023). Director: Alonso de Leciñana M, Gutiérrez A.*
- **Música Estévez M.** Desarrollo de un sistema de captura de vídeo basado en técnicas de aprendizaje profundo para el estudio de la cinemática de las manos de pacientes con ictus[dissertation]. *Madrid: UPM: 2023(18/07/2023). Director: Larraga García B, Alonso de Leciñana M.*
- **Moldes Castillo R.** Diseño e implementación de un sistema para el almacenamiento masivo de datos cinemáticos de la mano en pacientes con ictus[dissertation]. *Madrid: UPM: 2023(18/07/2023). Director: Larraga García B, Alonso de Leciñana M.*
- **de Spusa Da Silva A.** Diseño e implementación de aplicaciones web para la divulgación y visualización de herramientas de evaluación de pacientes con déficit motor[dissertation]. *Madrid: UPM: 2023(18/07/2023). Director: Gutiérrez A, Alonso de Leciñana M.*
- **García Pastor S.** Manifestaciones de enfermedad cardíaca en el dúplex carotídeo en pacientes con ictus isquémico[dissertation]. *Madrid: UPM: 2023(01/06/2023). Director: Alonso de Leciñana M, Rodríguez Pardo J.*



Publications

- **Arribas-Pascual M, Hernández-Hernández S, Jiménez- Arranz C, Grande-Alonso M, Angulo-Díaz-Parreño S, La Touche R, Paris-Aleman A.** Effects of physiotherapy on pain and mouth opening in temporomandibular disorders: an umbrella and mapping systematic review with meta-analysis. *J Clin Med.* 2023; 12(3): 788. Review. IF: 3.0; Q1
- **Arribas-Romano A, Fernández-Carnero J, González- Zamorano Y, Rodríguez-Lagos L, Alguacil-Diego IM, Molina-Álvarez M, Tejera DM, Mercado-Romero F.** Manual therapy effects on non-specific neck pain are not mediated by mechanisms related to conditioned pain modulation: a randomized clinical trial. *J Clin Med.* 2023; 12(12): 3894. Article. IF: 3.0; Q1
- **Badía JM, del Toro MD, Gracia JFN, Balibrea JM, Herruzo R, Sánchez CG, García JL, Pérez IR, Guirao X, Soria-Aledo V, Ortí-Lucas R.** Surgical infection reduction program of the observatory of surgical infection (PRIO-O): Delphi prioritization and consensus document on recommendations for the prevention of surgical site infection. *Cir Espan.* 2023; 101(4): 238-51. Article. IF: 1.3; Q3
- **Bendszus M, Fiehler J, Subtil F, Bonekamp S, Aamodt AH, Fuentes B, Gizewski ER, Hill MD, Krajina A, Pierot L, Simonsen CZ, Zelenák K, Blauenfeldt RA, Cheng B, Denis A, Deutschmann H, Dorn F, Flottmann F, Gellissen S, Gerber JC, Goyal M, Haring J, Herweh C, Hopf-Jensen S, Hua VT, Jensen M, Kastrup A, Keil CF, Klepanec A, Kurca E, Mikkelsen R, Moehlenbruch M, Müller-Huelsbeck S, Münnich N, Pagano P, Papanagiotou P, Petzold GC, Pham M, Puetz V, Raupach J, Reimann G, Ringleb PA, Schell M, Schlemm E, Schönenberger S, Tennoe B, Ulfert C, Valis K, Vitková E, Vollherbst DF, Wick W, Thomalla G.** Endovascular thrombectomy for acute ischaemic stroke with established large infarct: multicentre, open-label, randomised trial. *Lancet.* 2023; 402(10414): 1753-63. Article. IF: 98.4; D1
- **Bersano A, Khan N, Fuentes B, Acerbi F, Canavero I, Tournier-Lasserre E, Vajcocy P, Zedde ML, Hussain S, Lemeret S, Kraemer M, Herve D.** European Stroke Organisation (ESO) Guidelines on Moyamoya angiopathy: Endorsed by Vascular European Reference Network (VASERN). *Eur Stroke J.* 2023; 8(1): 55-84. Article. IF: 5.8; D1
- **Bocos-Corredor E, Moggioli F, Pérez-Fernández T, Armijo-Olivo S, Sánchez C, Cuenca-Zaldívar JN, Fernández-Carnero J, Martín-Pintado-Zugasti A.** Kinematic analysis of sensorimotor control during the craniocervical flexion movement in patients with neck pain and asymptomatic individuals: a cross-sectional study. *J Neuroeng Rehabil.* 2023; 20(1): 8. Article. IF: 5.2; Q1
- **Campo-Caballero D, de la Riva P, de Arce A, Martínez-Zabaleta M, Rodríguez-Antigüedad J, Ekiza J, Iruzubieta P, Purroy F, Fuentes B, Alfonso MD, Krupinski J, Chirife JJM, Palomas E, Guisado-Alonso D, Rodríguez-Yáñez M, Ustrell X, García JT, Mimblera AD, Paré-Curell M, Tembl J, Cajaraville S, Garcés M, Serena J.** Reperfusion treatment in acute ischaemic stroke due to cervical and cerebral artery dissection: results of a Spanish national multicentre study. *Neurologia.* 2023; 38(6): 412-8. Article. IF: 2.9; Q2
- **Carús-Cadavieco M, López IB, Canelo AM, Serrano-Lope MA, González-de la Fuente S, Aguado B, Fernández-Rodrigo A, Sainza TC, García AF, Venero C, Esteban JA, Guix F, Dotti CG.** Cognitive decline in diabetic mice predisposed to Alzheimers disease is greater than in wild type. *Life Sci Alliance.* 2023; 6(6): e202201789. Article. IF: 3.3; Q1
- **Castro JG, del Sol HM, Fraga OR, Barral MH, López SS, García AF, Montes AM.** CSF Aβ40 levels do not correlate with the clinical manifestations of Alzheimer's disease. *Neurodegener Dis.* 2023; 22(3-4): 151-8. Article. IF: 1.9; Q3
- **Cogollos-Paja M, García-Reneses JA, Herruzo R.** Assessment of increased knowledge about traffic accidents prevention, one month after a presentation included in the program it can happen to you of AESLEME. *Spinal Cord.* 2023; 61(7): 368-73. Article. IF: 2.1; Q3
- **Costa-Pereira JT, Oliveira R, Guadilla I, Guillén MJ, Tavares I, López-Larrubia P.** Neuroimaging uncovers neuronal and metabolic changes in pain modulatory brain areas in a rat model of chemotherapy-induced neuropathy - MEMRI and ex vivo spectroscopy studies. *Brain Res Bull.* 2023; 192: 12-20. Article. IF: 3.5; Q2
- **Cuenca-Martínez F, Sempere-Rubio N, Mollà-Casanova S, Muñoz-Gómez E, Fernández-Carnero J, Sánchez-Sabater A, Suso-Martí L.** Effects of repetitive-transcranial magnetic stimulation in fibromyalgia syndrome: an umbrella and mapping review. *Brain Sci.* 2023; 13(7): 1059. Review. IF: 2.7; Q3
- **Cuenca-Martínez F, Suso-Martí L, Fernández-Carnero J, Muñoz-Alarcos V, Sempere-Rubio N.** Exercise-based interventions on sleep quality in patients with fibromyalgia syndrome: An umbrella and mapping review with meta-analysis. *Semin Arthritis Rheu.* 2023; 61: 152216. Review. IF: 4.6; Q1
- **Cuenca-Zaldívar JN, Fernández-Carnero J, Sánchez-Romero EA, Álvarez-Gonzalo V, Conde-Rodríguez R, Rodríguez-Sanz D, Calvo-Lobo C.** Effects of a therapeutic exercise protocol for patients with chronic non-specific back pain in primary health care: a single-group retrospective cohort study. *J Clin Med.* 2023; 12(20): 6478. Article. IF: 3.0; Q1
- **Díaz-González F, Sacedo-Gutiérrez JM, Twigg SRF, Calpena E, Carceller-Benito FE, Parrón-Pajares M, Santos-Simarro F, Heath KE.** Case report: A third variant in the 5' UTR of TWIST1 creates a novel upstream translation initiation site in a child with Saethre-Chatzen syndrome. *Front Genet.* 2023; 13: 1089417. Article. IF: 2.8; Q2
- **Díaz-Sáez MC, Beltrán-Alacreu H, Gil-Castillo J, Gil-Martínez A.** Differences between maximum tongue force in women suffering from chronic and asymptomatic temporomandibular disorders-an observational study. *Life (Basel).* 2023; 13(1): 229. Article. IF: 3.2; Q1
- **Díaz-Saáz MC, Gil-Martínez A, Gadotti IC, Navarro-Fernández G, Gil-Castillo J, Beltrán-Alacreu H.** Reliability and responsiveness of a novel device to evaluate tongue force. *Life (Basel).* 2023; 13(5): 1192. Article. IF: 3.2; Q1
- **Fernández-Fournier M, López-Molina M, Iglesias GT, Botella L, Chamorro B, Laso-García F, Puertas I, Barranco AT, Otero-Ortega L, Frank-García A, Díez-Tejedor E.** Antibody content against Epstein-Barr virus in blood extracellular vesicles correlates with disease activity and brain volume in patients with relapsing-remitting multiple sclerosis. *Int J Mol Sci.* 2023; 24(18): 14192. Article. IF: 4.9; Q1
- **Ferreira V, Folgueira C, García-Altare M, Guillén M, Ruiz-Rosario M, DiNunzio G, García-Martínez I, Alen R, Bookmeyer C, Jones JG, Cigudosa JC, López-Larrubia P, Correig-Blanchar X, Davis RJ, Sabio G, Rada P, Valverde AM.** Hypothalamic JNK1-hepatic fatty acid synthase axis mediates a metabolic rewiring that prevents hepatic steatosis in male mice treated with olanzapine via intraperitoneal: Additional effects of PTP1B inhibition. *Redox Biol.* 2023; 63: 102741. Article. IF: 10.7; Q1
- **Finkel RS, Day JW, Pascual SIP, Ryan MM, Mercuri E, De Vivo DC, Montes J, Gurgel-Giannetti J, Monine M, Gambino G, Makepeace C, Foster R, Berger Z.** DEVOTE Study exploring higher dose of nusinersen in spinal muscular atrophy: study design and part a results. *J Neuromuscul Dis.* 2023; 10(5): 813-23. Article. IF: 3.2; Q2
- **García-González P, de Rojas I, Moreno-Grau S, Montreal L, Puerta R, Alarcón-Martín E, Quintela I, Orellana A, Andrade V, Adami PVM, Heilmann-Heimbach S, Gómez-Garre P, Perinián MT, Álvarez I, Díez-Fairen M, Llavres RN, Olive RC, García-Ribas G, Menéndez-González M, Martínez C, Aguilar M, Buongiorno M, Franco-Macías E, Saez ME, Cano A, Bullido MJ, Real LM, Rodríguez-Rodríguez E, Royo JL, Álvarez V, Pastor P, Piñol-Ripoll G, Mir P, Lara MC, Padilla MM, Sánchez-Juan P, Carracedo A, Valero S, Hernández I, Tàrraga L, Ramírez A, Boada M, Ruiz A.** Mendelian randomisation confirms the role of y-chromosome loss in Alzheimer's disease aetiopathogenesis in men. *Int J Mol Sci.* 2023; 24(2): 898. Article. IF: 4.9; Q1
- **Grande-Alonso M, Castillo-Alcañiz B, Paraiso-Iglesias P, Cuenca-Martínez F, La Touche R, Vidal-Quevedo C.** Comparative analysis of the burnout syndrome index between contract and freelance physiotherapists: An observational study. *Work.* 2023; 76(3): 1135-44. Article. IF: 1.7; Q3
- **Grande-Alonso M, Pro-Marín D, Piedra-Garrosa I, La Touche R, Paris-Aleman A.** Sensorimotor, cognitive and affective behavior according to perceived level of disability in patients with chronic low back pain: an observational cross-sectional study. *J Musculoskel Neuron.* 2023; 23(1): 72-83. Article. IF: 1.7; Q4



3.1 Neurosciences Area

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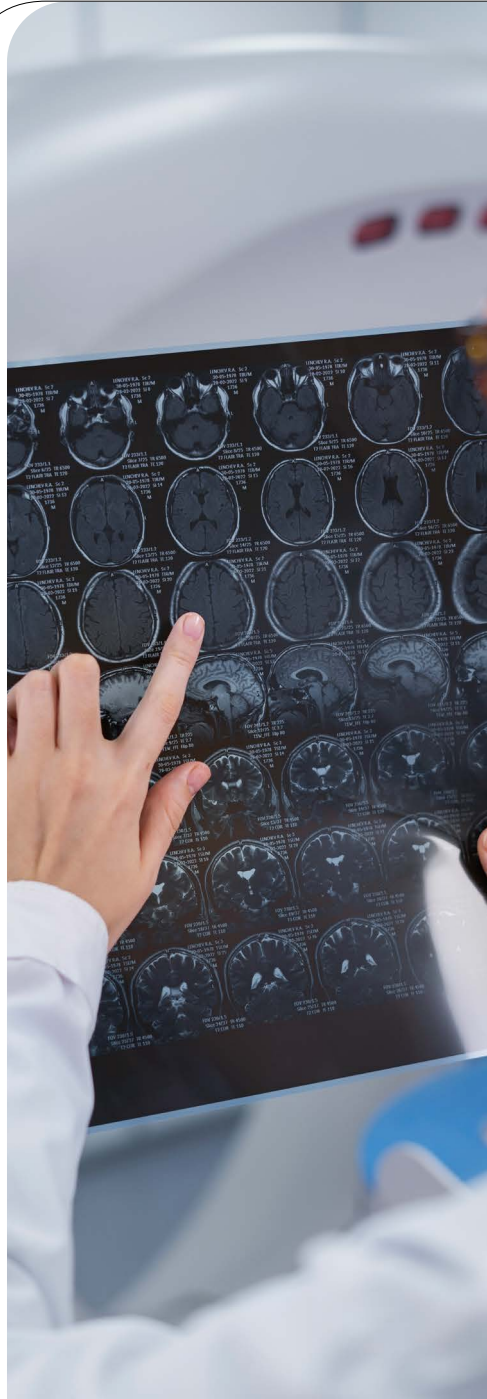
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- **Díez Tejedor E.** Moléculas moduladores del sistema inmune como biomarcadores de re-

puesta al tratamiento en Esclerosis Múltiple: estudio traslacional. (PI21/00918). *ISCIII.* 2022-2023. *Management centre: FIBHULP*

- **Díez Tejedor E.** Pacientes con esclerosis múltiple: análisis de la respuesta a tratamientos biológicos. *Fundación Biogen Idec.* 2013-Ongoing. *Management centre: FIBHULP*
- **Díez Tejedor E.** Pacientes con esclerosis múltiple: análisis de la respuesta al natalizumab. *Schering España S.A.* 2011-Ongoing. *Management centre: FIBHULP*
- **Díez Tejedor E.** Registro clínico para el seguimiento de tratamiento anticoagulante en prevención secundaria tras un ictus cardioembólico. *Boehringer Ingelheim España S.A.* 2011-Ongoing. *Management centre: FIBHULP*
- **Díez Tejedor E.** Se formará en proyectos de inmunología para la unidad de esclerosis múltiple, implantación del modelo eae, desarrolló técnicas para determinar las células reguladoras y analisis de marcadores biológicos en pacientes con em que estén en tratamiento con natalizumab. *Biogen Idec Ltd.* 2008-Ongoing. *Management centre: FIBHULP*
- **Frank García A.** Análisis antropológico de la sobrecarga del cuidador principal de personas con demencia. *estrategias de comunicación. Various funders.* 2018-Ongoing. *Management centre: FIBHULP*
- **Frank García A.** Evaluacion de la satisfaccion e impacto de los talleres formativo-informativos sobre ictus realizados por el servicios de neurología y centro de ictus del Hospital Universitario La Paz. *Various funders.* 2018-Ongoing. *Management centre: FIBHULP*
- **Frank García A.** Investigación en calidad: mejora continua en la gestion y organización de procesos asistenciales y de investigación del servicio de neurología y del grupo de investigación de neurología y enfermedades cerebrovasculares. *Various funders.* 2022-Ongoing. *Management centre: FIBHULP*
- **Fuentes Gimeno B.** Ensayo clínico piloto dulceína (dubbing language-therapy cinemabased in aphasia post-stroke. A feasibility crossover pilot-trial. *Fundación la Caixa.* 2019-2023. *Management centre: FIBHULP*



3.1 Neurosciences Area

- **Fuentes Gimeno B.** Epidemia covid19 e Ictus agudo. registro multicentrico Ictus. Ferrer Internacional S.A. 2020-Ongoing. *Managment centre: FIBHULP*
- **Fuentes Gimeno B.** Glucemia y daño cerebral por isquemia reperfusión en pacientes con infarto cerebral agudo tratados con trombectomía mecánica. Estudio GLIAS-TM (PI21/00962). ISCIII. 2022-2023. *Managment centre: FIBHULP*
- **Fuentes Gimeno B.** Novedades en Ictus y afasia. Daiichii S.A. Nkyo Pharma Development. 2022-Ongoing. *Managment centre: FIBHULP*
- **Fuentes Gimeno B.** Variabilidad glucémica: impacto pronóstico en el infarto cerebral agudo e influencia del tratamiento corrector de la hiperglucemia. Estudio GLIAS-3 (PI18/00991). ISCIII. 2019-2023. *Managment centre: FIBHULP*
- **Gandía González ML.** Estudio de factores químicos medioambientales mediante cromatografía líquida y espectrometría de masas y su influencia en el perfil epigenético mediante técnicas de análisis masivo en el glioblastoma multiforme, nueva aproximación a la identificación de factores de riesgo prevenibles. FIBHULP. 2022-Ongoing. *Managment centre: FIBHULP*
- **Gil Martínez A.** Efectividad de un programa de ejercicios en pacientes con enfermedad de covid-19 ingresados en planta del Hospital Universitario La Paz. Colegio Oficial de Fisioterapeutas de la Comunidad de Madrid. 2020-Ongoing. *Managment centre: FIBHULP*
- **Gil Martínez A.** Sistema de interaccion natural para análisis y rehabilitacion de los trastornos de la marcha en la enfermedad de Parkinson (MOBEEZE). Fundación I+D Del Software Libre. 2016-Ongoing. *Managment centre: FIBHULP*
- **Gutiérrez Fernández MD, Alonso de Leciana Cases M.** Descifrando el papel de las vesículas extracelulares como moduladores de la respuesta inmunológica para promover la recuperación funcional tras la hemorragia cerebral. Estudio traslacional. (PI20/00243). ISCIII. 2021-2023. *Managment centre: FIBHULP*
- **Gutiérrez Fernández MD.** Contrato Miguel servet Tipo II (CPII20/00002). ISCIII. 2021-2024. *Managment centre: FIBHULP*
- **Hernández Herrero D.** Primer portofolio de dispositivos de uso doméstico destinado a la rehabilitación de pacientes afectados por trastornos de la marcha (PMPTA22/00212). ISCIII. 2023-2024. *Managment centre: FIBHULP*
- **Laso García F.** Contrato predoctoral (F118/00026). ISCIII. 2019-2023. *Managment centre: FIBHULP*
- **Martínez Moreno M.** Puesta en marcha del estudio de título provisional: estudio en pacientes con atrofia muscular espinal de inicio tardío ml43472. Roche Farma S.A. 2021-Ongoing. *Managment centre: FIBHULP*
- **Moraleda Pérez S.** Pacientes con parálisis facial periférica: registro de características clínicas antes y después del tratamiento con toxina botulínica tipo a y reeducación neuromuscular facial. Merz Pharma España S.L. 2014-Ongoing. *Managment centre: FIBHULP*
- **Noval Martín S.** Estudio multicéntrico de tres años de duración para evaluar la tomografía de coherencia óptica como medida de valoración en pacientes con esclerosis múltiple. Novartis Farmaceutica S.A. 2012-Ongoing. *Managment centre: FIBHULP*
- **Otero Ortega L.** Contrato Miguel Servet (CP20/00024). ISCIII-MICINN. 2021-2025. *Managment centre: FIBHULP*
- **Otero Ortega L.** MicroARNs derivados de vesículas extracelulares sanguíneas como biomarcadores de respuesta al tratamiento en pacientes con esclerosis múltiple. FIBHULP. 2022-Ongoing. *Managment centre: FIBHULP*
- **Otero Ortega L.** Treatment choice matters in multiple sclerosis: The role of extracellular vesicles in predicting treatment response (CP20/00024). ISCIII. 2021-2024. *Managment centre: FIBHULP*
- **Pascual Pascual SI.** Estudio de la eficacia de la toxina botulínica en el pie equino espástico de la parálisis cerebral y de los factores que influyen en la misma. Allergan S.A. 2008-Ongoing. *Managment centre: FIBHULP*
- **Pascual Pascual SI.** Longitudinal data collection from patients with spinal muscular atrophy in spain a nationwide registry-cuidame. Fundación Sant Joan De Deu. 2020-Ongoing. *Managment centre: FIBHULP*
- **Pascual Pascual SI.** Safety evaluation on the use of botulinum toxin type a for the treatment of spasticity in children after 20 years of experience 1996-2015. a retrospective monocenter observational study based on a data base containing over 1000 children. Ipsen Innovation. 2017-Ongoing. *Managment centre: FIBHULP*
- **Rigual Bobillo RJ.** Continuación del tratamiento anticoagulante en la fase aguda infarto cerebral carioembólico. Estudio Coala-IC. Daiichi Sankyo España. 2020-Ongoing. *Managment centre: FIBHULP*
- **Rodríguez de Rivera Garrido FJ.** Consorcio europeo de ataxia de Friedreich para la realización de estudios traslacionales. Various funders. 2015-Ongoing. *Managment centre: FIBHULP*
- **Rodríguez de Rivera Garrido FJ.** Estudio doble ciego, controlado con placebo, de grupos paralelos, aleatorizado, multicéntrico de la eficacia y seguridad de nicotinamida en pacientes con ataxia de Friedreich (AC16/00082). ISCIII. 2017-2023. *Managment centre: FIBHULP*
- **Vivancos Matellano F.** Proyecto de desarrollo para la mejora clínico-asistencial de pacientes con enfermedad de parkinson avanzada tras el confinamiento. Abbvie Spain S.L.U. 2020-Ongoing. *Managment centre: FIBHULP*

Cibers and Retics

- **Bullido Gómez-Heras MJ.** Centro de Investigación en Red de Enfermedades neurodegenerativas. (CIBERNED). ISCIII. (31/12/2023). FIBHULP
- **Fuentes Gimeno B.** Enfermedades vasculares cerebrales. (RD21/0006/0012). ISCIII. (31/12/2024). FIBHULP
- **Otero Ortega L.** Inflamación. (RD21/0002/CRG11). ISCIII. (31/12/2024). FIBHULP





3.1 Neurosciences Area

Clinical Trials

- Aguilar-Amat Prior MJ.** Real world evidence study on the epidemiology and disease management of tsc patients in Spain.
Type/Phase: EOm no prospectivo
Sponsored by: Jazz Pharmaceuticals Iberia SI
Signed date: 21/12/2023
- Díaz De Terán Velasco FJ.** Desarrollo y validación de un cuestionario de satisfacción con el tratamiento en pacientes con migraña (misat-q).
Type/Phase: OTROS
Sponsored by: Laboratorios Pfizer Ltda;Pfizer, S.L.U.
Signed date: 12/07/2023
- Díaz De Terán Velasco FJ.** Ensayo en fase IV, aleatorizado, doble ciego, controlado con placebo, para evaluar la eficacia y tolerabilidad de rimegepant para el tratamiento agudo de migraña en adultos no aptos para el uso de triptanos.
Type/Phase: IV
Sponsored by: Biohaven Pharmaceuticals
Signed date: 23/02/2023
- Díaz De Terán Velasco FJ.** Estudio de fase III/III, multicéntrico, de preinclusión de 8 semanas de duración, seguido de un estudio prospectivo, de grupos paralelos, doble ciego, aleatorizado, controlado con placebo y de retirada de 12 semanas de duración, con una extensión abierta de 52 semanas, para evaluar la eficacia y la seguridad de 1,5 mg a 3,5 mg diarios de basimglurant en pacientes con dolor asociado a neuralgia del trigémino con respuesta subóptima a su tratamiento actual contra el dolor.
Type/Phase: III
Sponsored by: Noema Pharma Ag
Signed date: 19/07/2023
- Díaz De Terán Velasco FJ.** Estudio en fase IV, aleatorizado, doble ciego, controlado con placebo, para evaluar la eficacia y tolerabilidad de rimegepant para la prevención de la migraña en adultos con antecedentes de respuesta inadecuada a medicamentos preventivos orales.
Type/Phase: IV
Sponsored by: Biohaven Pharmaceuticals
Signed date: 27/02/2023
- Díaz De Terán Velasco FJ.** Estudio observacional, prospectivo, longitudinal y multinacional para describir la carga de la enfermedad y los patrones de tratamiento en pacientes con migraña (capture).
Type/Phase: EPA-SP
Sponsored by: Abbvie Spain, S.L.U.
Signed date: 07/02/2023
- Díez Tejedor E.** Estudio de fase III, aleatorizado, doble ciego, controlado con placebo y de grupos paralelos para demostrar la eficacia y la seguridad de milvexián, un inhibidor oral del factor xia, para la prevención de accidentes cerebrovasculares después de un accidente cerebrovascular isquémico agudo o un accidente isquémico transitorio de alto riesgo.
Type/Phase: III
Sponsored by: Janssen Research & Development, Llc
Signed date: 01/09/2023
- Díez Tejedor E.** Estudio de prueba de concepto, aleatorizado, doble ciego y controlado con placebo para evaluar la seguridad y la eficacia de elezanumab en ictus isquémico agudo.
Type/Phase: III
Sponsored by: Abbvie Deutschland GmbH & Co. Kg
Signed date: 17/02/2023
- Díez Tejedor E.** Estudio internacional de fase 2, aleatorizado, doble ciego, controlado con placebo, de búsqueda de dosis, de bms-986177, un inhibidor del factor xia oral, para la prevención de un nuevo caso de ictus isquémico o de re-infarto cerebral silente en pacientes tratados con aspirina y clopidogrel después de un ictus isquémico agudo o un accidente isquémico transitorio (ait).
Type/Phase: II
Sponsored by: Bristol-Myers Squibb International Corporation (Bmsic)
Signed date: 24/02/2023
- Frank García A.** Estudio de fase I/II, multicéntrico, aleatorizado, controlado con placebo, doble ciego, de dosis única y dosis múltiples para evaluar la seguridad, la tolerabilidad, la farmacocinética y la farmacodinámica de dnl593 en participantes sanos y participantes con demencia, seguido de una extensión sin enmascaramiento.
Type/Phase: I
Sponsored by: Denali Therapeutics, Inc
Signed date: 16/03/2023
- Frank García A.** Estudio de fase I/II, multicéntrico, aleatorizado, controlado con placebo, doble ciego, de dosis única y dosis múltiples para evaluar la seguridad, la tolerabilidad, la farmacocinética y la farmacodinámica de dnl593 en participantes sanos y participantes con demencia, seguido de una extensión sin enmascaramiento.
Type/Phase: I
Sponsored by: Denali Therapeutics, Inc
Signed date: 24/11/2023
- Fuentes Gimeno B.** Ensayo fase 3 para investigar la eficacia y seguridad del inhibidor oral del fxa asundexian (bay2433334) comparado con apixaban en pacientes con fibrilación auricular y riesgo de ictus- oceanic-af.
Type/Phase: III
Sponsored by: Bayer Ag
Signed date: 24/01/2023
- Fuentes Gimeno B.** Ensayo fase III multicéntrico, internacional, aleatorizado, controlado con placebo, doble ciego, de grupos paralelos y determinado por eventos, del inhibidor oral del fxa -asundexian (bay 2433334), para la prevención de ictus isquémicos en pacientes de ambos sexos mayores de edad, tras un ictus isquémico no cardioembólico agudo o ait de alto riesgo.
Type/Phase: III
Sponsored by: Bayer Ag
Signed date: 17/01/2023
- Fuentes Gimeno B.** Glucemia y daño cerebral por isquemia reperfusion en pacientes con infarto cerebral agudo tratados con trombectomía mecánica. estudio glias-tm.
Type/Phase: I
Sponsored by: Fundación Para La Investigación Biomédica Hospital Universitario La Paz
Signed date: 02/03/2023
- Hernández Barral M.** Estudio de fase 2, multicéntrico, aleatorizado, doble ciego, controlado con placebo para evaluar la eficacia y la seguridad de sar443820 en participantes adultos con esclerosis lateral amiotrófica, seguido de una extensión abierta.
Type/Phase: II
Sponsored by: Sanofi Aventis S.A
Signed date: 05/07/2023
- Hernández Herrero D.** Estudio prospectivo y multinacional para estimar la incidencia de espasticidad posterior a un accidente cerebrovascular y proporcionar un modelo de mejores prácticas para superar su aparición. epitome study.
Type/Phase: OTROS
Sponsored by: Ipsen Pharma S.P.S.
Signed date: 21/11/2023
- Mascias Cadavid J.** A multicenter, open-label extension study to investigate the long-term safety of fab122 in patients with amyotrophic lateral sclerosis. adorex (als trial with daily oral edaravone extension) study.
Type/Phase: III
Sponsored by: Ferrer Internacional, S.A
Signed date: 25/04/2023
- Mascias Cadavid J.** Estudio multicéntrico, aleatorizado, con enmascaramiento doble, controlado con placebo y de fase 2 en el que se evalúan la seguridad y la eficacia de cort113176 (dazucorilant) en pacientes con esclerosis lateral amiotrófica (dazals).
Type/Phase: II
Sponsored by: Concept Therapeutics Incorporated;
Signed date: 27/03/2023
- Navía Álvarez P.** Estudio pivotal del sistema de aspiración rapidpulse™ como abordaje de primera línea para pacientes con ictus isquémico agudo debido a oclusiones de gran vaso («estudio pivotal rapidpulse»
Type/Phase: PRODUCTO SANITARIO
Sponsored by: Rapidpulse Inc
Signed date: 14/11/2023
- Pascual Pascual SI.** Estudio controlado, aleatorizado y de aumento gradual de la dosis de nusinersén (biib058) en participantes con atrofia muscular espinal.
Type/Phase: III
Sponsored by: Biogen Idec Ltd
Signed date: 19/04/2023



3.1 Neurosciences Area

- **Pascual Pascual SI.** Estudio de fase 4 de nusinersen (biib058) en pacientes con atrofia muscular espinal que recibieron onasemnogene abepar-ovec.

Type/Phase: IV

Sponsored by: Biogen Idec Ltd

Signed date: 22/03/2023

- **Puertas Muñoz I.** Observational, multicenter study to describe the persistence in relapsing remitting multiple sclerosis naive patients with low-moderate activity treated with ozanimod (zeposia®) in clinical practice in Spain (appreziat study). estudio observacional multicéntrico para describir la persistencia en pacientes con esclerosis múltiple recurrente-remite con actividad baja a moderada sin tratamiento previo, que han iniciado tratamiento con ozanimod (zeposia®) en la práctica clínica en España (estudio appreciate)..

Type/Phase: EOm prospectivo

Sponsored by: Bristol Myers Squibb, S.A.U.

Signed date: 18/10/2023

- **Rodríguez de Rivera Garrido FJ.** Estudio en fase III multicéntrico, aleatorizado, cuádruple ciego y controlado con placebo para evaluar la eficacia y seguridad de batoclimab como tratamiento de inducción y mantenimiento en participantes adultos con miastenia grave generalizada (mfg).

Type/Phase: III

Sponsored by: Immunovant Sciences

Signed date: 12/01/2023

- **Rodríguez De Rivera Garrido FJ.** Eficacia y seguridad del tratamiento combinado con pozelimab y cemisiran en pacientes con miastenia grave generalizada sintomática.

Type/Phase: III

Sponsored by: Regeneron Pharmaceuticals, Inc

Signed date: 19/01/2023

- **Rodríguez De Rivera Garrido FJ.** Estudio de fase 3, aleatorizado, doble ciego, controlado con placebo y multicéntrico para evaluar la seguridad y la eficacia de ravulizumab en pacientes adultos sin tratamiento previo con inhibidores del complemento con miastenia gravis generalizada.

Type/Phase: III

Sponsored by: Alexion Pharmaceutical Inc

Signed date: 27/01/2023

- **Rodríguez De Rivera Garrido FJ.** Estudio de fase 3, aleatorizado, doble ciego, controlado con placebo, paralelo y multicéntrico para evaluar la seguridad y eficacia de alxn1720 en adultos con miastenia gravis generalizada.

Type/Phase: III

Sponsored by: Alexion Pharmaceutical Inc

Signed date: 26/07/2023

- **Tallón Barranco A.** Estudio de fase 3, multicéntrico, aleatorizado, doble ciego, para evaluar la eficacia, la seguridad y la tolerabilidad de imu-838 en comparación con placebo en adultos con esclerosis múltiple recurrente (ensure-1).

Type/Phase: III

Sponsored by: Immunic Ag

Signed date: 21/07/2023

- **Tallón Barranco A.** Estudio de tiempos y movimientos (t&m) para cuantificar la carga de preparación y administración de tysabri® intravenoso (i.v.) frente a tysabri subcutáneo (s.c.) para el tratamiento de la esclerosis múltiple (em).

Type/Phase: EOm prospectivo

Sponsored by: Biogen Idec Ltd

Signed date: 23/02/2023

Patents and Trademarks

- **Valdivieso Amate F, Bullido Gómez-Heras MJ, Martínez García A, inventors; UAM, assignee.** Method of identifying compounds that induce or inhibit endoplasmic reticulum stress or oxidative stress. P200702997, PCT/ES2008/000705, EP2221379, US20100304384; 2007 November 13.

- **Vergés Milano J, García García A, Ruhí Roura R, Montell Bonaventura E, García López M, Aláez Versón CR, Escaich Ferrer J, Egea Máiquez J, Llorio González S, Negro Madrigal P, inventors; BIOIBÉRICA S.A., UAM, assignees.** Sulphated disaccharides for the treatment of neurodegenerative and/or neurovascular diseases. P200902399, PCT/EP2010/070613, US20120309707, CA20102785237; 2010 December 22.

- **Valdivieso Ámate F, Burgos Muñoz JS, Ramírez Moreno C, Sastre Merlín I, inventors; UAM, CSIC, assignees.** Method of identifying therapeutic compounds which can be used for the treatment and/or prevention of infections and diseases caused by human herpes viruses. P200400965, PCT/ES2005/000209, EP1769677, US20070218004, AT447321, AU2005235319, CA2562787, JP2007533315; 2004 April 21.

- **Valdivieso Ámate F, Montoliú JL, Pozueta Larios J, inventors; UAM, CSIC, assignees.** Alzheimer's disease animal model, method for obtaining same and uses thereof. P200503002, PCT/ES2006/000673, EP1956091, EP20060841725, US20090222932, CA2638983, JP2009517066; 2005 December 02.

- **Ballesteros García P, López Larrubia P, Domínguez Mateo L, Marco Contelles JL, Cerdán García-Esteller S, inventors; Universidad Nacional de Educación a Distancia, CSIC, assignees.** Set of magnetic resonance imaging and spectroscopy cell acidity extrinsic indicators comprise polyol derivatives based on alditols. P200300936; 2003 April 23.

- **Gil-Martínez A, inventors; FIBHULP, assignees.** Specular Face. 4022981/5. 2019 December 10



- **Egea Máiquez FJ, Farré Alins V, Palomino Antolín A, Narros Fernández P, Martins Rosa J, Parada Pérez E, Hernández García BJ, Roda Frade JM, Yus Teruel S, Lagares Gómez-Abascal A, Sánchez Carabias C, Gandía Juan L, inventors; Fundación Hospital La Princesa, FIBHULP, Fundación Hospital 12 de Octubre, UAM, assignees.** Method for determining the progression of acute brain damage and pharmaceutical composition for its treatment. P202031194, PCT/ES2021/070856; 2020 November 30.

- **Gil Martínez A, Gil Castillo J, inventors; FIBHULP, Centro Superior de Estudios Universitarios La Salle, Javier Gil Castillo, assignees.** Dispositivo de medición y/o entrenamiento de la fuerza o presión de los músculos de la cavidad oral y su uso para rehabilitación. MU 1201U MU202230128. 2022 July, 26.

- **Alonso de Leciana M, Díez Tejedor E, Fuentes Gimeno B, Rodríguez-Pardo de Donleun J, López Martín D, Gutiérrez Martín A and Fernández Martín F, authors; FIBHULP and Universidad Politécnica de Madrid, assignee.** Trademark name: Neuro Data Tracker; ESM 018860324; 2023 April 11





3.1.3 Neuroprotective Strategies in Neurodegenerative Diseases



STRATEGIC OBJETIVES

- Oxidative stress is a key element in the aetiopathogenesis of neurodegenerative diseases and their comorbidities. Our laboratory studies the antioxidant protection mechanisms activated by extracellular signals and how this response could be regulated pharmacologically to provide a therapeutic benefit in these diseases.
- To meet these two objectives, we are studying signalling pathways that regulate antioxidant metabolism and provide a general protective response. An important finding of this group was the observation that the PI3K/AKT/GSK-3 survival pathway regulates the transcription factor NRF2, guardian of cellular redox homeostasis, that provides protection against oxidative, inflammatory and proteotoxic stress. For the past year we have been working on the validation this transcription factor as a new therapeutic target to modify progression of Parkinson's and Alzheimer's disease as well co-morbid retinopathy and type II diabetes.

RESEARCH LINES

- Role of oxidative stress in neuronal death and neuroinflammation in neurodegenerative diseases.
- Validation of NRF2 as a new therapeutic target in neurodegenerative diseases.
- Use of NRF2 transcriptional signature as a biomarker of prognosis, progression and therapeutic efficacy.
- Identification of NRF2 activating compounds by inhibiting their interaction with β -TrCP.
- Relevance of NRF2 transcriptional signature in altered molecular processes in ALS models.
- Molecular basis of the role of Nrf2 in type 2 diabetes and its complications (diabetic retinopathy and nephropathy).

RESEARCH ACTIVITY

Doctoral Theses

- **Alén Alonso, RM.** Vesículas extracelulares de tamaño pequeño derivadas de hepatocitos en el interactoma intrahepático e hígado-páncreas en el contexto de la enfermedad de hígado graso no alcohólica [dissertation]. Madrid: UAM: 2023(14/07/2023). Director: Martínez Valverde A, García Martínez I.
- **Da Silva Ferreira VM.** La modulación de AMPK y de JNK1 en el hipotálamo por Olanzapina controla el balance energético y la lipogénesis hepática: beneficios adicionales de la inhibición de PTP1B. [dissertation]. Madrid: UAM: 2023(06/10/2023). Director: Martínez Valverde A, Rada Llano PP.
- **Diego Martínez D.** Análisis de la función del factor de transcripción NRF2 en la progresión tumoral [dissertation]. Madrid: UAM: 2023(13/01/2023). Director: Cuadrado Pastro A, Escoll Guerrero MI.

Master Theses

- Debasa Mouce M. 6-MSITC (wasabi-isocyanate) as a modulator of NRF2 and protector against taupathy [dissertation]. Madrid: UAM: 2023(4/5089). Director: García Yagüe AJ, Cuadrado Pastor A

Publications: 12 | Q1:11

COMPOSITION

Ana Isabel Rojo Sanchís.
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- **Eduardo Cazalla Ibáñez.** Investigadora Predoctoral. Universidad Autónoma de Madrid

- **Antonio Cuadrado Pastor.** Catedrático. Dpto. Bioquímica. Facultad Medicina. Universidad Autónoma de Madrid
- **María Isabel Escoll Guerrero.** Investigadora Postdoctoral. CIBERNED
- **Raquel Fernández Ginés.** Investigadora Postdoctoral. Universidad Autónoma de Madrid
- **Ángel Juan García Yagüe.** Investigador Postdoctoral. Universidad Autónoma de Madrid
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- **Ángela Martínez Valverde.** Científico titular CSIC. IIB "Alberto Sols"/UAM-CISC
- **Patricia Rada Llano.** Investigadora Postdoctoral. CIBERNED



Publications

- Bourdakou MM, Fernández-Ginés R, Cuadrado A, Spyrou GM. Drug repurposing on Alzheimer's disease through modulation of NRF2 neighborhood. *Redox Biol.* 2023; 67: 102881. Article. IF: 10.7; Q1
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- Crisman E, Duarte P, Dauden E, Cuadrado A, Rodríguez-Franco MI, López MG, León R. KEAP1-NRF2 protein-protein interaction inhibitors: Design, pharmacological properties and therapeutic potential. *Med Res Rev.* 2023; 43(1): 237-87. Review. IF: 10.9; D1
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Research projects

- Cuadrado Pastor A, Seabra M. NRF2 as a novel therapeutic target in age-related macular degeneration (HR22-00569). Fundación La Caixa. 2022-2026. *Management centre: UAM*
- Cuadrado Pastor A. Activation of NRF2 by 6-MISTC, role in AD (2021/0175). KINJIRUSHI Ltd. Co. 2021-2023. *Management centre: Fundación UAM*
- Cuadrado Pastor A. Bench to bedside transition for pharmacological regulation of NRF2 in noncommunicable diseases (1004040104). Europeo. Programa COST. 2021-2025. *Management centre: "Victor Babes" National Institute of Pathology*
- Cuadrado Pastor A. Optimización y validación in vivo de fármacos innovadores para el tratamiento de taupatías (1004020195). CAM. 2023-2026. *Management centre: UAM*
- Cuadrado Pastros A, Rojo Sanchis AI. Desarrollo de nuevos fármacos antiinflamatorios basados en la activación del factor de transcripción NRF2 (PDC2021-121421-100). Agencia Estatal de Investigación. 2021-2023. *Management centre: UAM*
- Cuadrado Pastros A, Rojo Sanchis AI. El factor de transcripción NRF2 en la patofisiología de la enfermedad de Alzheimer (1004020167). MICIN. 2020-2023. *Management centre: UAM*
- Cuadrado Pastros A, Rojo Sanchis AI. Optimización de un nuevo activador del factor de transcripción NRF2 para frenar la progresión de NASH (1004020190). Agencia Estatal de Investigación. 2022-2024. *Management centre: UAM*
- Cuadrado Pastros A, Rojo Sanchis AI. Papel del factor de transcripción NRF2 en protección sináptica en las Taupatías (1004020200). MICIN. 2023-2026. *Management centre: UAM*
- Martínez Valverde A. Extracelular vesicles: new insights into their role in liver-pancreas interaction in T2D. European Association for the Study of Diabetes. 2021-2023. *Management centre: CIBER*

Ciber and Retic

- Cuadrado Pastor A. Centro de Investigación Biomédica en Enfermedades Neurodegenerativas (CIBERned). ISCIII (31/12/2023). UAM
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- Cuadrado Pastor A, Rojo Sanchis AI. Bench to bedside transition for pharmacological regulation of NRF2 in noncommunicable diseases (BenBed-Phar). EU. (18/10/2025). Victor Babes Research Institute (Romania)

Patents and trademarks

- Cuadrado Pastor A, Innamorato NG, inventors: CSIC, UAM. Use of sulforaphane as supplementary therapy for early-stage neurodegenerative disease. P201231693; 2012 November 06.
- León Martínez R, Egea Maíquez J, Buendía Abaitua I, Parada Pérez E, Navarro González de Mesa E, inventors; Fundación para la Investigación Biomédica del Hospital Universitario de La Princesa, UAM, CSIC, DNS NEUROSCIENCE S.A., assignees. Use of 3-(2-isothiocyanatoethyl)-5-methoxy-1H-indole for the treatment of neurodegenerative diseases. P201300667; 2013 July 17.
- León Martínez R, Buendía Abaitua I, Navarro González de Mesa E, Michalska P, Gameiro Ros I, López Vivo A, Egea Maíquez J, García López M, García García A, inventors; Fundación para la Investigación Biomédica del Hospital Universitario de La Princesa, UAM, DNS NEUROSCIENCE S.A., assignees. Compounds derived from 3-alkylamine-1H-indolyl acrylate and its use for the treatment of neurodegenerative diseases. P201400810, PCT/ES2015/000139, CA2964309; 2014 October 15.
- Cuadrado Pastor A, Fernández-Ginés R, León Martínez R, Encinar JA, Rodríguez Franco MI, García López MG, Rojo Sanchis AI, inventors. UAM, CSIC, UMH y Fundación de Investigación Biomédica del Hospital Universitario de La Princesa, assignees. Treatment of NRF2-Related diseases. PCT/2022/382025.1.



3.1.4 Involvement of Glycinergic and Glutamatergic Systems in Central Nervous System Pathologies Group

Publications: 4 | Q1:3

COMPOSITION

Francisco Zafra Gómez

Catedrático. Facultad de Ciencias. Universidad Autónoma de Madrid

- **María del Carmen Aragón Rueda.** Catedrática. Facultad de Ciencias. Universidad Autónoma de Madrid
- **Beatriz Fuensanta López Corcuera.** Profesora Titular. Facultad de Ciencias. Universidad Autónoma de Madrid
- **Enrique Núñez Balbuena.** Investigador Postdoctoral. Universidad Autónoma de Madrid
- **Eva María Porlan Alonso.** Profesora Contratada Doctora. Universidad Autónoma de Madrid

STRATEGIC OBJECTIVES

- Role of glutamate and glycine transporters in physiological and pathological aspects of glutamatergic and glycinergic neurotransmission.
- Involvement of glutamate transporters in excitotoxicity, ischemia and traumatic brain injury
- Pathologies of glycinergic neurotransmission such as hyperekplexia and pain
- Role of the adult neurogenesis in neurorepair.

RESEARCH LINES

1. Physiological and pathological aspects of glutamate fluxes in brain as potential targets to prevent excitotoxicity, associated with brain dysfunctions like ischemia, or traumatic brain injury, with special interest in intracellular traffic and characterization of interactomes of transporters and receptors of glutamatergic synapses.
2. Glycinergic neurotransmission. Identification and characterization of new GlyT2 mutations (SLC6A5 gene) associated to human hyperekplexia. Effects of the mutations on transporter structure, function, proteostasis and glycinergic neurotransmission. Role in presynaptic hyperekplexia of different genes related to GlyT2 trafficking, interactoma, posttranslational modifications. Rescue interventions.
3. Study of plastic adaptations affecting glycine transporters in physiological and pathological nociception. Regulation of GlyTs by receptors modulating nociceptive signaling (P2XR, P2YR, mACh, nACh, α2 adrenergic, 5-HT). Signaling pathways.
4. Physiological and pathological aspects of Neuronal reparation by adult neurogenesis:
 - a. Identification of novel regulatory mechanisms of adult neurogenesis by kinases.
 - b. Identification of novel regulatory mechanisms of adult neurogenesis by microRNAs and other non-coding RNAs.
5. GABAergic neurotransmission. Identification and characterization of new mutations in SLC6A1 gene (GABA transporter GAT-1) associated to epilepsy. Effects of the mutations on transporter structure, function in GABAergic neurotransmission. Pharmacological treatments with pharmacochaperones.



RESEARCH ACTIVITY

Doctoral Theses

- **Felipe Mendía R.** Regulación y modificación del transportador de glicina GlyT2[dissertation]. *Madrid: UAM: 2023(26/10/2023). Director: López Corcuera B.*

Final Degree Theses

- Vázquez Medel A. Caracterización de mutantes de GLYT2 asociados a hiperplexia humana[dissertation]. *Madrid: UAM: 2023(26/05/2023). Director: López Corcuera B*

Publications

- **del Puerto A, López-Fonseca C, Simón-García A, Martí-Prado B, Barrios-Muñoz AL, Pose-Utrilla J, López-Menéndez C, Alcover-Sánchez B, Cesca F, Schiavo G, Campanero MR, Farinas I, Iglesias T, Porlan E.** Kidins220 sets the threshold for survival of neural stem cells and progenitors to sustain adult neurogenesis. *Cell Death Dis.* 2023; 14(8): 500. Article. IF: 8.1; Q1
- **Piniella D, Canseco A, Vidal S, Xiol C, de Bustamante AD, Martí-Carrera I, Armstrong J, Bastolla U, Zafra F.** Experimental and bioinformatic insights into the effects of epileptogenic variants on the function and trafficking of the GABA transporter GAT-1. *Int J Mol Sci.* 2023; 24(2): 955. Article. IF: 4.9; Q1

- **Piniella D, Zafra F.** Functional crosstalk of the glycine transporter GlyT1 and NMDA receptors. *Neuropharmacology.* 2023; 232: 109514. Article. IF: 4.6; Q1
- **Sirerol-Piquer MS, Morante-Redolat JM, Porlan E.** Editorial: Unravelling neural stem cell biology: players and strategies. *Front Cell Dev Biol.* 2023; 11: 1206339. Editorial Material. IF: 4.6; Q2

Research projects

- **López Corcuera B.** El transportador neuronal de glicina glyt2 en dolor y en hiperplexia. Implicaciones patológicas en desarrollo (PID2020-119399RB-I00). Ministerio de Economía, Industria y Competitividad. 2021-2024. *Management centre: UAM*
- **López Corcuera B.** El transportador neuronal de glicina GlyT2 en hiperplexia: una patología glicinérgica del desarrollo. Fundación Ramón Areces. 2021-2024. *Management centre: Fundación Severo Ochoa*
- **Porlan Alonso E.** Nuevos reguladores farmacológicos de la neurogénesis adulta y la reprogramación directa (PID2019-104763RB-I00). Ministerio de Economía, Industria y Competitividad. 2020-2023. *Management centre: UAM*



3.1.5 Mechanisms and Biomarkers in Neurodegenerative Diseases Group



Publications: 3 | Q1:3

COMPOSITION

Isabel Lastres Becker.

Profesora Titular. Universidad Autónoma de Madrid

- **Aarón Abdelkader Guillén.** Investigador Predoctoral. Universidad Autónoma de Madrid
- **Marina Arribas Blázquez.** Investigadora Postdoctoral. Universidad Autónoma de Madrid
- **Pablo Beceiredo Macho.** Investigador Predoctoral. Universidad Autónoma de Madrid
- **Alicia Berrojo Armisen.** Investigadora Predoctoral. Universidad Autónoma de Madrid
- **Sara Kaminski Santamaría.** Investigadora Predoctoral. Universidad Autónoma de Madrid
- **Ignacio Silva Llanes.** Investigador Predoctoral. Universidad Autónoma de Madrid
- **Virginia Solar Fernández.** Investigadora Postdoctoral. Universidad Autónoma de Madrid

STRATEGIC OBJETIVES

- **The aging of the population poses a growing burden in society.** This is associated with the increase in disability and diseases that have a high impact on health care, on patients and their families. Likewise, aging is associated with the appearance of different neurodegenerative diseases, among which include Alzheimer's disease (AD), Parkinson's disease (PD) and amyotrophic lateral sclerosis (ALS). Therefore, the development of advanced biological markers, new drugs and appropriate technology is the key to establishing a treatment for these diseases, which is currently an important social challenge. In our laboratory we study the molecular basis of neurodegeneration. The research projects we develop have a multidisciplinary approach that combines basic and translational research, using cell culture techniques, murine models and postmortem samples from patients with AD, PD and ALS.
- **Amyotrophic lateral sclerosis (ALS): Design and development of innovative drugs for the treatment of ALS**
- **Amyotrophic lateral sclerosis (ALS) is a fatal neurodegenerative disease that affects motor neurons in the spinal cord and cerebral cortex.** Patients have a loss of muscle strength and coordination that progressively progresses, preventing the performance of daily activities. Until now there is no treatment that cures ALS, and for this reason in our laboratory we are developing several lines of research that aim to address this challenge by designing and developing new therapies for the treatment of ALS. In collaboration with several laboratories in a project funded by the Community of Madrid (ELA_Madrid S2017/BMD-3813) we have generated and functionally and biochemically characterized cell models (lymphoblasts) based on human samples. In addition, we are developing new compounds that modulate the TDP-43 and NRF2 signaling pathways, respectively, validating them in cellular and mouse models of ALS. In this context, in a project funded by the Ministry of Science, Innovation and Universities (PID2019-105600RB-I00) we are also investigating the modulation of aging and neurodegeneration by small molecule protein kinase inhibitors, in collaboration with Dr. Ana Martínez. On the other hand, one of the main characteristics of ALS is that there are alterations in mRNA metabolism and deregulated axonal transport. For this reason, in a project financed by FUNDELA, we are determining if the TDP-43 aggregates kidnap the RNA-binding

proteins, and do not let them carry out their function, in such a way that the mRNAs do not reach the synaptic connections and cannot be translated, causing there to be no connection between the neuron and the muscle, which ultimately leads to loss of muscle function. So we are looking at RNA granule transport and protein translation in situ in ALS, determining the involvement of STAU1 and TDP-43 proteins.

- **Tauopathies: new biomarkers and targets against neurodegeneration.**
- **The TAU protein is the main component of the intracellular filamentous deposits that define a series of neurodegenerative diseases called tauopathies.** In general, tauopathies are characterized by alterations in synaptic plasticity, cell death, proteinopathy, and neuroinflammation. Despite enormous efforts to find a cure for these diseases, there is still no effective treatment. That is why in my laboratory we face this challenge with two different approaches. In our laboratory we have shown in vitro and in vivo that neurons with accumulation of TAU induce the expression of the cannabinoid receptor CB2, which enhances neurodegeneration. Therefore, in a first approach we focus on the study of the pharmacological modulation of the CB2 receptor and its effects on TAU-induced neurodegeneration, with a project funded by the Fundación Tatiana Pérez de Guzmán el Bueno (2021-2024). There are currently no specific biomarkers for tauopathies that allow a prognosis/diagnosis of these diseases.
- **Implication of alterations at the mitochondrial level in Parkinson's disease.**
- **We are interested in elucidating the molecular aspects that underlie Parkinson's Disease (PD).** PD is the second most common multisystem neurodegenerative disorder associated with aging. Most cases of PD are sporadic and of unknown aetiology, but mutations in genes such as PINK1 and PARKIN have been associated with familial forms of the disease. Mitochondrial impairment is a well-established pathological hallmark of PD, but whether mitophagy is impaired in this disease remains a subject of intense debate. Therefore, in this research project we are determining the role of mitochondria and the differential alterations in mitochondria between neurons and astrocytes in a-synuclein associated-PD.



RESEARCH LINES

1. Research on targeted therapies to modulate neurodegeneration-associated TDP-43 and TAU proteins
2. Analysis of RNA transport and protein translation in situ: implication of STAUEN 1/2?
3. Modulation of cannabinoid CB2 receptor as a new therapeutic strategy to protect against TAU-induced neurodegeneration
4. Differential function of mitochondria in neuron-astrocyte-dependent α -synuclein protein in Parkinson's disease.

RESEARCH ACTIVITY

Final Degree Theses

Berrojo Armisen A. Análisis del posible efecto neuroprotector del tratamiento con dimetil fumarato en un modelo de demencia frontotemporal TDP-43 dependiente.[dissertation]. Madrid: UAM: 2023(23/05/2023). Director: Lastres-Becker I.

Publications

- Brackhan M, Arribas-Blázquez M, Lastres-Becker I. Aging, NRF2, and TAU: A perfect match for neurodegeneration? *Antioxidants*. 2023; 12(8): 1564. Review. IF: 6.0; Q1
- Lastres-Becker I. Special issue Role of NRF2 in disease: Novel molecular mechanisms and therapeutic approaches II. *Biomolecules*. 2023; 13(5): 813. Editorial Material. IF: 4.8; Q1
- Silva-Llanes I, Shin CH, Jiménez-Villegas J, Gorospe M, Lastres-Becker I. The transcription factor NRF2 has epigenetic regulatory functions modulating HDACs, DNMTs, and miRNA biogenesis. *Antioxidants*. 2023; 12(3): 641. Article. IF: 6.0; Q1

Research projects

- Lastres-Becker I. a-Synuclein-dependent neuron-astrocyte differential function of mitochondria in Parkinson's disease (PID2022-137065OB-I00). MICIN. 2023-2026. *Managment centre: UAM*
- Lastres-Becker I. Modulación del receptor cannabinoide CB2 como nueva estrategia terapéutica para proteger contra la neurodegeneración inducida por TAU (2021/00072/001). Fundación Tatiana Pérez de Guzmán el Bueno. 2021-2024. *Managment centre: UAM*
- Lastres-Becker I. Receptor cannabinoide CB2: Validación como Biomarcador en Demencias TAU-dependientes. Beca Dr. Luis Álvarez. 2024-2026. *Managment centre: IdiPaz*
- Martínez A, Lastres-Becker I. Aging and neurodegeneration targeting by protein kinase small molecules inhibitors (PID2019-105600RB-I00). MICIN. 2020-2024. *Managment centre: CSIC*
- Martínez A, Lastres-Becker I. Luchando contra la enfermedad de Parkinson con inhibidores de SGK1 (PDC2022-133774-I00). MICIN. 2022-2024. *Managment centre: CSIC*
- Martínez A, Lastres-Becker I. TTBK1 inhibitors as new therapeutic approach for FTD and other related disorders (ADDF-AFTD RA-202205-2023343). ADDF. 2022-2024. *Managment centre: CSIC-UAM*

Patents and trademarks

- López-Rodríguez ML, Viso A, Ortega S, Lastres-Becker I, González S, Fernández-Ruiz JJ, Ramos JA, inventors. Universidad Complutense de Madrid, assignees; Nuevos derivados de ácido araquidónico con afinidad por el transportador de anandamide. P200001920. 2020 nov 5





3.1.6 Multiple Sclerosis Research Group

Publications: 2 | Q1:1

COMPOSITION

Yolanda Aladró Benito

Médico Adjunto Neurología. Hospital Universitario de Getafe. Profesor Asociado. Universidad Europea de Madrid

- **Laura Lillo Triguero.** Facultativo Especialista de Área en Neurología. Hospital Universitario de Getafe
- **Guillermo Martín Ávila.** Facultativo Especialista de Área en Neurología. Hospital Universitario de Getafe
- **Alejandro Méndez Burgos.** Facultativo Especialista Adjunto Neurología. Hospital Universitario de Getafe
- **Belén Pilo de la Fuente.** Facultativo Especialista de Área en Neurología. Hospital Universitario de Getafe

STRATEGIC OBJECTIVES

- To assess the progression of multiple sclerosis using gait analysis with inertial sensors to find more objective, sensitive and reliable measures to detect and monitor the clinical progression of progressive Multiple Sclerosis. To validate selected measures provided by inertial sensors to monitor gait in a prospective cohort of patients with Multiple Sclerosis in early (primary and secondary) stages.
- We are specially focused in the assessment of the efficacy and effectiveness of techniques such as Mindfulness and we evaluate hypothetical mediators of response, such as neurotrophic factors or factors related to inflammatory response.
- Moreover, the group is involved in the evaluation of new treatments or new indications in mental disorders through the participation in clinical trials.

RESEARCH LINES

- Gait study with biosensors in multiple sclerosis patients.
- Covid-19 in multiple sclerosis
- Late-onset multiple sclerosis
- Use of motion sensors in essential tremor

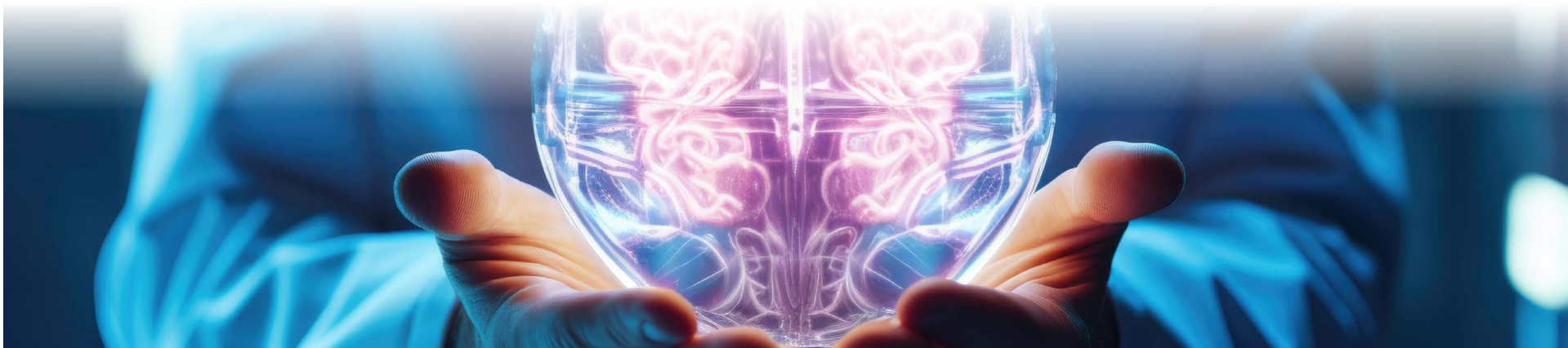
RESEARCH ACTIVITY

Publications

- **Casanova I, Domínguez-Mozo MI, de Torres L, Aladró-Benito Y, García-Martínez A, Gómez P, Abellán S, de Antonio E, Álvarez-Lafuente R.** MicroRNAs associated with disability progression and clinical activity in multiple sclerosis patients treated with glatiramer acetate. *Biomedicines*. 2023; 11(10): 2760. Article. IF: 3.9; Q2
- **Oreja-Guevara C, Rabanal A, Rodríguez CH, Benito YA, Bilbao MM, González-Suarez I, Gómez-Palmares JL.** Assisted reproductive techniques in multiple sclerosis: Recommendations from an expert panel. *Neurol. Ther.* 2023; 12(2): 427-39. Review. IF: 3.9; Q1

Research projects

- **Aladro Benito Y.** Monitoring of gait impairment progression using wearable sensors in patients with progressive multiple sclerosis. Roche Merck-Serono. 2021-Ongoing. *Management centre: Hospital Universitario de Getafe*





3.2 Cardiovascular Area

Documents: 218 | Originals: 157 | D1: 55 | Q1: 123

Area coordinator: José Raúl Moreno Gómez; María Fernández Velasco

coordinadorcardiovascular@idipaz.es

RESEARCH GROUPS

3.2.1 Research on Invasive Clinical and Translational Cardiology - ICCIT-PAZ -
José Raúl Moreno Gómez/María Fernández Velasco

3.2.2 Coagulopathies and Alterations of Haemostasis - Víctor Jiménez Yuste

3.2.3 Vascular Physiology and Pharmacology - Ana María Briones Alonso

3.2.4 Vascular Pharmacology and Metabolism (FARMAVSM) -
Carlos F. Sánchez Ferrer/Concepción Peiró Vallejo

3.2.5 Paediatric Cardiology Research - Federico Gutiérrez-Laraya Aguado



Strategic Objectives	Development forecast for the coming years:	Actions
<p>Cardiovascular Area is composed of 6 groups that carry out basic, experimental and clinical research in the fields of cardiology and cardiovascular risk factors. The area has an important activity in the performance of international clinical trials of wide impact and applicability. The scientific production of the cardiovascular area is supported by a high impact factor. The groups also have extensive experience in training researchers.</p>	<p>To merge the groups by research lines in order to avoid the duplicities that make the group lose strength and competitiveness and to bet on being more competitive and to take better advantage of the resources.</p>	<p>Foster and support translational research lines.</p>
	<p>The area should be focused on consolidated and multidisciplinary research lines rather than structured by pathologies. The collaboration with research groups from other organizations should be the norm.</p>	<p>Establish relationships/ collaboration/alliances with other IdiPAZ research groups and with groups from other institutions and maintain those already started.</p>
	<p>Resources should be focused on priorities established by the researchers themselves, or directly by IdiPAZ after analyzing the scientific production of each group.</p>	<p>Analyze the scientific production of each group</p>
	<p>Clinical research through the resources it provides (clinical trials) should guide basic research projects in order to offer the ideal field for translational medicine. This type of research also provides a stronger link between international research groups.</p>	<p>Encourage participation in clinical trials of researchers.</p>

HIGH IMPACT PUBLICATIONS

Matsushita T, Shapiro A, Abraham A, Angchaisuksiri P, Castaman G, Cepo K, d'Oiron R, Frei-Jones M, Goh AS, Haaning J, Jacobsen SH, Mahlangu J, Mathias M, Nogami K, Rasmussen JS, Stasyshyn O, Tran H, Vilchevska K, Martínez LV, Windyga J, You CW, Zozulya N, Zulfikar B, **Jiménez-Yuste V**. Phase 3 Trial of concizumab in hemophilia with inhibitors. *New Engl J Med*. 2023; 389(9): 783-94. Article. IF: 96.2; D1

Jurado-Román A, Mashayekhi K, Rumoroso JR, Brilakis ES. The psychology of chronic total occlusions and complex high-risk procedures (CHIP) operators. *JACC-Cardiovasc Inte*. 2023; 16(17): 2169-72. Article. IF: 11.7; D1

Boriani G, Imberti JF, Leyva F, Casado-Arroyo R, Chun J, Braunschweig F, Zylla MM, Duncker D, Farkowski MM, Pürerfellner H, **Merino JL**. Length of hospital stay for elective electrophysiological procedures: a survey from the European Heart Rhythm Association. *Europace*. 2023; 25(10): eead297. Article. IF: 7.9; Q1

Jurado-Román A, Freixa X, Cid B, Cruz-González I. Spanish cardiac catheterization and coronary intervention registry. 32nd official report of the Interventional Cardiology Association of the Spanish Society of Cardiology (1990-2022). *Rev Esp Cardiol (Engl Ed)*. 2023; 76(12): 1021-31. Article. IF: 7.2; Q1

División-Garrote JA, Carbayo-Herencia JA, Simarro-Rueda M, Molina-Escribano F, Escobar-Cervantes C, Artigao-Rodenas LM, Gil-Guillén V, **Banegas JR**. Prognosis of systolic pressure 130 to 139 according to risk. A prospective cohort study between 1992 and 2019. *Hypertension*. 2023; 80(11): 2485-93. Article. IF: 6.9; D1

Scientific Events by Cardiovascular Area

- **17/03/2023**. Scientific Seminar - Lipoxinas, unas nuevas herramientas terapéuticas en la enfermedad cardiovascular
- **09/06/2023**. Scientific Seminar - Utilidad de biomarcadores de fibrosis miocárdica en el diagnóstico y evaluación del riesgo de cardiopatías
- **15/06/2023**. Session - Utilidad de las vesículas extracelulares como biomarcador y tratamiento en el ictus. Investigación traslacional
- **15/12/2023** Scientific Seminar - Historias de metabolismo, inmunoterapia y microbiota



3.2.1 Research on Invasive Clinical Cardiology - ICCI-PAZ Group



Publications: 137 | Q1:82

COMPOSITION

José Raúl Moreno Gómez.

Jefe de Servicio de Cardiología. Hospital Universitario La Paz

María Fernández Velasco.

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- **José Ruiz Cantador.** Facultativo Especialista de Área en Cardiología. Hospital Universitario La Paz
- **Almudena Val Blasco.** Investigadora Postdoctoral. FIBHULP
- **Silvia Cayetana Valbuena López.** Médico Interno Residente en Cardiología. Hospital Universitario La Paz



3.2 Cardiovascular Area

STRATEGIC OBJECTIVES

- The group consists of various healthcare units of the Department of Cardiology at Hospital La Paz: Clinic/Coronary Unit, interventional cardiology, cardiac imaging, electrophysiology, rehabilitation and adult congenital heart disease.
- The main research lines focus on providing clinical responses, with local research protocols and direct participation in clinical trials and international multicentre registries. Moreover, clinical translational potential is reinforced through an institutional relationship with the CNIC.

RESEARCH LINES

- Myocardial ischaemia. Acute and chronic. Diagnosis, prognosis and treatment.
- Cardiac arrhythmias. Catheter navigation systems.
- Diagnosis and treatment. Post cardiac arrest hypothermia.
- Heart Failure. Diagnosis and treatment. Cardiotoxicity of antineoplastic agents.
- Cardiac diagnostic imaging.
- Aortic stenosis. Diagnosis and treatment.
- Adult congenital heart diseases.
- Endovascular therapy and new cellular therapies in peripheral vascular disease

RESEARCH ACTIVITY

Doctoral Theses

- **Rosillo Rodríguez SO.** Neumonía de inicio precoz y tardío en pacientes con parada cardíaca tratados con control de la temperatura corporal: Factores relacionados con el riesgo y el pronóstico [dissertation]. *Madrid: UAM: 2023(09/10/2023).* Director: *López-Sendon Hentschel JL, López De Sa Areses EA.*
- **Álvarez Ortega CA.** Predictores biofísicos de eficacia del procedimiento de aislamiento de venas pulmonares mediante criobalón: Análisis del estudio RECABA [dissertation]. *Madrid: UAM: 2023(25/09/2023).* Director: *Peinado Peinado R.*
- **Leblic Ramírez I.** Diseño, implantación y resultados de un equipo multidisciplinar de accesos vasculares para hemodiálisis [dissertation]. *Madrid: UAM: (24/11/2023).* Director: *Selgas Gutiérrez R, Riera del Moral LF.*
- **Montero Ruiz S.** Aplicabilidad, seguridad y eficacia de una intervención basada en mindfulness, en pacientes portadores de des-

fibrilador automático implantable: estudio piloto aleatorizado [dissertation]. *Madrid: UAM: 2023(26/06/2023).* Director: *Rodríguez Vega B.*

Master Theses

- **Pérez Cuervo A.** Role of the innate immune system in the progression of human and experimental cardiovascular disease [dissertation]. *Madrid: UAM: 2023(01/06/2023).* Director: *Fernández Velasco M.*
- **Saez de Buruaga Corrales E.** Estudio de localización y desplazamiento esofágico mediante contraste en ablación de venas pulmonares [dissertation]. *Madrid: Universidad San Pablo CEU: 2023(14/06/2023).* Director: *Peinado Peinado R.*
- **Ayala More HD.** Utilidad del mapa de activación con integración de vectores e información de velocidad para guiar la ablación de taquicardias macroreentrantes auriculares [dissertation]. *Madrid: Universidad San Pablo CEU: 2023(14/06/2023).* Director: *Peinado Peinado R.*

- **González Ferrero T.** Strain auricular izquierdo como predictor de áreas de bajo voltaje en pacientes sometidos a ablación de fibrilación auricular [dissertation]. *Madrid: Universidad San Pablo CEU: 2023(14/06/2023).* Director: *Peinado Peinado R.*
- **González Estriégana S.** Parámetros ecocardiográficos predictores de éxito en la terapia de resincronización cardíaca [dissertation]. *Murcia: Universidad Católica de Murcia: 2023(04/04/2023).* Director: *Peinado Peinado R.*

Final Degree Theses

- **Sáenz Molina M.** Incidencia y factores predictores de fibrilación auricular en el seguimiento de pacientes con cardiopatías congénitas del adulto sometidos a ablación de flutter auricular [dissertation]. *Madrid: UAM: 2023(07/06/2023).* Director: *Peinado Peinado R.*
- **Cuevas Carmona E.** Tetralogía de Fallot en el adulto: complicaciones arrítmicas en el postoperatorio precoz. Análisis de incidencia, factores de riesgo e implicaciones a corto y medio plazo. [dissertation]. *Madrid: Universidad Autónoma de Madrid: 2023(07/06/2023).* Director: *Peinado Peinado R.*

Publications

- **Abdin A, Werner C, Burri H, Merino JL, Vukadinovic D, Sawan N, Gajek J, Böhm M, Ukena C.** Outcomes of left bundle branch area pacing compared to His bundle pacing as a primary pacing strategy: Systematic review and meta-analysis. *PACE.* 2023; 46(11): 1315-24. Review. IF: 1.7; Q3
- **Aktaa S, Tzeis S, Gale CP, Ackerman MJ, Arbelo E, Behr ER, Crotti L, d'Avila A, de Chillou C, Denekel T, Figueiredo M, Friede T, Leclercq C, Merino JL, Semsarian C, Verstrael A, Zeppenfeld K, Tfelt-Hansen J, Reichlin T.** European Society of Cardiology quality indicators for the management of patients with ventricular arrhythmias and the prevention of sudden cardiac death Developed in collaboration with the European Heart Rhythm Association of the European Society of Cardiology. *Europace.* 2023; 25(1): 199-210. Article. IF: 7.9; Q1
- **Alfaris I, Ghandour A, López-Fernández T, Giannetti N, Mousavi N.** Contemporary issues in cardiology practice sodium-glucose cotransporter 2 in-

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- **Álvarez-García J, Ropero MJC, Manjavacas AMI, Díez-Villanueva P, Esteban-Fernández A, Baguda JD, Rivas-Lasarte M, Urquía MT, Górriz-Magaña J, Marcos MC, Goirigolzarri-Artaza J, del Valle DI, Freire RB, Herrera CB, Villa A, Ruiz RC, Martínez-Sellés M.** Do women physicians accept and follow heart failure guidelines more than men? *Curr Heart Fail Rep.* 2023; 20(3): 151-6. Article. IF: 3.8; Q1
- **Álvarez-Ortega CA, Ruiz MA, Solorzano-Guillen C, Barrera A, Toquero-Ramos J, Martínez-Alday JD, Grande C, Segura JM, García-Alberola A, Morina-Vázquez P, Ferrero-de-Loma-Osorio A, Villuendas R, Cozar R, Arcocha MF, Ibanez A, Peinado R.** Time to 30°C as a predictor of acute success during cryoablation in patients with atrial fibrillation. *Cardiol J.* 2023; 30(4): 534-42. Article. IF: 2.5; Q2
- **Amat-Santos IJ, Estévez-Loureiro R, Sánchez-Recalde A, Cruz-González I, Pascual I, Mascherbauer J, Altisent OAJ, Nombela-Franco L, Pan M, Trillo R, Moreno R, Delle Karth G, Blasco-Turrión S, Sánchez-Luna JP, Revilla-Orodoea A, Redondo A, Zamorano JL, Puri R, Iñiguez-Romo A, San Román A.** Right heart remodelling after bicaval Tric-Valve implantation in patients with severe tricuspid regurgitation. *Eurointervention.* 2023; 19(5): E450-2. Letter. IF: 7.6; D1
- **Anker SD, Usman MS, Anker MS, Butler J, Böhm M, Abraham WT, Adamo M, Chopra VK, Ciccoira M, Cosentino F, Filippatos G, Jankowska EA, Lund LH, Moura B, Mullens W, Pieske B, Ponikowski P, González-Juanatey JR, Rakisheva A, Savarese G, Seferovic P, Teerlink JR, Tschöpe C, Volterrani M, von Haehling S, Zhang J, Zhang YH, Bauersachs J, Landmesser U, Zieroth S, Tsioufis K, Bayes-Genis A, Chioncel O, Andreotti F, Agabiti-Rosei E, Merino JL, Metra M, Coats AJS, Rosano GMC.** Patient phenotype profiling in heart failure with preserved ejection fraction to guide therapeutic decision making. A scientific statement of the Heart Failure Association and the European Heart Rhythm Association of the European Society of Cardiology, and the European Society of Hypertension. *Eur J Heart Fail.* 2023; 25(7): 936-55. Editorial Material. IF: 16.9; D1
- **Ávila P, Berrueto A, Jiménez-Candil J, Tercedor L, Calvo D, Arribas F, Fernández-Portales J, Merino**



3.2 Cardiovascular Area

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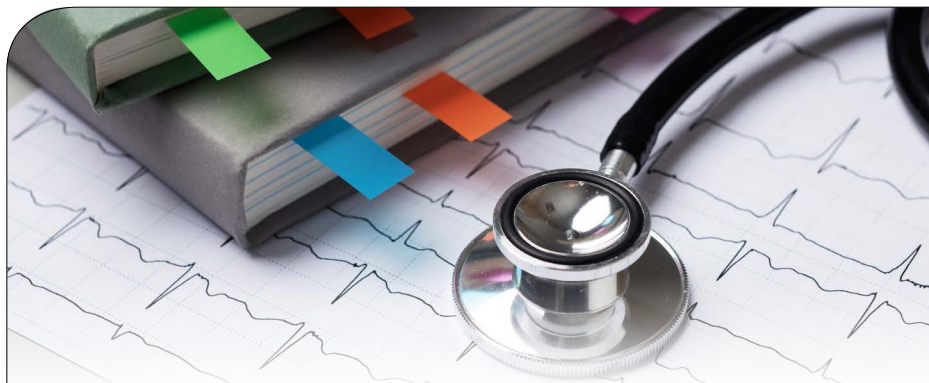
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- Merino Llorens JL. Addressing multimorbidity in elderly atrial fibrillation patients through interdisciplinary, tailored, patient-centred care pathways. UE. 2020-2026. *Management centre: FIBHULP*
- Merino Llorens JL. Comparative safety evaluation of atrial fibrillation by catheter with tissue temperature control mode (POWER FAST V). Medtronic. 2023-Ongoing. *Management centre: FIBHULP*
- Merino Llorens JL. EHRA-PATHS Addressing multimorbidity in elderly atrial fibrillation patients through interdisciplinary, tailored, patient-centered care pathways (GA 945260). UE. 2021-Ongoing. *Management centre: FIBHULP*
- Merino Llorens JL. El vectorcardiograma como herramienta de caracterización no invasiva de iá dinámica de activación y de i-a presencia y localización de zonas de conducción lenta en los circuitos de flíjter auricular atípico izquierdo mediante vectorcardiograma. Arrhythmia Network Technology S.L. 2018-Ongoing. *Management centre: FIBHULP*
- Merino Llorens JL. High radiofrequency power for fast and safe pulmonary veins ablation-a pilot observational study (POWERFAST III) (PI18/01522). ISCI. 2018-Ongoing. *Management centre: FIBHULP*
- Merino Llorens JL. HosmartAI Hospital Smart development based on AI (GA 101016834). UE. 2021-2024. *Management centre: FIBHULP*



- **Merino Llorens JL.** Hospital Smart development based on AI. UE. 2020-2024. *Management centre: FIBHULP*
- **Merino Llorens JL.** Implementation of personalised risk prediction and prevention of sudden cardiac death after myocardial infarction (PROFID EHRA) (GA 847999 (H2020-SC1-BHC-2018-2020)). UE. 2023-Ongoing. *Management centre: FIBHULP*
- **Merino Llorens JL.** Left atrial FLUTter: a comparison of ablation guided by high-density MApping and empirical LINEar ablation - the FLUTMALINE Trial. Biosense Webster. 2021-Ongoing. *Management centre: FIBHULP*
- **Merino Llorens JL.** Registro retrospectivo de identificación de factores cardiovasculares de mal pronóstico en pacientes covid-19 (CARD-covid). Medtronic Ibérica S.A. 2020-Ongoing. *Management centre: FIBHULP*
- **Moreno Gómez JR.** Evaluación clínica y seguimiento de los pacientes con cardiopatía estructural sometidos a procedimientos de tratamiento percutáneo. Abbott Laboratories S.A. 2011-Ongoing. *Management centre: FIBHULP*
- **Peinado Peinado R.** Comparación de un catéter multielectrodo frente a un catéter de ablación de punta irrigada para crear mapas de voltaje y activación en pacientes con taquicardias auriculares macroreentrantes. Medtronic Iberica S.A. 2019-Ongoing. *Management centre: FIBHULP*
- **Peinado Peinado R.** Influencia del remodelado eléctrico del miocardio auricular en la recurrencia de fibrilación auricular tras el aislamiento eléctrico de las venas pulmonares por fibrilación

- auricular paroxística . Abbott Medical España S.A. 2009-Ongoing. *Management centre: FIBHULP*
- **Peinado Peinado R.** Papel de los receptores del sistema inmune innato en el desarrollo y evolución de la fibrilación auricular. Medtronic Iberica S.A. 2021-Ongoing. *Management centre: FIBHULP*
 - **Peinado Peinado R.** PI-719 síndrome de apneas-hipopneas obstructivas del sueño y arritmias ventriculares en pacientes con disfunción ventricular sistólica portadores de DAI. Fundación Casa del Corazón. 2008-Ongoing. *Management centre: FIBHULP*
 - **Peinado Peinado R.** Registro de pacientes con cardiopatía congénita del adulto portadores de un sistema de terapia de resincronización cardiaca (RETRACA). Abbott Medical España S.A. 2017-Ongoing. *Management centre: FIBHULP*
 - **Peinado Peinado R.** Utilidad de los algoritmos de diagnostico diferencial electrocardiografico de las taquicardias regulares de qrs ancho en pacientes con cardiopatías congénitas de adulto. Medtronic Iberica S.A. 2019-Ongoing. *Management centre: FIBHULP*
 - **Pérez David E.** Caracterización de la fibrosis miocárdica en transposición de grandes vasos y ventrículo derecho sistémico mediante técnicas de imagen y biomarcadores moleculares y asociación con eventos adversos (PI22/00707). ISCIII. 2023-2025. *Management centre: FIBHULP*
 - **Pérez David E.** Fibrosis micocárdica en transposición de grandes vasos y ventrículo derecho sistémico: valoración mediante técnicas de imagen y asociación con clase funcional, biomarca-

- dores de insuficiencia cardiaca y evento adversos. FIBHULP. 2022-Ongoing. *Management centre: FIBHULP*
- **Riera del Moral LF.** Tratamiento celular de los aneurismas de aorta abdominal en un modelo murino. Jotec Cardiovascular S.L. 2017-Ongoing. *Management centre: FIBHULP*

Clinical Trials

- **Antorrena Miranda MI.** A phase 3, multicenter, randomized, double-blind, placebo-controlled, parallel-group study to evaluate the efficacy and safety of abelacimab in high-risk patients with atrial fibrillation who have been deemed unsuitable for oral anticoagulation (lilac).
Type/Phase: III
Sponsored by: Anthos Therapeutics, Inc
Signed date: 18/10/2023
- **Antorrena Miranda MI.** Estudio de fase II, multicéntrico, aleatorizado, paralelo, de tres grupos y controlado con placebo para evaluar la eficacia y la seguridad de cdr1321 en pacientes con fracción de eyección ventricular izquierda reducida ($\leq 45\%$) después de un infarto de mio.
Type/Phase: II
Sponsored by: Cardiopharmaceuticals, Gmbh
Signed date: 08/03/2023
- **Antorrena Miranda MI.** Estudio de fase III, aleatorizado, doble ciego, con doble simulación, con grupos paralelos y comparativo con tratamiento activo para evaluar la eficacia y la seguridad de milvexian, un inhibidor oral del factor xia, en comparación con

- apixabán en participantes con fibrilación auricular.
Type/Phase: III; Sponsored by: Janssen Research & Development, Llc; Signed date: 28/09/2023
- **Antorrena Miranda MI.** Estudio de fase III, aleatorizado, doble ciego, controlado con placebo y motivado por los acontecimientos para demostrar la eficacia y seguridad de milvexian, un inhibidor oral del factor xia, después de padecer un síndrome coronario agudo reciente. *Type/Phase: III; Sponsored by: Janssen Research & Development, Llc; Signed date: 28/09/2023*
 - **Antorrena Miranda MI.** Estudio global prospectivo de observación de la gestión real de pacientes con fibrilación auricular con alto riesgo de ictus (gardenia). *Type/Phase: EPA-SP; Sponsored by: Anthos Therapeutics, Inc; Signed date: 02/02/2023*
 - **Antorrena Miranda MI.** Estudio global prospectivo de observación de la gestión real de pacientes con fibrilación auricular con alto riesgo de ictus (gardenia). *Type/Phase: EPA-SP; Sponsored by: Anthos Therapeutics, Inc; Signed date: 07/11/2023*
 - **Iniesta Manjavacas AM.** On de una plataforma nacional multicéntrica para el estudio de la enfermedad inflamatoria del miocardio: cohorte pre-myo. *Type/Phase: OTROS; Sponsored by: Fundación Para La Formación E Investigación Sanitarias De La Región De Murcia; Signed date: 30/08/2023*
 - **Jurado Román A.** Treatment of functionally non-significant vulnerable plaques in patients with multivessel st-elevation myocardial infarction. the vulnerable randomized trial.



3.2 Cardiovascular Area

- Type/Phase:** PRODUCTO SANITARIO
Sponsored by: Fundación Epic
Signed date: 10/03/2023
- **Merino Llorens JL.** Ablación mediante aislamiento de venas pulmonares solo o combinado con ablación lineal para eliminar recurrencias de fa persistente: un ensayo clínico multicéntrico aleatorizado (supafer).
Type/Phase:
Sponsored by: Fundación Para La Investigación Biomedica Hospital Universitario La Paz
Signed date: 03/02/2023
 - **Merino Llorens JL.** Ensayo fase 3 para investigar la eficacia y seguridad del inhibidor oral del fxa asundexian (bay2433334) comparado con apixaban en pacientes con fibrilación auricular y riesgo de ictus- oceanic-af.
Type/Phase: III
Sponsored by: Bayer Ag
Signed date: 22/02/2023
 - **Merino Llorens JL.** Multi-center, multi-national, open-label, efficacy and safety study of etripamil nasal spray in pediatric patients with paroxysmal supraventricular tachycardia (the node-202 study).
Type/Phase: II
Sponsored by: Milestone Pharmaceuticals, Inc.
Signed date: 18/10/2023
 - **Moreno Gómez JR.** Clinical outcomes of the nvt allegra tavi system tf in failing calcified aortic heart valves in a real-world patient population with elevated surgical risk (follow)".
Type/Phase: No EPA
Sponsored by: Nvt Gmbh
Signed date: 29/09/2023
 - **Moreno Gómez JR.** Ensayo multicéntrico, aleatorizado, doble ciego y controlado con placebo que evalúa el impacto de incluirán en los acontecimientos cardiovasculares adversos mayores (mace) en participantes con enfermedad cardiovascular establecida (ecv)(victorion-2 prevent).
Type/Phase: III
Sponsored by: Novartis Farmaceutica, S.A.
Signed date: 27/01/2023
 - **Moreno Gómez JR.** Estudio de fase 2, doble ciego, aleatorizado, controlado con placebo, de 4 grupos para estudiar los síntomas, la funcionalidad, la calidad de vida relacionada con la salud y la seguridad de la administración subcutánea repetida de ponesgromab comparado con placebo en participantes adultos con insuficiencia cardíaca.
Type/Phase: II
Sponsored by: Pfizer Inc.
Signed date: 09/01/2023
 - **Moreno Gómez JR.** Estudio de fase 3, aleatorizado y controlado con placebo para evaluar la eficacia y la seguridad de mk-0616 para reducir las complicaciones cardiovasculares graves en participantes con riesgo cardiovascular elevado.
Type/Phase: III
Sponsored by: Merck Sharp & Dohme Llc
Signed date: 07/08/2023
 - **Moreno Gómez JR.** Evaluación prospectiva de revascularización completa en pacientes con enfermedad de múltiples vasos, sin incluir oclusiones totales crónicas (estudio present).
Type/Phase:
Sponsored by: Erasmus University Medical Center
Signed date: 30/12/2023
 - **Moreno Gómez JR.** Implementation of a decision support system and its effect on early optimisation of lipid-lowering therapies in patients with acute coronary syndrome: a cluster randomised controlled trial (implementación de un sistema de apoyo a la toma de decisiones y su efecto en la optimización precoz de las terapias hipolipemiantes en pacientes con síndrome coronario agudo: un ensayo controlado y aleatorizado).
Type/Phase: PRODUCTO SANITARIO
Sponsored by: Imperial College Of Science, Technology And Medicine
Signed date: 05/12/2023
 - **Moreno Gómez JR.** Investigación de la seguridad y el funcionamiento del sistema nvt allegra plus thv en pacientes con estenosis aórtica grave o bioprótesis aórtica quirúrgica fallida (empire ii).
Type/Phase: PRODUCTO SANITARIO
Sponsored by: Nvt Gmbh
Signed date: 27/09/2023
 - **Moreno Gómez JR.** Randomised, double-blind, placebo-controlled study to investigate a single administration of bi 765845 on top of standard of care in patients with acute myocardial infarction.
Type/Phase: II
Sponsored by: Boehringer Ingelheim International Gmbh
Signed date: 17/10/2023
 - **Moreno Gómez JR.** Randomized clinical trial of the results of allegra vs sapien transcatheter aortic valves in valve-in-valve indication.
Type/Phase:
Sponsored by: Fundación Epic
Signed date: 28/11/2023
 - **Pérez David E.** Estudio prospectivo, multicéntrico y abierto para evaluar la eficacia del esmolol en la identificación precoz de las alteraciones cardiovasculares inducidas por la cirrosis, la diabetes mellitus y los tratamientos cardiotoxicos.
Type/Phase: III
Sponsored by: Consorcio Centro De Investigación Biomedica En Red Instituto De Salud Carlos Iii
Signed date: 21/02/2023
 - **Pérez David E.** Registro multicéntrico español sobre la prevalencia y evolución de la insuficiencia tricúspide grave.
Type/Phase: No EPA
Sponsored by: Sociedad Española De Cardiología (Sec)
Signed date: 23/03/2023

Patents and trademarks

- **Riera del Moral LF, inventor; FIBHULP, assignee.** Aortic endoprosthesis for the treatment of aneurysm. P201231638, PCT/ES2013/070712; 2012 October 24.
- **Filgueiras Rama D, López de Sá y Areses E, Millet Roig J, Calvo Saiz CJ, inventors; Centro Nacional de Investigaciones Cardiovasculares Carlos III (CNIC), FIBHULP, Universidad Politécnica de Valencia, assignees.** Method of predicting or prognosticating neurological performance in patients who have suffered a cardiac arrest and optionally comatose status due to ventricular fibrillation. PCT/EP2015/076893, EP3020333; 2014 November 17.
- **Castro Conde A, author; FIBHULP, assignee.** Trademark name: RECAR Programa de Rehabilitación Cardíaca; CM 18457042; 2021 April 20.





3.2.2 Coagulopathies and Alterations of Haemostasis Group



Publications: 30 | Q1:12

COMPOSITION

Víctor Manuel Jiménez Yuste.

Jefe de Servicio de Hematología. Hospital Universitario La Paz. Profesor Asociado. Universidad Autónoma de Madrid

- **María Teresa Álvarez Román.** Jefa de Sección de Coagulopatías. Hospital Universitario La Paz
- **Nora Viviana Butta Coll.** Investigadora Senior (Contrato Miguel Servet - Tipo 2). Jefe de Laboratorio. Hospital Universitario La Paz-IdiPAZ
- **Hortensia de la Corte Rodríguez.** Facultativo Especialista de Área en Hematología y Hemoterapia. Hospital Universitario La Paz
- **Raquel Fernández Morata.** Técnico de Laboratorio. Hospital Universitario La Paz-IdiPAZ
- **Elena García Arias-Salgado.** Investigadora. Hospital Universitario La Paz-IdiPAZ
- **Sara García Barcenilla.** Coordinadora de Estudios. Hospital Universitario La Paz-IdiPAZ
- **Mercedes Gassior Kabat.** Facultativo Especialista de Área en Hematología y Hemoterapia. Hospital Universitario La Paz
- **Mónica Martín Salces.** Facultativo Especialista de Área en Hematología y Hemoterapia. Hospital Universitario La Paz
- **Elena Monzón Manzano.** Investigadora Postdoctoral. Hospital Universitario La Paz-IdiPAZ
- **Isabel Rivas Pollmar.** Médico Adjunto en Hematología. Hospital Universitario La Paz terno Residente en Cardiología. Hospital Universitario La Paz



STRATEGIC OBJETIVES

- This group's research activities address various relevant questions in the area of haematology and focus on the characterisation of the genetic and molecular basis of coagulation and haemostatic function. Our group investigates physiological processes such as coagulation, haemostasis, innate immunity, inflammation, cell adhesion and migration, and cell signalling, with special emphasis on their relevance to pathological processes.
- In addition, we perform epidemiological studies to facilitate patient data analysis and therapeutic treatment.

RESEARCH LINES

- Haemophilia A and B: Individualisation of treatment according to the characteristics of the patient
- New haemostatic treatments for bleeding disorders
- Haemostasis in patients with thrombocytopenias

RESEARCH ACTIVITY

Doctoral Theses

- **Ramón Ortiz C.** Papel de los biomarcadores séricos en el síndrome de obstrucción sinusoidal tras el trasplante de células madre hematopoyéticas[dissertation]. *Madrid: UAM: 2023(25/09/2023). Director: Jiménez Yuste VM, Butta Coll N*
- **Meijón Ortigueira M.** Profilaxis primaria personalizada en hemofilia a grave[dissertation]. *Madrid: UAM: 2023(20/06/2023). Director: Jiménez Yuste VN, Álvarez Román MT*
- **Guerrero Camacho R.** Análisis de resultados de dos protocolos terapéuticos en pacientes con Hemofilia adquirida a en un Hospital Terciario[dissertation]. *Madrid: UAM: 2023(29/03/2023). Director: Jiménez Yuste VN, Álvarez Román M*

- **Gasior Kabat M.** Transplantation with CD45RA+ Cell Purging and Adoptive Immunotherapy with CD45RO+ T Lymphocytes in Paediatric Patients with Malignant and Non-Malignant Haematological pathologies[dissertation]. *Madrid: UAM: 2023(17/10/2023). Director: Pérez Martínez A.*

Final Degree Theses

- **Albasanz García P.** Validación de nuevas técnicas microfluídicas en cámara de flujo para el análisis de trastornos de la hemostasia.[dissertation]. *Madrid: Universidad Politécnica de Madrid: 2023(24/07/2023). Director: García Arias-Salgado E, Jiménez Yuste VJ*



3.2 Cardiovascular Area

Publications

- **Álvarez-Román MT, Merchán RD, Mellado RCR, Jiménez-Yuste V.** Switching and increasing prophylaxis regimen with a genetically recombinant fusion of coagulation factor IX and albumin in haemophilia B: a case report. *Curr Opin Hematol.* 2023; 30(5): 175-9. Review. IF: 3.1; Q2
- **Álvarez-Román MT, Shapiro AD, Ragni MV, Palmborg H, Bystrická L, Szamosi J, Casiano S, Chambost H.** Long-term outcomes of prophylaxis with a recombinant factor VIII Fc or recombinant factor IX Fc in patients with hemophilia previously treated on demand. *Res Pract Thromb Haemost.* 2023; 7(6): e102163. Article. IF: 3.4; Q2
- **Álvarez-Román MT, Sierra-Aisa C, Jiménez-Yuste V.** The 2021 guidelines on the diagnosis of von Willebrand disease: A comparison with current clinical practice in Spanish centers. *Haemophilia.* 2023; 29(3): 925-7. Letter. IF: 3.0; Q2
- **Astermark J, Blatny J, Königs C, Hermans C, Jiménez-Yuste V, Hart DP.** Considerations for shared decision management in previously untreated patients with hemophilia A or B. *Ther Adv Hematol.* 2023; 14: 20406207231165900. Review. IF: 3.4; Q2
- **Blázquez-Ramos N, Romero-Garrido JA, del Valle LG, Collada-Sánchez VL, Álvarez-Román MT, Jiménez-Yuste V, Martín-Salces M, de la Corte-Rodríguez H, Herrero-Ambrosio A, Benedi-González J, Rodríguez-Merchan EC.** Development of a telematic pharmaceutical care app (Haemoassist) for multidisciplinary follow-up of patients with congenital coagulopathies. *Expert Rev Hematol.* 2023; 16(3): 213-26. Article. IF: 2.3; Q2
- **Bouza E, Martín M, Alés JE, Aragonés N, Barragán B, de la Cámara R, Del Pozo JL, García-Gutiérrez V, García-Sanz R, Gracia D, Guillem V, Jiménez-Yuste V, Martín-Delgado MC, Martínez J, López R, Rodríguez-Lescure A, Galiana JR, Sureda AM, Tejerina-Picado F, Trilla A, Zapatero A, Palomo E, San-Miguel J.** Impact of the COVID-19 pandemic on the diagnosis and treatment of onco-hematologic patients: a discussion paper. *Rev Esp Quim.* 2023; 36(1): 1-25. Review. IF: 1.9; Q4
- **Butta NV, Arias-Salgado EG, Manzano EM, Acuña P, Román MTA, Buño-Soto A, Ramos JCR, Belda-Iniesta C, Frías J, Carcas AJ, de Soto LM, Buckley RD, Lora D, García-Morales MT, Borobia AM, Arribas JR, Yuste VJ, CombiVacS Study Grp.** No changes in hemostasis after COVID-19-heterologous vaccination schedule: A subanalysis of the phase 2 CombiVacS study. *Res Pract Thromb Haemost.* 2023; 7(1): e100049. Article. IF: 3.4; Q2
- **de Bustamante JMM, Mendoza A, López-Muñoz S, García-Fernández E, Gómez-Prieto P, Jiménez-Yuste V.** A new face of fibrin-associated large b-cell lymphoma: epstein-barr virus-positive breast implant-associated diffuse large b-cell lymphoma. *J Clin Med.* 2023; 12(11): 3614. Review. IF: 3.0; Q1
- **De la Corte-Rodríguez H, Román-Belmonte JM, Rodríguez-Damiani BA, Vázquez-Sasot A, Rodríguez-Merchán EC.** Extracorporeal shock wave therapy for the treatment of musculoskeletal pain: a narrative review. *Healthcare (Basel).* 2023; 11(21): 2830. Review. IF: 2.4; Q2
- **de Ramon Ortiz C, Justo Sanz R, Beauverd Y, Humala K, López de la Guía A, De Paz R, Gasior M, Gómez Prieto P, Fabra Urdiola M, Canales Albendea M, Butta N, Jiménez Yuste V.** Low plasma levels of hyaluronic acid might rule out sinusoidal obstruction syndrome after hematopoietic stem cell transplantation. *Dis Markers.* 2023; 2023: 7589017. Article. Not indexed
- **Díaz-Jordán BL, Cebanu T, Barcenilla SG, Álvarez-Román MT.** Real-world experience of rIX-FP prophylaxis at dosing intervals of up to 14 days in a pediatric patient with hemophilia B during the COVID-19 pandemic. *Clin Case Rep.* 2023; 11(12): e8180. Article. IF: 0.6; Q3
- **Encinas-Ullán CA, De la Corte-Rodríguez H, Gómez-Cardero P, Rodríguez-Merchán EC.** Orthopedic surgical procedures in people with hemophilia. *Blood Coagul Fibrin.* 2023; 34: S5-8. Article. IF: 1.2; Q4
- **García-Ripoll M, De la Corte-Rodríguez H.** Disability and the social impact of hemophilia. *Blood Coagul Fibrin.* 2023; 34: S26-8. Article. IF: 1.2; Q4
- **Hermans C, Astermark J, Carvalho M, Dolan G, d'Oiron R, Fontana P, Holme PA, Kenet G, Klamroth R, Mancuso ME, Marquardt N, Núñez R, Katsarou O, Pabinger-Fasching I, Quintavalle G, Rodgers R, van der Valk P, Windyga J, Yuste VJ, Zupan IP.** Prevalence of COVID-19 related hospitalizations and mortality in adults aged ≥40 years with haemophilia: A survey from Europe. *Haemophilia.* 2023; 29(3): 913-6. Letter. IF: 3.0; Q2
- **Jiménez-Yuste V, Álvarez-Román M, Martín-Salces M, Corte-Rodríguez HD, Bonanad S, Núñez R, Fernández-Mosteirín N, García-Frade LJ, Martino-li C, Kim HK.** Comparative analysis of Hemophilia Early Arthropathy Detection with Ultrasound (HEAD-US) scores in persons with nonsevere hemophilia A and B reveals a high degree of joint damage in both disease types. *Res Pract Thromb Haemost.* 2023; 7(7): e102207. Letter. IF: 3.4; Q2
- **Jiménez-Yuste V, Álvarez-Román MT.** Fitusiran prophylaxis in severe haemophilia without inhibitors. *Lancet Haematol.* 2023; 10(5): E308-9. Editorial Material. IF: 15.4; D1
- **Kessler CM, Corrales-Medina FF, Mannucci PM, Jiménez-Yuste V, Tarantino MD.** Clinical efficacy of simoctocog alfa versus extended half-life recombinant FVIII concentrates in hemophilia A patients undergoing personalized prophylaxis using a matching-adjusted indirect comparison method. *Eur J Haematol.* 2023; 111(5): 757-67. Article. IF: 2.3; Q2
- **Martínez-López J, De la Cruz J, Gil-Manso R, Alegre A, Ortiz J, Llamas P, Martínez Y, Hernández-Rivas JA, González-Gascón I, Benavente C, Monteliu PE, Jiménez-Yuste V, Canales M, Bastos M, Kwon M, Valenciano S, Callejas-Charavia M, López-Jiménez J, Herrera P, Duarte R, Martín-Buitrago LN, Godoy PS, Yerovi CJ, Martínez-Barranco P, Roa MG, Escobar CE, Matilla A, Sierra BR, Aláez-Usón MC, Quiroz-Cervantes K, Martínez-Chamorro C, Pérez-Oteyza J, Martos-Martínez R, Herráez R, González-Santillana C, Del Campo JF, Alonso A, de la Fuente A, Pascual A, Bustelos-Rodríguez R, Sebrango A, Ruiz E, Marcheco-Pupo EA, Grande C, Cedillo A, Lumbreras C, Barea AA, Casas-Rojo JM, Calbacho M, Díez-Martín JL, García-Suárez J.** COVID-19 Severity and survival over time in patients with hematologic malignancies: a population-based registry study. *Cancers (Basel).* 2023; 15(5): 1497. Article. IF: 4.5; Q1
- **Mathias M, Abraham A, Belletrutti MJ, Carcao M, Carvalho M, Chambost H, Chan AKC, Dubey L, Ducore J, Gattens M, Greselo P, Gruel Y, Guillet B, Jiménez-Yuste V, Kitanovski L, Klukowska A, Lohade S, Mancuso ME, Oldenburg J, Pollio B, Sigaud M, Vilchevska K, Wu JKM, Jansen M, Belyanskaya L, Walter O, Knaub S, Neufeld EJ.** Simoctocog alfa (Nuwiq®) in previously untreated patients with severe haemophilia A-Final efficacy and safety results from the NuProtect study. *Eur J Haematol.* 2023; 111(4): 544-52. Article. IF: 2.3; Q2
- **Matsushita T, Shapiro A, Abraham A, Angchaisuksiri P, Castaman G, Cepo K, d'Oiron R, Frei-Jones M, Goh AS, Haaning J, Jacobsen SH, Mahlangu J, Mathias M, Nogami K, Rasmussen JS, Stasyshyn O, Tran H, Vilchevska K, Abraham A, Windyga J, You CW, Zozulya N, Zulfikar B, Jiménez-Yuste V.** Phase 3 trial of concizumab in hemophilia with inhibitors. *New Engl J Med.* 2023; 389(9): 783-94. Article. IF: 96.2; D1
- **Mingot-Castellano ME, Hirnyk MC, Sánchez-González B, Álvarez-Román MT, Báez-García A, Bernardo-Gutiérrez A, Bernat-Pablo S,**
- **Bolaños-Calderón E, Butta-Coll N, Caballero-Navarro G, Caparrós-Miranda IS, Entrena-Ureña L, Fernández-Fuertes LF, García-Frade LJ, del Castillo MDG, González-López TJ, Grande-García C, de Castro JMG, Jarque-Ramos I, Jiménez-Bárceñas R, López-Ansoar E, Martínez-Carballeira D, Martínez-Robles V, Monteagudo-Montesinos E, Páramo-Fernández JA, Perera-Álvarez MD, Soto-Ortega I, Valcárcel-Ferreiras D, Pascual-Izquierdo C.** Recommendations for the clinical approach to immune thrombocytopenia: Spanish ITP Working Group (GEPTI). *J Clin Med.* 2023; 12(20): 6422. Review. IF: 3.0; Q1
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3.2 Cardiovascular Area

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- Álvarez Román MT. Fenotipo clínico y respuesta a agonistas de receptores de trombopoyetina en pacientes ancianos con trombocitopenia inmune (PI22/01489). ISCIII. 2023-2025. *Management centre: FIBHULP*
- Álvarez Román MT. Hemolultion: estudio observacional ambispectivo para evaluar la efectividad y seguridad del tratamiento con emicizumab de pacientes con hemofilia a en condiciones de práctica clínica habitual ML41684. Olga Roche Losada . 2019-Ongoing. *Management centre: FIBHULP*
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- Álvarez Román MT. Programa del tratamiento multidisciplinario del paciente con hemofilia. Omnix Pharma S.L. 2017-Ongoing. *Management centre: FIBHULP*
- Álvarez Román MT. Puesta en marcha y realización del estudio clínico ML40944 Hemolife: un estudio observacional de calidad de vida en personas con hemofilia a y cuidadores y el estudio: Hemolultion: estudio observacional ambispectivo para evaluar la eficacia y seguridad del tratamiento en emicizumab de pacientes con hemofilia a en condiciones práctica clínica habitual. Roche Farma S.A. 2018-Ongoing. *Management centre: FIBHULP*
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- Butta Coll NV. Estudio de la hemostasia en la enfermedad de Behçet. Baxter S.L. 2011-Ongoing. *Management centre: FIBHULP*
- Butta Coll NV. Evaluación del efecto procoagulante in vitro de concentrados de factor ix en pacientes en profilaxis con emicizumab. CSL Behring S.A. 2021-Ongoing. *Management centre: FIBHULP*
- Butta Coll NV. Fenotipo clínico y respuesta ancianos con trombocitopenia inmune. FIBHULP. 2022-Ongoing. *Management centre: FIBHULP*
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- Jiménez Yuste VM. Aplicación de inteligencia artificial para detectar de hemorragias articulares en pacientes con hemofilia. Novo Nordisk Health Care AG. 2022-Ongoing. *Management centre: FIBHULP*
- Jiménez Yuste VM. Asesoramiento para la puesta en marcha del estudio de fase 3 sin enmascaramiento y de un solo grupo para evaluar la eficacia y la seguridad de PF-07055480 (terapia génica con el VAA2/6 recombinante/factor VIII humano) en varones adultos con hemofilia a entre moderadamente grave y grave (FVIII: c<1%). Parexel International (Ir) Limited. 2022-Ongoing. *Management centre: FIBHULP*
- Jiménez Yuste VM. Desarrollo de nuevas estrategias para mejorar el manejo terapéutico de los pacientes con hemofilia a en presencia de inhibidor (PI22/01461). ISCIII. 2023-2025. *Management centre: FIBHULP*
- Jiménez Yuste VM. Desarrollo de un nuevo método de laboratorio de alta sensibilidad para la detección cuantitativa de anticuerpos contra el factor VIII. Pfizer S.L.U. 2012-Ongoing. *Management centre: FIBHULP*
- Jiménez Yuste VM. Estudio de efecto procoagulante del emicizumab y de su combinación con concentrados de factor para el tratamiento de sangrados en pacientes con hemofilia A grave. (PI19/00631). ISCIII. 2020-2023. *Management centre: FIBHULP*
- Jiménez Yuste VM. Estudio del papel de los biomarcadores de daño endotelial, hepatocelular y fibrosis hepática y la elastografía de transición en el diagnóstico del síndrome de obstrucción sinusoidal. Jazz Pharmaceuticals Iberia S.L. 2015-Ongoing. *Management centre: FIBHULP*
- Jiménez Yuste VM. Estudio in vitro del efecto procoagulante de factor VII recombinante activado y vatreptacog alfa en sangre de pacientes con hemofilia grave mediante tromboelastografía y test de generación de tromina. PI-1306. Novo Nordisk A/S. 2012-Ongoing. *Management centre: FIBHULP*
- Jiménez Yuste VM. Estudio in vitro del efecto procoagulante de feibar en pacientes en profilaxis con emicizumab. Takeda Pharmaceutical International AG. 2020-Ongoing. *Management centre: FIBHULP*
- Jiménez Yuste VM. Field study to evaluate the activity a site specific of b-domain deleted (BDD) pegylated recombinant FVIII protein (BAY 94-9024) in plasma samples measured with both

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- Jiménez Yuste VM. I edición del abordaje multidisciplinar del paciente con Ilc. Astrazeneca Farmaceutica Spain S.A. 2022-Ongoing. *Management centre: FIBHULP*
- Jiménez Yuste VM. Individualización de la profilaxis: estudio de los niveles valles mediante técnicas globales e impacto de la actividad física. World Federation of Hemophilia. 2015-Ongoing. *Management centre: FIBHULP*
- Jiménez Yuste VM. Iniciativas confihe: profilaxis personalizada: estudios prospectivos de la influencia de los parámetros farmacocinéticos individuales, test globales de la coagulación y actividad deportiva en la eficacia de la profilaxis. MK Media S.L. 2017-Ongoing. *Management centre: FIBHULP*
- Jiménez Yuste VM. Monitorización del tratamiento con agentes "bypass", en pacientes con hemofilia e inhibidor mediante tres métodos de evaluación global de la hemostasia. Sanofi Aventis S.A. 2007-Ongoing. *Management centre: FIBHULP*
- Jiménez Yuste VM. Post-hemarthrosis sinovitis markers on patients with haemophilia on prophylaxis. clinical, biological and ultrasonographic stuyd. Pfizer S.L.U. 2012-Ongoing. *Management centre: FIBHULP*
- Rivas Pollmar MI. Evaluación de la carga asistencial de enfermería durante el uso de bombas de infusión intravenosa programables para la administración frecuente de bolos de RFVIIA. Novo Nordisk Pharma S.A. 2020-Ongoing. *Management centre: FIBHULP*
- Rivas Pollmar MI. Individualización de la profilaxis en pacientes pediátricos con hemofilia a grave mediante estudio farmacocinético y farmacodinámico en tratamiento con productos de vida media estándar y vida media extendida. Swedish Orphan Biovitrum S.L. 2020-Ongoing. *Management centre: FIBHULP*



Clinical trials

- **Jiménez Yuste VM.** Case-control pilot study of the immune modulating effect of feiba on patients with haemophilia a and inhibitors.
Type/Phase:
Sponsored by: Baxter Healthcare Corporation
Signed date: 02/12/2023
- **Jiménez Yuste VM.** estudio abierto en participantes pediátricos (<18 años de edad) con hemofilia a severa (actividad del factor de coagulación <1 %) con o sin inhibidores, o con hemofilia b de moderadamente severa a severa (actividad del factor de coagulación ≤ 2 %) con o sin inhibidores, que compara 12 meses de tratamiento estándar histórico con la profilaxis con marstacimab.
Type/Phase: III
Sponsored by: Pfizer, S.L.U.
Signed date: 10/07/2023
- **Álvarez Román MT.** Estudio de fase III, aleatorizado y doble ciego de ianalumab (VAY736) frente a placebo en combinación con corticosteroides en primera línea en trombocitopenia inmune primaria (VAYHIT1).
Type/Phase: III
Sponsored by: Novartis Farmaceutica, S.A.
Signed date: 11/01/2023
- **Álvarez Román MT.** Estudio de fase III, aleatorizado y doble ciego de ianalumab (VAY736) frente a placebo en combinación con eltrombopag en pacientes con trombocitopenia inmune primaria (PTI) que hayan tenido una respuesta insuficiente o una recaída después del tratamiento de primera línea con esteroides (VAYHIT2).
- Type/Phase:** III
Sponsored by: Novartis Farmaceutica, S.A.
Signed date: 23/03/2023
- **Jiménez Yuste VM.** Open-label, long-term safety and efficacy study of mim8 in participants with haemophilia a with or without inhibitor.
Type/Phase: IIIb
Sponsored by: Novo Nordisk A/S
Signed date: 21/03/2023
- **Álvarez Román MT.** A phase 3b open-label, multicenter study evaluating physical activity and joint health in previously treated patients ≥ 12 years of age with severe haemophilia a treated with intravenous recombinant coagulation factor viii fc-von willebrand factor-xten fusion protein (rfviii-fc-vwf-xten efanesoctocog alfa) for 24 months.
Type/Phase: IIIb
Sponsored by: Swedish Orphan Biovitrum Ab Sobi
Signed date: 17/11/2023
- **Álvarez Román MT.** Estudio no intervencionista sobre los cambios en el estado de salud de las articulaciones en pacientes adultos con hemofilia a tras el cambio a la profilaxis con el turoctocog alfa pegol (N8-GP).
Type/Phase: EPA-SP
Sponsored by: Novo Nordisk A/S
Signed date: 24/01/2023
- **Álvarez Román MT.** An observational, multicenter study to evaluate the use and effectiveness of doptelet® (avatrombopag) in adult patients with immune thrombocytopenia (itp).
Type/Phase: EPA-SP
Sponsored by: Swedish Orphan Biovitrum Ab Sobi
Signed date: 20/01/2023
- **Jiménez Yuste VM.** Open-label safety study in adults and adolescents with haemophilia a with and without fviii inhibitors switching directly from emicizumab prophylaxis to nnc0365-3769 (MIM8) prophylaxis.
Type/Phase: IIIb
Sponsored by: Novo Nordisk A/S
Signed date: 28/04/2023
- **Álvarez Román MT.** Estudio observacional para describir el impacto clínico de los patrones de tratamiento en personas con hemofilia a leve-moderada en España (Estudio LEMON).
Type/Phase: EPA-SP
Sponsored by: Roche Farma, S.A.
Signed date: 15/05/2023
- **Jiménez Yuste VM.** Estudio en fase 3, aleatorizado, de loncastuximab tesirina en combinación con rituximab frente a inmunoterapia en pacientes con linfoma difuso de células B grandes (LDCBG) recidivante o resistente.
Type/Phase: III
Sponsored by: Adc Therapeutics Sa
Signed date: 14/02/2023
- **Álvarez Román MT.** Estudio de bajo nivel de intervención, prospectivo, multicéntrico, de 18 meses de duración para evaluar los resultados en salud articular de pacientes con hemofilia a o b en tratamiento profiláctico con efmoroctocog alfa o eftreonoacog alfa.
Type/Phase: IV
Sponsored by: Swedish Orphan Biovitrum Ab
Signed date: 21/09/2023
- **Jiménez Yuste VM.** Ensayo de fase I/II, multicéntrico, sin enmascaramiento para evaluar la seguridad y la farmacocinética de dosis crecientes de BTCT4465A en monoterapia y en combinación con atezolizumab en pacientes con linfoma no hodgkiniano de linfocitos b y leucemia linfocítica crónica recidivantes o resistentes.
Type/Phase: I
Sponsored by: Genentech Inc Roche Farma, S.A.
Signed date: 15/02/2023
- **Álvarez Román MT.** The european paediatric network for haemophilia management and the pednet haemophilia registry the european paediatric network for haemophilia management and the pednet haemophilia registry.
Type/Phase: No EPA
Sponsored by: Pednet Haemophilia Research Foundation UMC Utrecht
Signed date: 15/03/2023
- **Jiménez Yuste VM.** Estudio en fase I/II para evaluar la seguridad, tolerabilidad, farmacocinética, farmacodinámica y eficacia de NXT007 en personas con hemofilia a grave o moderada.
Type/Phase: I
Sponsored by: F.Hoffmann-La Roche Ltd
Signed date: 13/07/2023
- **Jiménez Yuste VM.** Estudio abierto de extensión para evaluar la seguridad a largo plazo, la tolerabilidad y la eficacia de marstacimab en profilaxis en pacientes con hemofilia a grave (actividad del factor de coagulación <1 %) con o sin inhibidores o en pacientes con hemofi.
Type/Phase: III
Sponsored by: Pfizer, S.L.U.
Signed date: 04/05/2023



3.2 Cardiovascular Area

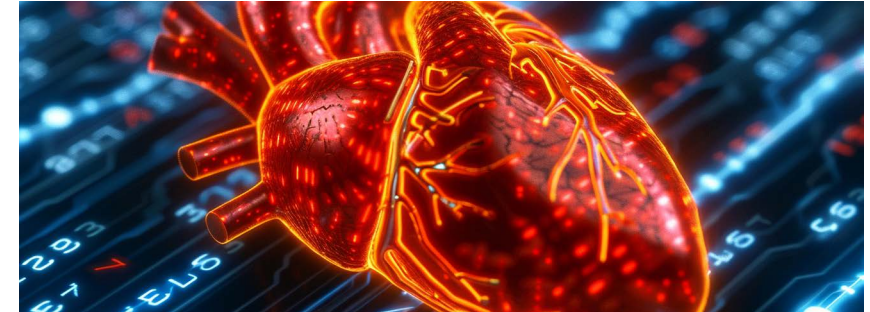
- **Jiménez Yuste VM.** An open-label, single-arm treatment study to investigate the safety and tolerability of switching from emicizumab to fitusiran prophylaxis in male participants aged ≥ 18 years of age with severe hemophilia a, with, or without inhibitors.
Type/Phase: I
Sponsored by: Sanofi-Aventis Recherche & Développement
Signed date: 13/07/2023
- **Jiménez Yuste VM.** Estudio de fase I/II, modular, abierto y multicéntrico, para evaluar AZD4573 en combinaciones novedosas con agentes antitumorales en pacientes con neoplasias malignas hematológicas en estadio avanzado.
Type/Phase: I
Sponsored by: Astrazeneca AB
Signed date: 14/04/2023
- **Jiménez Yuste VM.** Estudio de fase III, aleatorizado, abierto y multicéntrico, para comparar zanubrutinib (BGB-3111) más rituximab frente a bendamustina más rituximab en pacientes con linfoma de células del manto no tratados previamente que no son aptos para recibir un trasplante de células madre.
Type/Phase: III
Sponsored by: Beigene Ltd
Signed date: 21/03/2023
- **Jiménez Yuste VM.** Estudio de fase 2 de un solo brazo en monoterapia con tosilato de valemestostat en sujetos con linfoma periférico de células t en recaída / refractario (valemestostat tosilato [ds-3201b]), un inhibidor dual del potenciador del homólogo zeste [ezh] 1/2 para el linfoma de linfocitos t periférico recidivante/resistente [lltp r/r].
Type/Phase: II
Sponsored by: Daiichi Sankyo Inc
Signed date: 25/05/2023
- **Álvarez Román MT.** Estudio global, abierto y de diseño adaptativo para investigar la eficacia y la seguridad de serpinpc en pacientes con hemofilia a grave o con hemofilia b de moderadamente grave a grave.
Type/Phase: IIb
Sponsored by: Apcintex Ltd
Signed date: 02/08/2023
- **Jiménez Yuste VM.** Estudio en fase II, abierto y de dos cohortes de bretuximab vedotina y CHP (A+CHP) en el tratamiento de primera línea de sujetos con linfoma de linfocitos t periféricos (lltp) con menos de un 10% de expresión.
Type/Phase: II
Sponsored by: Seagen, Inc
Signed date: 13/04/2023
- **Jiménez Yuste VM.** Estudio en fase III multicéntrico, aleatorizado, doble ciego, controlado con placebo y con comparador activo, de brenuximab vedotina o placebo en combinación con lenalidomida y
- **rituximab en pacientes con linfoma difuso de células b grandes (LDCBG) recidivante o resistente.**
Type/Phase: III
Sponsored by: Seagen, Inc
Signed date: 02/05/2023
- **Álvarez Román MT.** Estudio global, abierto para investigar la eficacia y la seguridad de serpinpc en sujetos con hemofilia b con inhibidores a global, open-label study to investigate the efficacy and safety of serpinpc in subjects with hemophilia b with inhibitors.
Type/Phase: IIb
Sponsored by: Apcintex Ltd
Signed date: 04/08/2023
- **Jiménez Yuste VM.** Estudio controlado de fase IB/II, abierto, multicéntrico y aleatorizado para investigar la seguridad, tolerabilidad, farmacocinética y eficacia de mosunetuzumab (BTCT4465A) en combinación con chop o chp-polatuzumab vedotin en pacientes con linfoma no hodgkiniano de linfocitos b.
Type/Phase: I
Sponsored by: F.Hoffmann-La Roche Ltd
Signed date: 03/07/2023
- **Gasior Kabat M.** Estudio de fase 3, aleatorizado y abierto, para evaluar a imetelstat (GRN163L) frente al mejor tratamiento disponible en pacientes con mielofibrosis de riesgo intermedio 2 o alto resistente a inhibidores de las cinasas jano.
Type/Phase: III
Sponsored by: Geron Corporation
Signed date: 14/09/2023
- **Jiménez Yuste VM.** Estudio en fase 3, aleatorizado, de loncastuximab tesirina en combinación con rituximab frente a inmunoterapia en pacientes con linfoma difuso de células b grandes (LDCBG) recidivante o resistente.
Type/Phase: III
Sponsored by: ADC Therapeutics S.A.
Signed date: 06/11/2023
- **Jiménez Yuste VM.** Safety, tolerability, pharmacokinetics and pharmacodynamics of single and multiple subcutaneous doses of NNC0365-3769 (MIM8) in healthy subjects and in subjects with haemophilia a with or without factor viii inhibitors.
Type/Phase: I
Sponsored by: Novo Nordisk A/S
Signed date: 10/10/2023
- **Jiménez Yuste VM.** Estudio de fase 3, aleatorizado, doble ciego, controlado con placebo y multicéntrico entre bendamustina con rituximab (BR) en monoterapia y en combinación con acalabrutinib (ACP-196) en pacientes con linfoma de células del manto no tratado previamente.
Type/Phase: III
Sponsored by: Acerta Pharma B.V
Signed date: 27/09/2023
- **Jiménez Yuste VM.** Estudio de fase 3, de un solo brazo, multicéntrico, multinacional, abierto, cruzado unidireccional, para investigar la eficacia y seguridad de la profilaxis con fitusiran en pacientes masculinos de ≥ 12 años de edad con hemofilia a o b grave, con o sin anticuerpos inhibidores del factor VIII o IX.
Type/Phase: III
Sponsored by: Sanofi-Aventis Recherche & Développement
Signed date: 24/10/2023
- **Jiménez Yuste VM.** Estudio de fase II, abierto, de 2 cohortes y multicéntrico de INCB050465, un inhibidor de PI3k δ , en linfoma de células del manto en recidiva o resistente al tratamiento, previamente tratado con o sin un inhibidor de la BTK-205.
Type/Phase: II
Sponsored by: Incyte Corporation
Signed date: 08/02/2023

Patents and trademarks

- **Nora Butta JY.** Trademark name: WELCOME von willebrand active e-learnig course. CM M4190835; 2022 November 8.
- **Arias-Salgado, MT Álvarez Román, V Jiménez Yuste, N Butta Coll, García Rivera Francisco Julián, García Rivera M^a Carmen, Carballo García M^a Ángeles, inventors.** FIBHULP, García Rivera M^a Carmen, Carballo García M^a Angeles, assignees. Dispositivo de recogida de muestras biológicas. P202230651. 2022 July 22.



3.2.3 Vascular Physiology and Pharmacology Group



Publications: 14 | Q1:10

COMPOSITION

Ana María Briones Alonso

Profesora Titular. Dpto. Farmacología, Facultad de Medicina. Universidad Autónoma de Madrid

- **María Jesús Alonso Gordo.** Catedrática. Departamento de Ciencias Básicas de la Salud. Facultad de Ciencias de la Salud. Universidad Rey Juan Carlos
- **Constanza Ballesteros Martínez.** Investigadora Predoctoral. Universidad Autónoma de Madrid
- **María Teresa Barrús Ortiz.** Profesora Contratada doctor. Departamento de Ciencias de la Salud. Facultad de Ciencias de la Salud. Universidad Rey Juan Carlos
- **Javier Blanco Rivero.** Profesor Titular. Departamento de Fisiología. Facultad de Medicina. Universidad Autónoma de Madrid
- **Naoual Boukich El Houari.** Investigadora Predoctoral. Universidad Autónoma de Madrid
- **Ana Belén García Redondo.** Profesora Ayudante Doctor. Departamento de Fisiología. Facultad de Medicina. Universidad Autónoma de Madrid
- **María González Amor.** Investigadora Postdoctor-

al. Centro Nacional de Investigaciones Cardiovasculares

- **Raquel González Blázquez.** Investigadora Postdoctoral. Universidad Autónoma de Madrid
- **Zoe González Carnicero.** Investigadora Postdoctoral. Universidad Autónoma de Madrid
- **Raquel Hernanz Martín.** Profesora Titular. Departamento de Ciencias Básicas de la Salud. Facultad de Ciencias de la Salud. Universidad Rey Juan Carlos
- **Ángela Martín Cortes.** Profesora Contratada Doctor. Departamento de Ciencias de la Salud. Facultad de ciencias de la Salud. Universidad Rey Juan Carlos
- **Marta Martínez Casales.** Profesora Visitante. Universidad Rey Juan Carlos
- **Abraham Merino López.** Ayudante de Investigación. Universidad Autónoma de Madrid
- **Marta Miguel Castro.** Científico Titular. Instituto de Investigación en Ciencias de la Alimentación Consejo Superior de Investigaciones Científicas
- **Roberto Palacios Ramírez.** Investigador Postdoctoral. Universidad de Valladolid
- **Raquel Rodríguez Díez.** Profesora Ayudante Doctor. Departamento de Fisiología. Facultad de Medicina. Universidad Complutense
- **Mercedes Salaices Sánchez.** Catedrática. Departamento de Farmacología. Facultad de Medicina. Universidad Autónoma de Madrid
- **Lucía Serrano Díaz del Campo.** Investigadora predoctoral. Universidad Autónoma de Madrid

STRATEGIC OBJETIVES

- Our group is a well-established research group with more than 30 years of experience in the study of the mechanisms involved in the functional, structural and mechanical alterations of the vasculature in various cardiovascular pathologies such as ageing, diabetes and, in particular, hypertension.
- The group is located at the Faculty of Medicine (UAM) and maintains research collaborations with investigators at various universities in Spain and in other countries. Our main objective is to gain further insight into the physiological and molecular mechanisms involved in alterations of resistance and conductance arteries in cardiovascular pathologies. To conduct our research, we generally use various experimental approaches including in vivo animal models, ex vivo experiments and in vitro cellbased studies combined with physiological, pharmacological and molecular biology techniques. In addition, we have begun to translate this knowledge into human studies. In terms of the mediators involved, we have a particular interest in proinflammatory prostanoids, reactive oxygen species (and their interaction among each other or with other mediators such as nitric oxide) and proresolvin lipid mediators. This research is important given the essential role these mediators play in the control of vascular smooth muscle tone and vascular structure.

RESEARCH LINES

- Inflammation and vascular function and remodelling. Changes with hypertension and other cardiovascular pathologies.
- Adipose tissue and vascular alterations in cardiovascular pathologies.
- Neural control of vascular tone.
- Cardiovascular effects of heavy metals.
- Antioxidant and antihypertensive properties of food bioactive compounds.
- Resolution of inflammation as a therapeutic approach for cardiovascular diseases
- Effect of gut microbiota modulation in different physiopathological situations



RESEARCH ACTIVITY

Doctoral Theses

- **González Carnicero Z.** Regulación por Nrf2 de la inflamación vascular y el estrés oxidativo inducidos por IL-1beta en células de músculo liso vascular. Relación con TLR[dissertation]. *Madrid: URJC: 2023(14/09/2023). Director: Martín Cortés A, Hernanz Martín R. International Mention*
- **Ballesteros Martínez C.** Microsomal prostaglandin E synthase-1 is involved in the metabolic, cardiovascular and renal alterations associated with obesity[dissertation]. *Madrid: UAM: 2023(18/05/2023). Director: Briones Alonso AM, Salaices Sánchez M. International Mention*
- **Serrano Díaz del Campo L.** Specialized proresolving mediators as a possible therapeutic strategy for cardiovascular damage in hypertension[dissertation]. *Madrid: UAM: 2023(19/05/2023). Director: Briones Alonso AM, Salaices Sánchez M. International Mention*

Master Theses

- **Jiménez Moreno E.** Desarrollo de nuevos ingredientes alimentarios más saludables y sostenibles[dissertation]. *MADRID: UAM: 2023(15/09/2023). Director: Miguel Castro M.*

Final Degree Theses

- **Loeches Rivero JC.** Valoración anatomopatológica de los efectos de un hidrolizado de quinua con actividad antioxidante y antihipertensiva en ratas espontáneamente hipertensas[dissertation]. *MADRID: UAH-URJC-CIAL: 2023(16/06/2023). Director: José Uranga AJ, Miguel Castro M.*
- **Vidal Liscano AC.** Importancia de la nutrición en el deportista con diagnóstico de diabetes tipo 1[dissertation]. *MADRID: UAM: 2023(16/06/2023). Director: Briones Alonso AM, González Blázquez R.*
- **Diez Benítez I.** Efectos de la alimentación vegetariana en el rendimiento deportivo[dissertation]. *MADRID: UAM: 2023(16/06/2023). Director: García Redondo A, Blanco Rivero J.*
- **García Monedero S.** Efecto de la diabetes tipo 1 en el rendimiento deportivo de un futbolista. Mejora del rendimiento a través de la alimentación.[dissertation]. *MADRID: UAM: 2023(16/06/2023). Director: García Redondo A, Blanco Rivero J.*

Publications

- **Álvarez-Frutos L, Barriuso D, Duran M, Infante M, Kroemer G, Palacios-Ramírez R, Senovilla L.** Multiomics insights on the onset, progression, and metastatic evolution of breast cancer. *Front Oncol.* 2023; 13: 1292046. Review. IF: 3.5; Q2
- **Barriuso D, Álvarez-Frutos L, González-Gutiérrez L, Motiño O, Kroemer G, Palacios-Ramírez R, Senovilla L.** Involvement of Bcl-2 family proteins in tetraploidization-related senescence. *Int J Mol Sci.* 2023; 24(7): 6374. Review. IF: 4.9; Q1
- **Bruna-García E, Isabel-Redondo B, Sabater-Munoz B, Miguel-Castro M.** Assessment of antioxidant bioactive properties of iberian dry-cured ham fat-derived essences using the yeast *Saccharomyces cerevisiae* as experimental model. *Lwt-Food Sci Technol.* 2023; 186: 15235. Article. IF: 6.0; Q1
- **del Campo LSD, García-Redondo AB, Rodríguez C, Zaragoza C, Duro-Sánchez S, Palmas F, de Benito-Bueno A, Socuélamos PG, Peraza DA, Rodríguez-Díez R, Valenzuela C, Dallí J, Salaices M, Briones AM.** Resolvin D2 attenuates cardiovascular damage in angiotensin II-induced hypertension. *Hypertension.* 2023; 80(1): 84-96. Article. IF: 6.9; D1
- **Filetti FM, Schreider IRG, Wiggers GA, Miguel M, Vassallo DV, Simões MR.** Cardiovascular harmful effects of recommended daily doses (13 µg/kg/day), tolerable upper intake doses (0.14 mg/kg/day) and twice the tolerable doses (0.28 mg/kg/day) of doppel. *Cardiovasc Toxicol.* 2023; 23(5-6): 218-29. Article. IF: 3.4; Q2
- **González-Carnicero Z, Hernanz R, Martínez-Casales M, Barrús MT, Martín A, Alonso MJ.** Regulation by Nrf2 of IL-1β-induced inflammatory and oxidative response in VSMC and its relationship with TLR4. *Front Pharmacol.* 2023; 14: 1058488. Article. IF: 4.4; Q1
- **Lima-Posada I, Stephan Y, Soulie M, Palacios-Ramírez R, Bonnard B, Nicol L, Kolkhof P, Jaisser F, Mulder**

- P.** Benefits of the non-steroidal mineralocorticoid receptor antagonist finerenone in metabolic syndrome-related heart failure with preserved ejection fraction. *Int J Mol Sci.* 2023; 24(3): 2536. Article. IF: 4.9; Q1
- **López-Moreno M, Garcés-Rimón M, Miguel-Castro M, Fernández-Martínez E, López MTI.** Effect of nutrition education on health science university students to improve cardiometabolic profile and inflammatory status. *Nutrients.* 2023; 15(21): 4685. Article. IF: 4.8; Q1
- **López-Moreno M, Jiménez-Moreno E, Gallego AM, Pasamontes GV, Ocio JAU, Garcés-Rimón M, Miguel-Castro M.** Red quinoa hydrolysates with antioxidant properties improve cardiovascular health in spontaneously hypertensive rats. *Antioxidants.* 2023; 12(6): 1291. Article. IF: 6.0; Q1
- **López-Moreno M, Sabater-Muñoz B, Iglesias-López MT, Castro MM, Garcés-Rimón M.** Red quinoa hydrolysates with antioxidant bioactive properties on oxidative stress-induced *saccharomyces cerevisiae*. *LWT-Food Sci Technol.* 2023; 184: 115038. Article. IF: 6.0; Q1
- **Lorentzen KA, Hernanz R, Pinilla E, Nyengaard JR, Wogensen L, Simonsen U.** Sex-dependent impairment of endothelium-dependent relaxation in aorta of mice with overexpression of hyaluronan in tunica media. *Int J Mol Sci.* 2023; 24(9): 8436. Article. IF: 4.9; Q1
- **Peraza DA, Povo-Retana A, Mojena M, García-Redondo AB, Avilés P, Boscá L, Valenzuela C.** Trabectedin modulates macrophage polarization in the tumor-microenvironment. Role of KV1.3 and KV1.5 channels. *Biomed Pharmacother.* 2023; 161: 114548. Article. IF: 6.9; Q1
- **Pérez-Giron JV, Palacios-Ramírez R, Horrillo D, Jaafar M, Asenjo A, Hernández-Vélez M, Jensen J, Sanz R.** TiO2 nanopikes micro-areas on rutile single crystal surfaces determine arrangements of rat aortic vascular smooth muscle cells. *2023 IEEE 23rd Intern Conf Nanotech.* 2023: 404-9. Article. Not indexed
- **Piagette JT, Junior JEGP, Kanaan SHH, Herrera CT, Bastilhos LO, Pecanha FM, Vassallo DV, Miguel-Castro M, Wiggers GA.** Pretreatment with egg white hydrolysate protects resistance arteries from damage induced after treatment with accidental cadmium exposure values. *J Funct Foods.* 2023; 104: 105529. Article. IF: 3.8; Q2

Research projects

- **Briones Alonso AM.** Deciphering the role of novel inflammatory mediators derived from interferon and the inefficient resolution of inflammation in the cardiovascular damage associated to hypertension (PID2020-116498RB-I00). AEI. 2021-2024. *Management centre: UAM*
- **Briones Alonso AM (UAM).** General Coordinator: Thomas Unger (University of Maastricht). Mechanistic Integration of vascular and endocrine pathways for Subtyping Hypertension: an Innovative network approach for Future generation research Training-MINDSHIFT (Grant agreement 954798). Marie Skłodowska-Curie actions. Innovative Training Networks (ITN)-European Joint Doctorates. 2021-2024. *Management centre: UAM*
- **Briones Alonso AM.** Papel del gen 15 estimulado por interferon (ISG15) en el remodelado vascular patológico. Sociedad Española de Arterioesclerosis. 2022-2023. *Management centre: UAM*
- **Briones Alonso AM.** Relación entre postranoides, especies reactivas de oxígeno y aldosterona tejido adiposo y su papel en las alteraciones cardiovasculares asociadas a hipertensión y obesidad. Roche Pharma S. A. 2014-2024. *Management centre: FIBHULP*
- **Miguel Castro M.** Envejecimiento saludable. Hidrolizados de proteínas alimentarias multifuncionales como abordaje terapéutico en el síndrome de sarcopenia. SARCOPEP (PID2022-1386100B-I00). Ministerio de Ciencia e Innovación. 2023-2026. *Management centre: CIAL (CSIC-UAM)*
- **Martín Cortés A.** Papel de NRF2 en las alteraciones cardiovasculares asociadas al desarrollo de hipertensión. Universidad Rey Juan Carlos. 2023-2023. *Management centre: URJC*
- **Hernanz Martín R, Alonso Gordo MJ.** Disbiosis intestinal en el dimorfismo sexual en hipertensión y las alteraciones cardiovasculares asociadas. Papel de la vía TLR4/NLRP3. Universidad Rey Juan Carlos. 2023-2023. *Management centre: URJC*

CIBER y Réticos:

- **Salaices Sánchez M, Briones Alonso A.** Networked Biomedical Research Center for Cardiovascular Diseases. (CIBERCV). IISCIII. (31/12/2024). UAM



Patents and trademarks

- Pérez Girón JV, Ruiz-Castellanos MJ, de Luis Jiménez O, Pérez Boto V, Sanz González R, Hernández Vélez MC, Mas Gutiérrez JA, Alonso Gordo MJ, Salaices Sánchez M, Ros Pérez M, Coloma Jerez A, Asenjo Barahona A, Sanz Montaña JL, Puente Prieto J, Jensen J, inventors. NANOATE, S.L., assignee. Method for producing biosensors. P201031224, PCT/ES2011/070536; 2010 August 05.
- Miguel Castro M, López-Alonso Fandiño R, Recio Sánchez MI, Ramos González MM, Aleixandre de Artiñano A, inventors. CSIC, assignee. Bioactive peptides derived from the proteins of egg white by means of enzymatic hydrolysis. P200301829, PCT/ES2004/070059, EP1661913, US8227207, AT388166, DE602004012289, DK1661913, JP2007523045; 2003 July 31.
- Miguel Castro M, López-Alonso Fandiño R, Ramos González MM, Aleixandre de Artiñano A, inventors. CSIC, assignee. Production of and antihypertensive properties of peptides derived from egg white proteins. P200501246 PCT/ES2006/070067; 2005 May 23.
- Recio Sánchez MI; Quirós del Bosque A, Hernández Ledesma B, Gómez Ruiz JA, Miguel Castro M, Amigo Garrido L, López Ex-

pósito I, Ramos González MM, Aleixandre de Artiñano A, (Contreras Gómez M), inventors. CSIC, assignee. Bioactive peptides identified in enzymatic hydrolyzates of milk caseins and method of obtaining same. P200501373, PCT/ES2006/070079, EP1905779, EP2495250, US8354502, AU2006256720, BRPI0611729, CA2611416, CN101305017, CN103254278, JP2008545774, KR20080045108, MX2007-015528, NO20080103; 2005 June 08.

- Garcés Rimón M, Miguel Castro M, López-Alonso Fandiño R, López-Miranda González V, Uranga Ocio J, inventors; CSIC, Universidad Rey Juan Carlos, assignees; Use of multifunctional bioactive products derived from the enzymatic hydrolysis of egg white proteins for treating metabolic syndrome. P201331767, PCT/ES2014/070880; 2013 December 04.
- Miguel Castro M, Garcés Rimón M, López-Alonso Fandiño R, Sandoval Huertas M, inventors. CSIC, Mario Sandoval Huertas, assignees. Healthy food compositions having gel or foam textures and comprising hydrolyzed egg products. P201331886, PCT/ES2014/070902, EP3106042, US9648897, AR098685, JP2015130856, MX2014015135; 2013 December 20.

- González-Muñiz R, Pérez de Vega MJ, Miguel M, Balsera-Paredes B, Moreno S, inventors. CSIC, assignee. Triazolyl polyphenols with antioxidant activity and uses thereof; P201531450; 2015 November 08.
- González-Muñiz R, Miguel Castro M, Pérez de Vega MJ, Balsera-Paredes B, S Moreno, inventors. CSIC, assignee. Compounds with antioxidant activity and uses thereof. P201630362; 2016 March 29.
- León Martínez R, Abril Comesaña S, Duarte Flórez P, Crisman Vigil E, Michalska P, Salaices Sánchez M, Menéndez Ramos JC, inventors. Fundación para la Investigación Biomédica del Hospital Universitario de la Princesa, UAM, UCM, assignees. Compuestos agonistas nicotínicos y antioxidantes para el tratamiento de enfermedades neurodegenerativas. P201930908. 2019 October 14.
- León Martínez R, Abril Comesaña S, Michalska P, Buendía Abaitua I, Salaices Sánchez M, Menéndez Ramos JC, García López M; inventors. Fundación para la Investigación Biomédica del Hospital Universitario de la Princesa, UAM, UCM, assignees. Compuestos derivados de 2-iodo-7-((2-(5-metoxi-1H-indol-3-il)etil)amino)metil)-1-alquil/aril-6,7,8-tet-

rahidro-3H-pirrololo[2,1-j]quinolina-3,9(5H)-diona como agentes antioxidantes, inductores de NRF2 y moduladores nicotínicos para el tratamiento de enfermedades neurodegenerativas. P201930190. 2019 March 01.

leggie

- Miguel Castro M, Garcés Rimón M, authors; Miguel Castro M, Garcés Rimón M, assignees. Brand name: leggie. ESM4044711; 2019 November 22. Concesión 8 Junio 2020
- Miguel M, Bruna E, Redondo BI, Gómez J, Gómez Sánchez J. inventors: Cárnica Joséllito S.L. assignee. Extracto procedente de la grasa de cerdo, método de obtención, composición alimenticia que lo comprende y usos del mismo. P2021130236. 2021 March 17
- Miguel M, Bruna E, Redondo BI, Gómez J, Gómez Sánchez J, Sabater-Muñoz B. inventors: Cárnica Joséllito S.L. assignee. Composición farmacéutica que comprende un extracto procedente de la grasa de jamón de cerdo como principio activo y su uso en medicina para la prevención cardiovascular e inflamación intestinal. P202131111. 2021 november 30



3.2.4 Vascular Pharmacology and Metabolism (FARMAVSM) Group



Publications: 2 | Q1:2

COMPOSITION

Carlos Félix Sánchez Ferrer

Catedrático de Farmacología. Universidad Autónoma de Madrid

Concepción Peiró Vallejo

Catedrática de Farmacología. Universidad Autónoma de Madrid

- **Diego Berlanas Vicente.** Ayudante de Investigación. Universidad Autónoma de Madrid
- **Ana Cuadrado Gómez.** Investigadora Predoctoral. Universidad Autónoma de Madrid
- **Fernando de la Cuesta Marina.** Investigador Postdoctoral. Universidad Autónoma de Madrid

- **Jorge Francisco Gómez Cerezo.** Jefe de Servicio de Medicina Interna. Hospital Universitario Infanta Sofía
- **Fátima Ainara González Moro.** Investigadora Predoctoral. Universidad Autónoma de Madrid
- **Miriam Morales Rodríguez de Lope.** Ayudante de investigación. Universidad Autónoma de Madrid
- **Alan Andrés Rivera Tenorio.** Investigadora Predoctoral. Universidad Autónoma de Madrid
- **Ibone Rubio Sánchez-Pajares.** Investigadora Postdoctoral. Universidad Autónoma de Madrid
- **Giselle Santos Magalhaes.** Investigadora Postdoctoral. Universidad Autónoma de Madrid
- **Licia Shamoon.** Investigadora Predoctoral. Universidad Autónoma de Madrid
- **Alicia Villacampa Calvo.** Investigadora Postdoctoral. Universidad Autónoma de Madrid

STRATEGIC OBJETIVES

- Understanding vascular ageing, both in healthy and pathological conditions, like obesity and diabetes mellitus

RESEARCH LINES

- Mechanisms of human vascular ageing
- Mechanisms for vascular damage in diabetes mellitus
- Obesity, adipokines, insulin resistance, and vascular dysfunction
- Role for the angiotensin-(1-7)/Mas receptor axis on vascular function and inflammation.
- Development of novel extracellular vesicle-based therapies for cardiovascular diseases

RESEARCH ACTIVITY

Master Theses

- **Cuadrado A.** Canagliflozin induce anti-inflammatory and anti-senescent effects in human vascular smooth muscle cells and improves endothelial dysfunction in mesenteric microvessels from diabetic mice [dissertation]. Madrid: UAM: 2023(19/09/2023). Director: Peiro Vallejo C, Sánchez Ferrer CF

Publications

- **Carpio C, Qasem A, Buño A, Borobia AM, Arnalich F, Rey V, Lázaro T, Mariscal P, Laorden D, Salgueiro G, Moreno A, Peiró C, Lorenzo O, Álvarez-Sala R.** Krebs von den Lungen-6 (KL-6) levels in post-COVID follow-up: Differences according to the severity of COVID-19. *J Clin Med.* 2023; 12(19): 6299. Article. IF: 3.0; Q1
- **Barderas MG, de la Cuesta F.** A Molecular (not very becoming) picture of stressed arteries and heart, with some therapeutic hope. *Int J Mol Sci.* 2023; 24(4): 3870. Editorial Material. IF: 4.9; Q1

Research projects

- **de la Cuesta Marina F.** Developing novel nanotherapies for atherosclerosis by delivering senolytics to the plaque using mesenchymal stem cell-derived extracellular vesicles (2019-T1/IND-13794 y 2023-5A/IND-28938). CM. 2020-2025. Management centre: UAM
- **de la Cuesta Marina F.** Nueva terapia senolítica para enfermedad vascular asociada al envejecimiento mediante bioingeniería de vesículas extracelulares de células madre para administración dirigida (PID2021-126274OB-I00). AEI. 2022-2025. Management centre: UAM
- **de la Cuesta Marina F.** Terapias senolíticas avanzadas basadas en nanopartículas biológicas para tratar el envejecimiento vascular (CNS2022-135368). AEI. 2023-2025. Management centre: UAM
- **de la Cuesta Marina F.** Escalado y fabricación GMP de vesículas extracelulares de células madre mesenquimales para terapias avanzadas (IND2023/BMD-27323). CM. 2024-2027. Management centre: UAM
- **Peiro Vallejo C, Sánchez Ferrer CF.** Identifying pharmacological targets for the prevention of cardiometabolic vascular inflammation (PID2020-115590RB-I00). ISCIII. 2021-2024. Management centre: UAM



3.2.5 Paediatric Cardiology Research*



COMPOSITION

Federico Gutiérrez-Larraya Aguado

Jefe de Servicio de Cardiología Pediátrica. Hospital Universitario La Paz. Profesor Titular. Universidad Francisco de Vitoria. Hospital Universitario La Paz

- **César Abelleiro Pardeiro.** Facultativo Especialista de Área en Cardiología Pediátrica. Hospital Universitario La Paz
- **Viviana Arreo del Val.** Facultativo Especialista de Área en Cardiología Pediátrica. Hospital Universitario La Paz
- **Juan José Beunza Nuin.** Catedrático Facultad de Ciencias de la Salud. Universidad Europea de Madrid
- **Antonio Javier Cartón Sánchez.** Facultativo Especialista de Área en Pediatría. Hospital Universitario La Paz
- **Lucía Deiros Bronte.** Facultativo Especialista de Área en Pediatría. Hospital Universitario La Paz
- **Marta Gamba Arzoz.** Facultativo Especialista de Área en Pediatría. Hospital Universitario La Paz
- **Luis García-Guereta Silva.** Jefe de Sección de Cardiología Pediátrica. Hospital Universitario La Paz
- **Carlos Labradero de Lera.** Facultativo Especialista de Área en Cardiología Pediátrica. Hospital Universitario La Paz
- **Álvaro Lafuente Romero.** Facultativo Especialista de Área en Pediatría. Hospital Universitario La Paz
- **Diana Salas Mera.** Médico Adjunto Cardiología Pediátrica. Hospital Universitario La Paz

STRATEGIC OBJETIVES

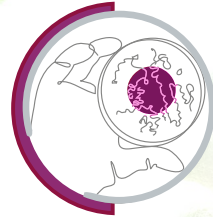
- Establishment of Cardiopathy Registers: Creation of comprehensive databases that comply with all legal regulations regarding security, confidentiality, and data protection.
- Advances in Imaging Diagnosis: Innovation and refinement of imaging techniques for precise characterization of pediatric heart diseases.
- Minimally Invasive Diagnostic and Therapeutic Techniques: Development and application of procedures that minimize impact and improve patient recovery.
- Research on Vascular Risk and Environmental Factors: Dedicated studies to understand how environmental factors and lifestyle influence pediatric heart diseases and their prevention.
- Role of Exercise in Pediatric Cardiology: Research on the importance of physical exercise in the detection and treatment of cardiac alterations in children.
- Telemedicine and Cardiac Monitoring: Implementation of telemedicine solutions and the use of IoT devices for efficient and real-time cardiac monitoring.
- Blockchain in Medical Record Management: Application of blockchain technology to ensure the integrity and privacy of medical records.
- Omics Research for Pediatric Cardiology: Search for biomarkers and therapeutic targets through genomic, proteomic, and metabolomic studies.

- Scientific Dissemination and Industrial Collaboration: Publication of research in high-impact journals and collaboration with the pharmaceutical sector for the development of new therapies.
- Creation of Specialized Care Units: Formation of multidisciplinary teams based on the latest research to provide the best care.
- Continuous Training and Public Awareness: Development of educational programs for professionals and families, and collaboration with media to increase the visibility of pediatric heart diseases.

RESEARCH LINES

- Application of Artificial Intelligence and New Technologies: Exploration and adoption of technological advances to enhance the diagnosis, treatment, and monitoring of pediatric heart diseases.
- Innovation in Medical Devices and Pharmacology: Development and assessment of advanced medical devices and new pharmacological compounds tailored to the specific needs of the pediatric population.
- Management of Vascular Risk in Pediatrics: Study and management of vascular risk from the earliest stages of life, focusing on the prevention and early detection of cardiovascular diseases.

*Group recently created, december 2023



3.3 Infectious Diseases and Immunity Area

Documents: 280 | Originals: 220 | D1: 56 | Q1: 141

Area coordinator: Eduardo López-Collazo

coordinadorinfecciosas@idipaz.es

RESEARCH GROUPS

3.3.1 AIDS and Infectious Diseases - José Ramón Arribas López

3.3.2 Molecular Microbiology - Jesús Mingorance Cruz

3.3.3 Immuno-Rheumatology - María Eugenia Miranda Carús

3.3.4 Innate Immune Response - Eduardo López-Collazo/Carlos del Fresno Sánchez

3.3.5 Complement Defects in Human Pathology - Margarita López Trascasa/Pilar Sánchez-Corral Gómez

3.3.6 Lymphocyte Pathophysiology in Immunodeficiencies - Eduardo López Granados

3.3.7 Drug Hypersensitivity and Innate Immune Response - Teresa Bellón Heredia

3.3.8 Immunomediate Gastrointestinal Diseases and Other Digestive Pathologies -
María Dolores Martín Arranz

3.3.9 MicroRNA Regulation of Immune Tolerance, Autoimmunity and Cancer - Alicia González Martín



3.3. Infectious Diseases and Immunity Area

Strategic Objectives	Development forecast for the coming years:	Actions
<p>Infectious Diseases and Immunity Area is composed of 9 groups focused on the study of diseases related to the immune system such as HIV, autoimmune diseases, cancer, etc., as well as the molecular mechanisms that explain the phenomena associated with these pathologies.</p>	To identify priority research topics in our area and if necessary expand some of them.	Promote the priority research line identified
	To generate and develop scientific research projects that allow the production of knowledge in the biomedical area.	Obtain national and international scientific research projects in biomedical area
	To generate a significant number of research products/results, such as publications in nationally and internationally indexed journals, journals that contribute to the social appropriation of knowledge.	Improve the annual number of publications in the first quartile and decile, and total impact factor of the area
	To socialize the research results by presenting papers at national and international events	Increase the presence of area researchers in national and international events
	To establish agreements and strategic alliances with other communities of knowledge that allow academic discussion and project development.	Search for synergies with other groups with similar and complement research lines.
	To promote the training of young researchers and undergraduate and graduate students.	Training in research methodology undergraduate, predoctoral and postdoctoral personal.
	To develop a good system of applied research so that everything studied in the laboratory has repercussions on both our patients and our entities.	Promote the synergies of translational researchers and clinical researchers, and their incorporation into groups

HIGH IMPACT PUBLICATIONS

Sobral-Costas TG, Escudero-Tornero R, Servera-Negre G, Bernardino JI, Arroyo AG, Díaz-Menéndez M, Busto-Leis JM, Álvarez PR, Pinto PH, **Cudos ES**. Human monkeypox outbreak: Epidemiological data and therapeutic potential of topical cidofovir in a prospective cohort study. *J Am Acad Dermatol.* 2023; 88(5): 1074-82. Article. IF: 12.8; D1

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Scientific Events by Infectious Diseases and Immunity Area

- **18/01/2023.** Session - Dengue: a propósito del brote de 2022
- **11/01/2023.** Session - Aplicaciones de la secuenciación de genomas completos en la Vigilancia de Enterobacterias productoras de carbapenemasas
- **25/01/2023.** Session - Metagenómica en el diagnóstico microbiológico
- **08/02/2023.** Session - Resistencia a nuevos antibióticos en el clon de alto riesgo *K. pneumoniae*-ST307
- **01/02/2023.** Session - Caso clínico: No siempre es VIH
- **15/02/2023.** Session - Actualización en carbapenemasas y nuevos antibióticos
- **22/02/2023.** Session - Machine Learning. Sistemas de IA como herramientas clínicas
- **24/02/2023.** Scientific Seminar - Mecanismos moleculares que regulan las células linfoides innatas tipo 3 (ILC3s) frente a una infección intestinal
- **08/03/2023.** Session - Vesículas extracelulares: utilidad en la infección por *Mycobacterium tuberculosis*
- **15/03/2023.** Session - Novedades en COVID-19. Después de 3 años de pandemia, ¿dónde estamos?
- **29/03/2023.** Session - Un brote inesperado
- **12/04/2023.** Session - Emergencia de *Pseudomonas aeruginosa* productora de carbapenemasa tipo GES. Estudio epidemiológico y molecular
- **26/04/2023.** Session - Diagnóstico molecular de septicemias. T2
- **03/05/2023.** Session - COVID persistente en inmunodeprimido
- **07/05/2023.** Session - Heterorresistencia en Enterobacterias productoras de carbapenemasas
- **10/05/2023.** Session - Diagnóstico de hongos filamentosos mediante espectrometría de masas MALDI-TOF
- **24/05/2023.** Session - La microbiología en las redes
- **17/05/2023.** Session - Infecciones entre humanos y otros animales: implicaciones de un flujo bidireccional
- **31/05/2023.** Session - Actualización en histoplasmosis
- **14/06/2023.** Session - Transmisión sexual de virus emergentes
- **05/10/2023.** Session - Apretando el acelerador en los estudios de sensibilidad en sepsis'
- **26/10/2023.** Session - Diseño de proteínas miniACE2 para bloquear la infección por SARS-CoV2'
- **02/11/2023.** Session - Actualización en dengue y nuevas vacunas
- **16/11/2023.** Session - Cultivo de SARS-CoV-2: Utilidad clínica y nuestra experiencia.
- **23/11/2023.** XII Jornada de Microbiología
- **30/11/2023.** Session - ¿Qué hace un bacilo como TB en un sitio como este?
- **01/12/2023.** Scientific Seminar - Inmunidad entrenada, ampliando fronteras en vacunación
- **14/12/2023.** Session - Transmisión sexual de virus emergentes y reemergente
- **21/12/2023.** Session - PRODIM ¿Esto qué es?



3.3.1 AIDS and Infectious Diseases Group



Publications: 41 | Q1:26

COMPOSITION

José Ramón Arribas López.

Jefe de Sección del Servicio de Medicina Interna (Unidad de Infecciosas). Hospital Universitario La Paz. Profesor Titular. Universidad Autónoma de Madrid

- **Marta Arsuaga Vicente.** Médico Adjunto en Medicina Interna. Hospital Carlos III - Hospital Universitario La Paz
- **José Ignacio Bernardino de la Serna.** Facultativo Especialista de Área en Medicina Interna. Unidad VIH. Hospital Universitario La Paz
- **Carmen Busca Arenzana.** Contrato Río Hortega. Hospital Universitario La Paz
- **Julen Cadiñanos Loidi.** Contrato Río Hortega. Hospital Universitario La Paz
- **Fernando de la Calle Prieto.** Médico adjunto en Medicina Interna. Unidad de Medicina Tropical. Hospital Carlos III - Hospital Universitario La Paz. Profesor Colaborador. Universidad Autónoma de Madrid

- **Rosa de Miguel Buckley.** Facultativo Especialista Adjunto en Medicina Interna. Hospital Universitarios La Paz
- **Marta Díaz Menéndez.** Médico adjunto en Medicina Interna. Unidad de Medicina Tropical. Hospital Universitario La Paz
- **Beatriz Díaz Pollán.** Facultativo Especialista de Área en Medicina Interna. Unidad de Enfermedades Infecciosas y Microbiología Clínica. Hospital Universitario La Paz
- **Alejandro Díez Vidal.** Facultativo Especialista de Área en Medicina Interna. Hospital Universitario La Paz
- **Andrés Esteban Cantos.** Investigador postdoctoral (R2A). Hospital Universitario La Paz
- **Marta Gálvez Charro.** Enfermera. Unidad de VIH. Hospital Universitario La Paz
- **Nicolás García-Arenzana Les.** Facultativo Especialista de Área en Medicina Preventiva. Hospital Universitario La Paz
- **Francisco Gayá Moreno.** Investigador Predoctoral (Contrato de Estabilización de Técnicos de Apoyo). Hospital Universitario La Paz
- **Juan Julián González García.** Facultativo Especialista de Área en Medicina Interna. Unidad de VIH. Hospital Universitario La Paz
- **Lucía Gutiérrez García.** Investigadora Predoctoral. FIBHULP

- **Pedro Herranz Pinto.** Facultativo Especialista de Área en Dermatología. Jefe de Sección. Hospital Universitario La Paz
- **Víctor Hontañón Antoñana.** Investigador predoctoral. Hospital Universitario La Paz
- **María Jiménez González.** Bioestadística. FIBHULP
- **María del Mar Lago Núñez.** Facultativo Especialista de Área en Medicina Interna. Unidad de Medicina Tropical. Hospital Carlos III - Hospital Universitario La Paz
- **Cristina Marcelo Calvo.** Contrato Río Hortega. Hospital Universitario La Paz
- **Luz Martín Carbonero.** Facultativo Especialista de Área. Hospital Universitario La Paz
- **Patricia Martínez Martín.** Médico Adjunto en Medicina Interna. Hospital Universitario La Paz
- **Mario Mayoral Muñoz.** Enfermero. Hospital Universitario La Paz
- **Juan José Miguel Castro.** Enfermero. Hospital Universitario La Paz
- **Rocío Montejano Sánchez.** Investigadora Postdoctoral. Hospital Universitario La Paz
- **María Luisa Montes Ramírez.** Facultativo Especialista de Área de Medicina Interna. Unidad de VIH. Hospital Universitario La Paz
- **Marta Mora Rillo.** Facultativo Especialista de Área de Medicina Interna. Unidad de Enfermedades Infecciosas y Microbiología Clínica. Hospital Universitario La Paz
- **Francisco Moreno Ramos.** Farmacéutico. Hospital Universitario La Paz
- **Carlos Manuel Oñoro López.** Médico Interno Residente. FIBHULP
- **Juan Carlos Ramos Ramos.** Facultativo Especialista de Área en Medicina Interna. Hospital Universitario La Paz
- **Luis Ramos RuPérez.** Investigación Río Hortega. Hospital Universitario La Paz
- **Berta Rodés Soldevila.** Investigadora Miguel Servet. Responsable laboratorio BSL2-virología. FIBHULP
- **Javier Rodríguez Centeno.** Investigador postdoctoral. Hospital Universitario La Paz
- **Elena Sendagorta Cudós.** Facultativo Especialista de Área de Dermatología. Hospital Universitario La Paz
- **Lucía Serrano Morago.** Investigadora predoctoral. Hospital Universitario La Paz
- **Eulalia Valencia Ortega.** Facultativo Especialista de Área en Medicina Interna. Hospital Universitario La Paz

STRATEGIC OBJETIVES

- Although great progress has been made, HIV infection remains an incurable disease. Even under the best circumstances, HIV-infected patients who receive current antiretroviral therapy have a survival disadvantage compared with the general non-infected population, which is estimated to be a life expectancy of 15 years less than the general population.
- HIV infection is highly prevalent in Spain. Among western European countries, Spain has the second highest prevalence. An important local characteristic of the HIV-infected population in Spain is the high prevalence of hepatitis C coinfection.
- This research line covers four main topics of research in HIV infection: antiretroviral treatment, HIV-HCV coinfection, metabolic complications and HIV-resistance to antiretroviral drugs. In addition, we are planning to start another research project on infections other than HIV.
- The group has started a new research line regarding the aging and HIV Infection.
- Tropical diseases are increasing as a consequence of global travel. These diseases continue to be relatively rare however, and therefore, often sub-optimal treated if managed by non-specialists. Furthermore, every year an increasing amount of special travelers (pregnants, comorbidities, immunosuppressed) travel abroad, adding complexity in terms of a timely and effective diagnosis and management. The Tropical and Travel Medicine Unit provide both pre and posttravel assistance in imported infectious diseases. The aim of this Unit is to provide efficient and effective specialist care with proven or suspected tropical disease and a specific preventative travel advice, together with international vaccines recommended for the trip.



3.3. Infectious Diseases and Immunity Area

RESEARCH LINES

- Antiretroviral therapy & resistance.
- Metabolic complications of antiretroviral therapy.
- Liver disease.
- Neurocognitive impairment.
- Paediatric HIV infection and MTCT.
- Epigenetic and cellular factors related to HIV progression
- Optimisation of antibiotic therapy (ID no HIV)
- Tropical diseases
- Emerging and re-emerging virus
- Molecular and cellular biomarkers of aging

RESEARCH ACTIVITY

Master Theses

- **Menéndez Calderón MJ.** El cambio de las enfermedades infecciosas: revisión leptospirosis 2016-2021 en un Hospital de segundo nivel [dissertation]. Barcelona: Universitat de Barcelona: 2023(01/06/2023). Director: Díaz Menéndez M
- **López Peláez MV.** Brote familiar de fiebre Q en ambiente urbano [dissertation]. Barcelona: Universitat de Barcelona: 2023(01/06/2023). Director: Díaz Menéndez M
- **Manrique Pérez JM.** Miocardiopatía en la enfermedad de Chagas arritmias y su manejo. [dissertation]. Barcelona: Universitat de Barcelona: 2023(01/06/2023). Director: Díaz Menéndez M.
- **Díaz Menéndez M.** Despistaje de Fiebre Hemorrágica de Crimea-Congo. Implementación del diagnóstico de infección protésica compleja. Manejo de PrEP e ITS. [dissertation]. Sevilla: Universidad de Sevilla: 2023(01/06/2023). Director: Díaz Menéndez M. no
- **Noblejas Mozo A.** Nocardiosis pulmonar en paciente inmunodeprimido tras inducción con rituximab por vasculitis [dissertation]. Barcelona: Universitat de Barcelona: 2023(28/06/2023). Director: Díaz Pollán B.
- **Carrasco Molina S.** Efectividad del tratamiento con Fidaxomicina vs Vancomicina en la Infección

por [dissertation]. Madrid: Universidad de Alcalá de Henares: 2023(11/05/2023). Director: Díaz Pollán B.

Publications

- **Álvarez-Troncoso J, López-Caballero L, Robles-Marhuenda A, Sota-Abánades C, Ríos-Blanco JJ.** Influence of vaccination and immunosuppressive treatments on the coronavirus disease 2019 outcomes in patients with systemic autoimmune diseases. *Eur J Intern Med.* 2023; 108: 114-6. Letter. IF: 5.9; Q1
- **Álvarez-Troncoso J, Molina SC, Robles-Marhuenda A, Martínez-Robles E, Ríos-Blanco JJ.** Therapeutic challenges and cardiovascular risk in patients with HMGR-associated immune-mediated necrotizing myopathy (HMGR-IMNM) secondary to statins. *Eur J Intern Med.* 2023; 114: 143-5. Letter. IF: 5.9; Q1
- **Angelo KM, Smith T, Camprubi-Ferrer D, Balerdi-Sarasola L, Menéndez MD, Servera-Negre G, Barkati S, Duvignaud A, Huber KLB, Chakravarti A, Bottieau E, Greenaway C, Grobusch MP, Pedro DM, Asgeirsson H, Popescu CP, Martín C, Licitra C, de Frey A, Schwartz E, Beadsworth M, Lloveras S, Carsten C, Guagliardo SAJ, Whitehill F, Huits R, Hamer DH, Kozarsky P, Libman M.** Epidemiological and clinical characteristics of patients with monkeypox in the Geo-Sentinel Network: a cross-sectional study. *Lancet Infect Dis.* 2023; 23(2): 196-206. Article. IF: 36.4; D1

- **Berenguer J, Jarrín I, Bellón JM, Díez C, Jiménez-Sousa MA, Roca C, González-García J, Dalmau D, Olalla J, Herrero C, Villarroja F, Domingo P, Resino S.** Obesity-related single-nucleotide polymorphisms and weight gain following first-line antiretroviral therapy. *Clin Infect Dis.* 2023; 76(6): 977-85. Article. IF: 8.2; D1
- **Bernardino JI.** Estimated glomerular filtration rate equations: one size does not fit all. *Aids.* 2023; 37(5): 845-7. Editorial Material. IF: 3.4; Q3
- **Bernardino JI, Alejos B, Rodríguez-Centeno J, Esteban-Cantos A, Mora-Rojas B, Montejano R, De Miguel R, Montero-Alonso M, Ayerdi O, Hernández-Gutiérrez C, Curran A, Arribas JR, Rodés B.** Monocyte activation and ageing biomarkers in the development of cardiovascular ischaemic events or diabetes in people with HIV. *Microorganisms.* 2023; 11(7): 1818. Article. IF: 4.1; Q2
- **Butta NV, Arias-Salgado EG, Manzano EM, Acuña P, Román MTA, Buño-Soto A, Ramos JCR, Belda-Iniesta C, Frias J, Carcas AJ, de Soto LM, Buckley RD, Lora D, García-Morales MT, Borobia AM, Arribas JR, Yuste VJ, CombiVacS Study Grp.** No changes in hemostasis after COVID-19-heterologous vaccination schedule: A subanalysis of the phase 2 CombiVacS study. *Res Pract Thromb Haemost.* 2023; 7(1): e100049. Article. IF: 3.4; Q2
- **Calle-Prieto FD, Muñoz ME, Ramírez G, Díaz-Menéndez M, Velasco M, Galparsoro HA, Lleti MS, Forte TM, Blanco JL, Mora-Rillo M, Arsuaga M, Buckley RD, Arribas JR, Membrillo FJ.** Treatment and prevention of monkeypox. *Enferm Infecc Microb Cl.* 2023; 41(10): 629-34. Review. IF: 2.6; Q3
- **Corominas J, Garriga C, Prenafeta A, Moros A, Cañete M, Barreiro A, González-González L, Madrenas L, Güell I, Clotet B, Izquierdo-Useros N, Raich-Regué D, Gallemí M, Blanco J, Pradenas E, Trinité B, Prado JG, Blanch-Lombarte O, Pérez-Caballero R, Plana M, Esteban I, Pastor-Quiñones C, Núñez-Costa X, Abu Taleb R, McSkimming P, Soriano A, Nava J, Anagua JO, Ramos R, Lluch RM, Comes AC, Romero SO, Gómez XM, Sans-Pola C, Moltó J, Benet S, Bailón L, Arribas JR, Borobia AM, Parada JQ, Navarro-Pérez J, Giner MJF, Lucas RO, Jiménez MDV, Compán SO, Álvarez-Mon M, Troncoso D, Arana-Arri E, Meijide S, Imaz-Ayo N, García PM, Martínez SD, Fernández SR, Prat T, Torroella E, Ferrer L.** Safety and immunogenicity of the protein-based PHH-TV compared to BNT162b2

- as a heterologous SARS-CoV-2 booster vaccine in adults vaccinated against COVID-19: a multicentre, randomised, double-blind, non-inferiority phase IIb trial. *Lancet Reg Health Eur.* 2023; 28: 100613. Article. IF: 13.6; D1
- **Díaz-Menéndez M, Angelo KM, Buckley RD, Bottieau E, Huits R, Grobusch MP, Gobbi FG, Asgeirsson H, Duvignaud A, Norman FF, Javelle E, Epelboin L, Rothe C, Chappuis F, Martínez GE, Popescu C, Camprubi-Ferrer D, Molina I, Odolini S, Barkati S, Kuhn S, Vaughan S, McCarthy A, Lago M, Libman MD, Hamer DH.** Dengue outbreak amongst travellers returning from Cuba-GeoSentinel surveillance network, January-September 2022. *J Travel Med.* 2023; 30(2): taa139. Letter. IF: 9.1; D1
- **Díaz-Pollán B, Molina SC, Marcelo C, Grela AD, Martínez-Martín P, Jiménez-González M, Ramos FM, Mora-Rillo M.** A comparison of the efficacy of treatment with fidaxomicin versus vancomycin in clostridioides difficile infection. *Cureus.* 2023; 15(11): e48735. Article. IF: 1.0; Q3
- **Esteban-Cantos A, Rodríguez-Centeno J, Silla JC, Barruz P, Sánchez-Cabo F, Saiz-Medrano G, Nevado J, Mena-Garay B, Jiménez-González M, de Miguel R, Bernardino JI, Montejano R, Cadiñanos J, Marcelo C, Gutiérrez-García L, Martínez-Martín P, Waller C, Raffi F, Rodés B, Arribas JR.** Effect of HIV infection and antiretroviral therapy initiation on genome-wide DNA methylation patterns. *Ebiomedicine.* 2023; 88(): 104434. Article. IF: 9.7; D1
- **Gibas KM, Arribas JR, Cahn P, Daar ES, Taiwo BO.** Need for clear inclusion criteria in reviews of antiretroviral treatments Reply. *Lancet HIV.* 2023; 10(3): E150-1. Letter. IF: 12.8; D1
- **González-Baeza A, Osma JJ, Rua-Cebrián G, Cano-Smith J, Suso-Ribera C, Pérez-Valero I.** Brief transdiagnostic group intervention for people living with HIV and emotional disorders: feasibility and clinical utility. *AIDS Care.* 2023; 35(12): 1998-2006. Article. IF: 1.2; Q4
- **Huys R, Angelo KM, Amatya B, Barkati S, Barnett ED, Bottieau E, Emetulu H, Epelboin L, Eperon G, Medebb L, Gobbi F, Grobusch MP, Itani O, Jordan S, Kelly P, Leder K, Díaz-Menéndez M, Okumura N, Rizwan A, Rothe C, Saio M, Waggoner J, Yoshimura Y, Libman M, Hamer DH, Schwartz E.** Clinical characteristics and outcomes among travelers with severe dengue: a geosentinel analysis. *Ann Intern Med.* 2023; 176(7): 940-8. Article. IF: 19.6; D1



3.3. Infectious Diseases and Immunity Area

- López CN, de Abreu JMG, Pérez-Blanco V, Buckley RD, Gómez MPR, Díaz-Menéndez M. Effectiveness of the BNT162b2 mRNA Covid-19 vaccine in Spanish healthcare workers. *Enferm Infecc Microbiol Clin*. 2023; 41(1): 33-5. Article. IF: 2.6; Q3
- Mangas-Moro A, Zamarrón-de-Lucas E, Carpio-Segura CJ, Álvarez-Sala-Walther R, Arribas-López JR, Hosp Univ La Paz. Impact and characteristics of hospital-acquired influenza over 10 seasons in a third-level university hospital. *Enferm Infecc Microbiol Clin*. 2023; 41(7): 391-5. Article. IF: 2.6; Q3
- Martín-Escolano R, Virseda-Berdecas A, Berenguer J, González-García J, Brochado-Kith O, Fernández-Rodríguez A, Díez C, Hontañón V, Resino S, Jiménez-Sousa MA. Predictive plasma biomarkers of long-term increase in hepatic steatosis index after HCV eradication in HIV/HCV-coinfected patients. *Biomed Pharmacother*. 2023; 164: 114913. Article. IF: 6.9; Q1
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- Salguero S, Brochado-Kith O, Verdices AV, Berenguer J, González-García J, Martínez I, Díez C, Hontañón V, Pérez-Latorre L, Fernández-Rodríguez A, Jiménez-Sousa MA, Resino S. PBMCs gene expression signature of advanced cirrhosis with high risk for clinically significant portal hypertension in HIV/HCV coinfected patients: A cross-control study. *Biomed Pharmacother*. 2023; 159: 114220. Article. IF: 6.9; Q1
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Research projects

- **Arribas López JR.** Biomarcadores epigenéticos de envejecimiento como predictores de eventos SIDA no-SIDA y enf. propias del envejecimiento (PI22/00285). *ISCI.* 2023-2025. *Management centre: FIBHULP*
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- **Arribas López JR.** Impacto de abacavir y tenofovir en la recuperación a largo plazo del estado de inmunosenescencia en una cohorte prospectiva de adultos de avirémicos infectados por el VIH (PI19/00294). *ISCI.* 2020-2024. *Management centre: FIBHULP*
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- **Arribas López JR.** Strengthened health regulations and preparedness in EU (SHARP). *EU.* 2019-2023. *Management centre: FIBHULP*
- **Arsuaga Vicente M.** Filling key research gaps with clinical implications in mansonellosis and schistosomiasis. a network approach. IRCCS Sacro Cuore Don Calabria Hospital. 2021-Ongoing. *Management centre: FIBHULP*
- **Bernardino de la Serna JI.** Biological age and cardiovascular ischemic events or diabetes in HIV-infected patients. Gilead Sciences S. L. 2017-Ongoing. *Management centre: FIBHULP*
- **Bernardino de la Serna JI.** Enfermedad coronaria obstruida asintomática en pacientes VIH. Papel de la metilación del ADN y la activación monocitaria en la progresión de la ateromatosis coronaria (PI18/01327). *ISCI.* 2019-2023. *Management centre: FIBHULP*
- **Bernardino de la Serna JI.** Programa de actualización sobre investigación en pacientes infectados por el VIH ¿qué hay de nuevo? nuevos pacientes, nuevos retos, nuevos investigadores. Gilead Sciences S. L. 2018-Ongoing. *Management centre: FIBHULP*
- **Díaz Menéndez M.** Caracterización de los cuadros de fiebre tras la vuelta de un viaje internacional sin diagnóstico por métodos convencionales y evaluación de técnicas basadas en secuenciación masiva para el diagnóstico microbiológico: estudio Meta-Pyrexia "meta-pyrexia" (PI-5690). Becas Luis Álvarez/FIBHULP. 2023-Ongoing. *Management centre:*
- **Díaz- Menéndez M.** Enfermedades importadas en migrantes procedentes de centro y sur de américa: estudio retrospectivo de un centro de referencia nacional de enfermedades tropicales en España, 2017-2022 (PI-5720). no. 2023-Ongoing. *Management centre:*
- **Díaz Menéndez M.** Evaluación de la patología adquirida por viajeros de riesgo durante un viaje internacional: estudio prospectivo en un centro de referencia. International Society of Travel Med-

icine (Istm). 2017-Ongoing. *Management centre: FIBHULP*

- **Díaz Menéndez M.** Impact of international travel on the prevalence of intestinal carriage of resistant enterobacteriae and its interaction with the gut microbiota. *FIBHULP.* 2022-Ongoing. *Management centre: FIBHULP*
- **Gayá Moreno F.** Contrato técnico de apoyo a estabilizado (ECA07/013). *CM.* 2008-2025. *Management centre: FIBHULP*
- **González García JJ.** Infecciones Agudas/Reinfecciones por VHC en Hombres que tienen Sexo con Hombres con y sin VIH (PI20/00507). *ISCI.* 2021-2023. *Management centre: FIBHULP*
- **Herranz Pinto P.** Dermatitis atópica y patología alérgica en dermatología: actualización y perspectivas futuras para médicos y pacientes: de la investigación a la práctica clínica. Sanofi Aventis S.A. 2020-Ongoing. *Management centre: FIBHULP*
- **Montejano Sánchez R.** Aceleración de la edad epigenética en personas que viven con VIH: Impacto de factores biológicos y de comportamiento (PI21/01349). *ISCI.* 2022-2024. *Management centre: FIBHULP*
- **Montes Ramírez ML.** Estudio de hepatopatías en pacientes infectados por VIH sin hepatitis víricas que reciben tratamiento antirretroviral. Abbvie Spain S. L. U. 2016-Ongoing. *Management centre: FIBHULP*
- **Rodés Soldevila B.** Contrato Miguel Servet Cat-

egoria A (CES11/021). *ISCI.* 2007-2025. *Management centre: FIBHULP*

- **Rodés Soldevila B.** Efecto de la Metformina sobre el Reservorio Viral en Personas con (2023.64). *FIBHULP.* 2023-2024. *Management centre: FIBHULP*
- **Rodés Soldevila B.** Estrategias de tratamiento antirretroviral y su efecto en la edad epigenética en pacientes VIH positivos con supresión virológica (PI18/00569). *ISCI.* 2019-2023. *Management centre: FIBHULP*
- **Rodés Soldevila B.** Impacto de la regulación epigenética de la proteína p21 y su asociación a la progresión a sida en la infección por vih (PI25-11). *Genoma España.* 2011-Ongoing. *Management centre: FIBHULP*
- **Rodés Soldevila B.** Perfiles de metilación del ADN y transcripción génica como marcadores del agotamiento de las células T en individuos VIH+ no tratados y crónicos avirémicos (PI21/00177). *ISCI.* 2022-2024. *Management centre: FIBHULP*
- **Rodríguez Centeno J.** Marcadores de respuesta post-vacunal en población inmunocomprometida (MARVIC): oportunidades para el desarrollo de nuevas inmunoterapias para la prevención de la covid 19 (2024,128). *Fundacio de la Lluita contra el SIDA.* 2023-Ongoing. *Management centre: FIBHULP*
- **Sendagorta Cudós E.** ClearPap: dispositivo de terapia fotodinámica para el tratamiento de lesiones anales asociadas a VPH (DTS22/00181). *ISCI.* 2023-2025. *Management centre: FIBHULP*



3.3. Infectious Diseases and Immunity Area

Cibers and Retics

- **Arribas López JR.** Centro de Investigación Biomédica en Red de Enfermedades Infecciosas (CIBERInfect). ISCIII. (31/12/2024). FIBHULP

Clinical trials

- **González García JJ.** Seguridad, tolerancia y actividad antirretroviral de dasatinib: estudio clínico piloto en pacientes con infección reciente por el vih-1.
Type/Phase: II
Sponsored by: Fundació De Recerca Clínic Barcelona-Institut D'Investigacions Biomèdiques August Pi I Sunyer (Fundació Clínic Per A La Recerca Biomedica)
Signed date: 21/03/2023
- **de la Calle Prieto F.** Cohort study of human monkeypox virus disease.
Type/Phase:
Sponsored by: Agencia Nacional De Investigación Sobre El Sida Y Las Hepatitis Viricas (Inserm-Anrs)
Signed date: 04/04/2023
- **Herranz Pinto P.** Estudio multicéntrico, aleatorizado, con doble enmascaramiento, controlado con placebo y con grupos paralelos para evaluar la eficacia y la seguridad de dupilumab en pacientes adultos con penfigoide ampuloso.
Type/Phase: II
Sponsored by: Regeneron Pharmaceuticals, Inc
Signed date: 25/01/2023
- **Herranz Pinto P.** A phase 3, randomized, 24-week, placebo-controlled, double-blind study to assess the efficacy, safety and tolerability of rocatinlimab (amg 451) monotherapy in adult subjects with moderate-to-severe atopic dermatitis (ad) (rocket-horizon).
Type/Phase: III
Sponsored by: Amgen, Inc
Signed date: 18/04/2023
- **Herranz Pinto P.** Estudio de fase III, aleatorizado, doble ciego, de 52 semanas de duración, controlado con placebo, multicéntrico para investigar la eficacia, seguridad y toler-

abilidad de ritlecitinib en participantes adultos y adolescentes con vitiligo no segmentario.

Type/Phase: III
Sponsored by: Pfizer Inc
Signed date: 07/07/2023

- **Arribas López JR.** A multicenter, adaptive, randomized, controlled trial platform to evaluate safety and efficacy of strategies and treatments for hospitalized patients with respiratory infections short title: strategies and treatments for respiratory infections & viral emergencies (strive).
Type/Phase: Sponsored by: Regents Of The University Of Minnesota
Signed date: 19/06/2023
- **González García JJ.** Estudio clínico de fase III, abierto, de doravirina/islatravir (dor/isl [100 mg/0,25 mg]) una vez al día para el tratamiento de la infección por el vih-1 en participantes que han recibido previamente dor/isl (100 mg/0,75 mg) una vez al día en un estudio clínico de fase iii.
Type/Phase: III
Sponsored by: Merck Sharp & Dohme Llc
Signed date: 12/01/2023
- **Bernardino de la Serna JI.** Estudio clínico de fase 3, aleatorizado, doble ciego y controlado con producto activo para evaluar el cambio a doravirina/islatravir (dor/isl 100 mg/0,25 mg) una vez al día en participantes con vih-1 que presentan supresión virológica con bictegavir/emtricitabina/tenofovir alafenamida (bic/ftc/taf).
Type/Phase: III
Sponsored by: Merck Sharp & Dohme Llc
Signed date: 11/01/2023
- **Martín Carbonero L.** Estudio clínico de fase 3, abierto, aleatorizado y comparativo con tratamiento activo, para evaluar el cambio a doravirina/islatravir (dor/isl 100 mg/0,25 mg) una vez al día en participantes con vih-1 que presentan supresión virológica con el tratamiento antirretroviral.
Type/Phase: III
Sponsored by: Merck Sharp & Dohme Llc
Signed date: 23/02/2023
- **Herranz Pinto P.** Estudio de fase 3b/4 aleatorizado, abierto, enmascarado para los evaluadores de la eficacia, para comparar la seguridad y la

eficacia enmascarada para los evaluadores de upadacitinib frente a dupilumab en pacientes con dermatitis atópica moderada o grave (level-up).

Type/Phase: IIIb
Sponsored by: Abbvie Deutschland Gmbh & Co. Kg
Signed date: 12/04/2023

- **Valencia Ortega E.** Estudio clínico de fase 3, aleatorizado, doble ciego y comparativo con tratamiento activo para evaluar la actividad antirretroviral, la seguridad y la tolerabilidad de doravirina/islatravir (dor/isl 100 mg/0,25 mg) una vez al día en participantes infectados por el vih-1 sin tratamiento previo.
Type/Phase: III
Sponsored by: Merck Sharp & Dohme Llc
Signed date: 26/01/2023
- **de Miguel Buckley R.** Estudio neural. Desenlaces neurocognitivos en pacientes con malaria.
Type/Phase: No EPA
Sponsored by: International Society Of Travel Medicine (Istm)
Signed date: 09/08/2023
- **De Miguel Buckley R.** presevere: predictores de infecciones graves y diagnóstico en viajeros e inmigrantes.
Type/Phase: No EPA
Sponsored by: International Society Of Travel Medicine (Istm)
Signed date: 23/11/2023
- **Montes Ramírez ML.** Estudio piloto de fase IV, comparativo, aleatorizado y abierto para evaluar la eficacia y la seguridad de una pauta de tratamiento antirretroviral basada en rilpivirina en pacientes infectados por vih con enfermedad metabólica hepática que mantiene carga viral de vih indetectable.
Type/Phase: IV
Sponsored by: Fundacion Seimc-Gesida
Signed date: 30/03/2023
- **González García JJ.** Estudio de fase IIB, aleatorizado, con doble enmascaramiento, de grupos paralelos para evaluar la eficacia, la seguridad, la tolerabilidad y el perfil de resistencia de gsk3640254 en combinación con dolutegravir en comparación con dolutegravir más lamivudina en adultos infectados por el vih-1 sin tratamiento previo.

Type/Phase: II
Sponsored by: Glaxosmithkline Research And Development Limited
Signed date: 04/01/2023

- **Herranz Pinto P.** A phase 2/3, multicenter, randomized, double-blind, placebo-controlled study evaluating the efficacy and safety of nipocalimab for the treatment of adult participants with moderate to severe bullous pemphigoid.
Type/Phase: II
Sponsored by: Janssen Cilag International Nv
Signed date: 08/05/2023
- **Herranz Pinto P.** Estudio abierto, multinacional y multicéntrico para evaluar la seguridad, tolerabilidad y eficacia a largo plazo de amlitelimab por vía subcutánea en adultos con dermatitis atópica de moderada a grave.
Type/Phase: II
Sponsored by: Sanofi-Aventis Recherche & Development
Signed date: 31/05/2023
- **Herranz Pinto P.** A phase 3, multicenter, double-blind maintenance study to assess long-term safety, tolerability, and efficacy of rocatinlimab in adult and adolescent subjects with moderate-to-severe atopic dermatitis (ad) (rocket-ascend).
Type/Phase: III
Sponsored by: Amgen, Inc
Signed date: 11/07/2023
- **Herranz Pinto P.** Estudio de fase III, abierto, multicéntrico, a largo plazo, para investigar la seguridad y la eficacia de pf 06651600 en participantes adultos y adolescentes con alopecia areata.
Type/Phase: III
Sponsored by: Pfizer S.L.U.
Signed date: 23/01/2023
- **Herranz Pinto P.** Estudio aleatorizado, doble ciego, controlado con placebo, de prueba de concepto que evalúa la eficacia y seguridad de una molécula anti-tnf-ox40l nanobody®, sar442970, en pacientes con hidradenitis supurativa de moderada a severa.
Type/Phase: II
Sponsored by: Sanofi-Aventis Recherche & Development
Signed date: 14/03/2023



3.3. Infectious Diseases and Immunity Area

- Herranz Pinto P.** Estudio de extensión abierto, multicéntrico, para evaluar la eficacia y seguridad a largo plazo de ctp-543 en pacientes adultos con alopecia areata de moderada a grave.
Type/Phase: III
Sponsored by: Concert Pharmaceuticals, Inc
Signed date: 09/02/2023
- González García JJ.** Estudio clínico de fase 3, aleatorizado, doble ciego y controlado con producto activo para evaluar el cambio a doravirina/islatravir (dor/isl) una vez al día en participantes con supresión virológica del vih-1 con bictegravir/emtricitabina/tenofovir alafenamida (bic/ftc/taf).
Type/Phase: III
Sponsored by: Merck Sharp & Dhome Corp.
Signed date: 08/02/2023
- Arribas López JR.** Estudio de fase 3, aleatorizado, doble ciego, controlado con placebo, para evaluar la eficacia y la seguridad de ad26.cov2.s para la prevención de covid-19 mediada por sars-cov-2 en adultos mayores de 18 años.
Type/Phase: III
Sponsored by: Janssen Cilag International Nv
Signed date: 17/03/2023
- Ramos Ramos JC.** ARISE - estudio multicéntrico, aleatorizado, doble ciego, controlado con placebo y con tratamiento activo para validar los instrumentos de medida de resultados notificados por el paciente, en pacientes adultos, con infección pulmonar por micobacterias no tuberculosas (mnt) de nuevo diagnóstico causada por el complejo mycobacterium avium (mac).
Type/Phase: III
Sponsored by: Insmad Incorporated
Signed date: 09/03/2023
- Ramos Ramos JC.** ENCORE - estudio multicéntrico, aleatorizado, doble ciego, controlado con placebo y con tratamiento activo para evaluar la eficacia y seguridad de un régimen basado en la suspensión para inhalación de liposomas de amikacina (alis) en pacientes adultos con infección pulmonar por micobacterias no tuberculosas (mnt) de nuevo diagnóstico causada por el complejo mycobacterium avium (mac).
Type/Phase: III
Sponsored by: Insmad Incorporated
Signed date: 09/03/2023
- Herranz Pinto P.** Estudio observacional para identificar las características clínicas, metodología diagnóstica, abordaje terapéutico y la comorbilidad vinculada al prurigo nodular en la práctica clínica.
Type/Phase: No EPA
Sponsored by: Laboratorios Galderma, S.A.
Signed date: 05/06/2023
- Valencia Ortega E.** Estudio clínico de fase 3, aleatorizado, doble ciego y comparativo con tratamiento activo para evaluar la actividad antirretroviral, la seguridad y la tolerabilidad de doravirina/islatravir una vez al día en participantes infectados por el vih-1 sin tratamiento previo.
Type/Phase: III
Sponsored by: Merck Sharp & Dhome Corp.
Signed date: 23/03/2023
- Arribas López JR.** Epigenetic biomarkers of biological age as predictors of aids, non-aids events, and diseases characteristics of aging in persons with hiv.
Type/Phase: OTROS
Sponsored by: Fundacion Para La Investigacion Biomedica Hospital Universitario La Paz
Signed date: 05/06/2023
- Herranz Pinto P.** Ensayo fase 2b, aleatorizado, doble ciego, controlado con placebo, multicéntrico, de grupos paralelos y de búsqueda de dosis para evaluar la eficacia y la seguridad de diferentes dosis de leo 138559 administrado por vía subcutánea en sujetos adultos con dermatitis atópica (da) de moderada a grave.
Type/Phase: IIb
Sponsored by: Leo Pharma A/S
Signed date: 26/10/2023
- Arribas López JR.** A multicenter, adaptive, randomized, controlled trial platform to evaluate safety and efficacy of strategies and treatments for hospitalized patients with respiratory infections.
Type/Phase:
Sponsored by:
Signed date: 04/12/2023
- Martín Carbonero L.** Estudio de fase 3 aleatorizado y doble ciego para evaluar la seguridad y la eficacia de una combinación de dosis fija de bictegravir/emtricitabina/tenofovir alafenamida frente a dolutegravir + emtricitabina/fumarato de disoproxilo de tenofovir en adultos no tratados anteriormente coinfectados por el vih-1 y el virus de la hepatitis b.
Type/Phase: III
Sponsored by: Gilead Sciences Inc
Signed date: 25/05/2023
- Díaz Pollán B.** Estudio en fase III, aleatorizado, doble ciego, controlado con placebo y multicéntrico para evaluar la eficacia, la seguridad y la inmunogenicidad de la vacunación con espec9v en la prevención de la enfermedad por escherichia coli patógena extraintestinal invasiva en adultos de 60 años de edad en adelante con antecedentes de infección urinaria en los últimos 2 años.
Type/Phase: III
Sponsored by: Janssen Research & Development, Llc
Signed date: 16/08/2023
- González García JJ.** Estudio fase 2a, aleatorizado, doble ciego (abierto para el promotor), controlado con placebo, para investigar el efecto antiviral, la seguridad, la tolerabilidad y la farmacocinética de la administración oral en monoterapia de un inhibidor de la cápsida en adultos con infección por vih-1 sin tratamiento previo.
Type/Phase: II
Sponsored by: Viiv Healthcare Uk Limited
Signed date: 23/11/2023
- González García JJ.** Estudio de fase IIIB, abierto, multicéntrico, aleatorizado, de grupos paralelos y de no inferioridad para evaluar la eficacia, la seguridad y la tolerabilidad de la combinación de dolutegravir/lamivudina administrada por vía oral una vez al día como tratamiento de primera línea, en comparación con la combinación de bictegravir/emtricitabina/tenofovir alafenamida administrada por vía oral una vez al día, para la inhibición y el mantenimiento virológico en adultos con vih sin tratamiento antirretroviral previo.
Type/Phase: IIIb
Sponsored by: Viiv Healthcare Uk Limited
Signed date: 14/11/2023
- Valencia Ortega E.** Estudio clínico de fase 3, aleatorizado, doble ciego y comparativo con tratamiento activo para evaluar la actividad antirretroviral, la seguridad y la tolerabilidad de doravirina/islatravir una vez al día en participantes infectados por el vih-1 sin tratamiento previo.
Type/Phase: III
Sponsored by: Merck Sharp & Dhome Corp.
Signed date: 09/08/2023
- Arribas López JR.** Momento estratégico para inicio de la terapia antirretroviral.
Type/Phase: III
Sponsored by: Regents Of The University Of Minnesota
Signed date: 12/07/2023
- Bernardino de la Serna, José Ignacio.** estudio de fase 2/3, operativamente sin interrupciones, aleatorizado, abierto, multicéntrico y con control activo para evaluar la seguridad y la eficacia de bictegravir/lenacapavir en comparación con un régimen de referencia estable en personas con vih-1 en supresión virológica que reciben pautas de tratamiento complejas estables.
Type/Phase: II
Sponsored by: Gilead Sciences Inc
Signed date: 21/11/2023
- González García JJ.** Estudio fase III, aleatorizado, multicéntrico, abierto, de grupos paralelos, para evaluar la eficacia, seguridad y tolerabilidad de una pauta de tratamiento intramuscular de acción prolongada con cabotegravir y rilpivirina en el mantenimiento de la supresión virológica, tras una inducción con un tratamiento de comprimido único con un inhibidor de la integrasa en pacientes adultos infectados por el vih-1 que no han recibido un tratamiento antirretroviral previo.
Type/Phase: III
Sponsored by: Laboratorios Viiv Healthcare, S.L.
Signed date: 04/12/2023

Patents and trademarks

- Romero Gómez M, Solá Lamoglia R, González García JJ, inventors.** Servicio Andaluz de Salud, Universidad de Sevilla, Fundació Institut Mar D'Investigacions Mèdiques, FIBHULP, assignees. Kit for decision making in patients with Hepatitis C genotypes 1 and 4. P201330731; 2013 May 21.



3.3.2 Molecular Microbiology Group

Publications: 58 | Q1:25

COMPOSITION

Jesús Mingorance Cruz.

Investigador Titular. FIBHULP. Profesor Asociado de la Facultad de Medicina. Universidad Autónoma de Madrid

- **Iván Bloise Sánchez.** Facultativo Especialista en Microbiología y Parasitología Clínica. Hospital Universitario La Paz
- **Emilio Cendejas Bueno.** Facultativo Especialista de Área en Microbiología. Hospital Universitario La Paz
- **Eliás Dahdouh.** Investigador Postdoctoral Miguel Servet. FIBHULP
- **Iker Falces Romero.** Facultativo Especialista de Área en Microbiología. Hospital Universitario La Paz
- **Silvia García Bujalance.** Facultativo Especialista de Área en Microbiología. Hospital Universitario La Paz
- **María Jesús García García.** Profesora Emérita. Departamento de Medicina Preventiva y Salud Pública y Microbiología. Facultad de Medicina. Universidad Autónoma de Madrid
- **Julio García Rodríguez.** Jefe de Servicio de Microbiología. Hospital Universitario La Paz
- **Paulino Gómez Puertas.** Científico Titular CSIC. CBM "Severo Ochoa". Profesor Honorario. Universidad Autónoma de Madrid
- **Rocío González Soltero.** Catedrática de Genética Molecular. Universidad Europea
- **David Grandioso Vas.** Facultativo Especialista de Área en Microbiología. Hospital Universitario La Paz
- **Almudena Gutiérrez Arroyo.** Facultativo Especialista de Área en Microbiología. Hospital Universitario La Paz
- **Fernando Lázaro Perona.** Facultativo Especialista de Área en Microbiología. Hospital Universitario La Paz



- **María Belén Loeches Yagüe.** Médico Adjunto. Unidad de Enfermedades Infecciosas. Hospital Universitario La Paz
- **Carmen Menéndez Gómez.** Profesor contratado Doctor, Departamento de Medicina Preventiva y Salud Pública y Microbiología. Facultad de Medicina. Universidad Autónoma de Madrid
- **Dolores Montero Vega.** Facultativo Especialista de Área en Microbiología. Hospital Universitario La Paz
- **Verónica Pérez Blanco.** Facultativo Especialista de Área en Medicina Preventiva. Hospital Universitario La Paz
- **Rafael Carlos Prados Rosales.** Investigadora Postdoctoral. Universidad Autónoma de Madrid
- **María Inmaculada Quiles Melero.** Facultativo Especialista de Área en Microbiología. Hospital Universitario La Paz
- **Alicia Rico Nieto.** Facultativo Especialista de Área en Microbiología. Hospital Universitario La Paz
- **Graciela Rodríguez Sevilla.** Facultativo Especialista de Área en Microbiología. Hospital Universitario La Paz
- **Guillermo Ruiz Carrascoso.** Facultativo Especialista de Área en Microbiología. Hospital Universitario La Paz
- **Carlos Toro Rueda.** Facultativo Especialista de Área en Microbiología. Hospital Universitario La Paz

STRATEGIC OBJETIVES

- The Molecular Microbiology research group is integrated into the Department of Microbiology at Hospital La Paz, and a significant number of its members are physicians in the department devoted to microbiological diagnostic work. This integration determines the group's strategic approach and therefore, the different lines of research revolve around several aspects of clinical microbiology and infectious diseases.
- An important line of activity (Clinical Microbiology) is the result of the routine activities provided by the department, but goes further and deeper into the methodological, epidemiological and pathological challenges encountered in the daily routine.
- One research line derived from the former is the development of methods for the molecular characterization of pathogenic microorganisms, including microbiological diagnosis and epidemiological analysis, and more recently, microbial genomics.
- Another line focuses on the study of the evolution of pathogenic microorganisms. As a model of opportunistic pathogens, we study *Escherichia coli*, a microorganism that is well characterised at the genetic level and that is clinically relevant as the primary cause of urinary tract infections and one of the most frequently involved in bacteraemia.
- Another important focus, given the scarcity of new antibiotics, is the search for new molecules. In this line, we use molecular dynamics to search for new metallo-beta-lactamase inhibitors.
- Several group members belong to the Faculty of Medicine and they have a long research record in the Molecular Biology and Pathogenesis of *Mycobacterium tuberculosis* and other mycobacteria.



RESEARCH LINES

- Molecular epidemiology and evolution of pathogens
- Molecular methods for diagnostics of infectious diseases
- Genomics of hospital microbial pathogens
- Design of new inhibitors of metallo-beta-lactamases by molecular dynamics
- Molecular Biology and Pathogenesis of Mycobacterium tuberculosis

RESEARCH ACTIVITY

Master Theses

- **Martín Portugués S.** Desarrollo de un protocolo de tipificación rápida por MLST, para aislados clínicos de *Escherichia coli* y *Staphylococcus aureus*, utilizando la secuenciación masiva por MinION [dissertation]. *Madrid: UAM: 2023(14/09/2023). Director: Dahdouh E.*
- **Tello Durán B.** Interacción entre miRNAs, microbiota intestinal y marcadores de inflamación: Caracterización y desarrollo de un pipeline para su aplicación en muestras humanas [dissertation]. *Madrid: UE: 2023(01/11/2023). Director: González Soltero R.*

Final Degree Theses

- **Merino González S.** Selección por antibióticos de mutantes de porinas en enterobacterias [dissertation]. *Madrid: UAM: 2023(30/06/2023). Director: Mingorance Cruz J.*
- **Muñoz García M.** El papel de la dieta en el Síndrome del Intestino Irritable [dissertation]. *Madrid: UAM: 2023(28/05/2023). Director: Menéndez Gómez C.*
- **Redondo Lois L.** Implicaciones del SIBO en la absorción de nutrientes [dissertation]. *Madrid: UAM: 2023(28/05/2023). Director: Menéndez Gómez C.*

Publications

- **Acero LA, Quiles-Melero I, Jaras-Hernández MJ, Toro C.** Is *Mycobacterium shimoidei* an underrecognized cause of tuberculosis-like disease? *Rev Esp Quim.* 2023; 36(6): 643-4. Letter. IF: 1.9; Q4
- **Acero LA, Soto SR, Nieto AR.** Answer to photo quiz: a sticky foe. *J Clin Microbiol.* 2023; 61(2): e00390-22. Editorial Material. IF: 6.1; Q1

- **Acero LA, Soto SR, Nieto AR.** Photo quiz: a sticky foe. *J Clin Microbiol.* 2023; 61(2): e0039122. Editorial Material. IF: 6.1; Q1
- **Aguilera-Alonso D, Escosa-García L, Epalza C, Bravo-Oueipo-de-Llano B, Olteanu FC, Cendejas-Bueno E, Orellana MA, Cercenado E, Saavedra-Lozano J.** Antibiotic resistance in bloodstream isolates from high-complexity paediatric units in Madrid, Spain: 2013-2021. *J Hosp Infect.* 2023; 139: 33-43. Article. IF: 3.9; Q1
- **Arendrup MC, Arikian-Akdagli S, Jorgensen KM, Barac A, Steinmann J, Toscano C, Arsenijevic VA, Sartor A, Lass-Flörl C, Hamprecht A, Matos T, Rogers BRS, Quiles I, Buil J, Özenci V, Krause R, Bassetti M, Loughlin L, Denis B, Grancini A, White PL, Lagrou K, Willinger B, Rautemaa-Richardson R, Hamal P, Ener B, Unalan-Altintop T, Evren E, Hilmioglu-Polat S, Oz Y, Ozyurt OK, Aydin F, Ruzicka F, Meijer EEJ, Gangneux JP, Lockhart DEA, Khanna N, Logan C, Scharmann U, Desoubeaux G, Roilides E, Talento AF, van Dijk K, Koehler P, Salmanton-García J, Cornely OA, Hoenigl M.** European candidaemia is characterised by notable differential epidemiology and susceptibility pattern: Results from the ECMM Candida III study. *J Infection.* 2023; 87(5): 428-37. Article. IF: 14.3; D1
- **Boattini M, Pinto MF, Christaki E, Fasciana T, Falces-Romero I, Tofarides A, Bianco G, Cendejas-Bueno E, Tricoli MR, Tsiolakkis G, García-Rodríguez J, Matzaras R, Comini S, Giammanco A, Kasapi D, Almeida A, Gartzonika K, Cavallo R, Costa C.** Multicentre surveillance of candida species from blood cultures during the SARS-CoV-2 pandemic in southern Europe (CANCoVEU Project). *Microorganisms.* 2023; 11(3): 560. Article. IF: 4.1; Q2
- **Broncano-Lavado A, Barrado L, López-Roa P, Cacho J, Domingo D, Hernández S, García-Martínez J,**

- Millan MR, Pérez-Cecilia E, Ruiz-Serrano MJ, Salso S, Simon M, Tato M, Toro C, Valverde-Canovas JF, Esteban J.** Clinical evaluation of nontuberculous mycobacteria (NTM) elite agar, a new medium for the isolation of NTM: a multicenter study. *J Clin Microbiol.* 2023; 61(4): e0003623. Article. IF: 6.1; Q1
- **Busca A, Salmantón-García J, Marchesi F, Farina F, Seval GC, Van Doesum J, De Jonge N, Bahr NC, Maertens J, Meletiadis J, Fracchiolla NS, Weinbergerová B, Verga L, Rácl Z, Jiménez M, Glenthøj A, Blennow O, Tanase AD, Schönlein M, Prezioso L, Khanna N, Duarte RF, Zák P, Nucci M, Machado M, Kulasekararaj A, Espigado I, De Kort E, Susana JMRS, Marchetti M, Magliano G, Falces-Romero I, Ilhan O, Ammatuna E, Zompi S, Tsigiriotis P, Antoniadou A, Zambrotta GPM, Nordlander A, Karlsson LK, Hanakova M, Dragonetti G, Cabrita A, Venemyr CB, Gräfe S, Van Praet J, Tragiannidis A, Petzer V, López-García A, Itri F, Groh A, Gavrilaki E, Dargenio M, Rahimli L, Cornely OA, Pagano L.** Outcome of COVID-19 in allogeneic stem cell transplant recipients: Results from the EPICOVIDEHA registry. *Front Immunol.* 2023; 14: 1125030. Article. IF: 5.7; Q1
- **Cercenado E, Rodríguez-Baño J, Alfonso JL, Calbo E, Escosa L, Fernández-Polo A, García-Rodríguez J, Garnacho J, Gil-Navarro MV, Grau S, Gudiol C, Horcajada JP, Larrosa N, Martínez C, Molina J, Nuvials X, Oliver A, Paño-Pardo JR, Pérez-Rodríguez MT, Ramírez P, Rey-Biel P, Vidal P, Retamar-Gentil P.** Antimicrobial stewardship in hospitals: Expert recommendation guidance document for activities in specific populations, syndromes and other aspects (PROA-2) from SEIMC, SEFH, SEMPSPGS, SEMICYUC and SEIP. *Enferm Infect Micr Cl.* 2023; 41(4): 238-42. Editorial Material. IF: 2.6; Q3
- **Cobo-Vázquez E, Aguilera-Alonso D, Carrasco-Colom J, Calvo C, Saavedra-Lozano J.** Increasing incidence and severity of invasive Group A streptococcal disease in Spanish children in 2019-2022. *Lancet Reg Health Eur.* 2023; 27: 100597. Letter. IF: 13.6; D1
- **Colomo S, Ros-Pardo D, Oltra SS, Gómez-Puertas P, Sarrío D, Moreno-Bueno G.** Structural and functional insights into GSDMB isoforms complex roles in pathogenesis. *Cell Cycle.* 2023; 22(20): 2346-59. Review. IF: 3.4; Q3
- **Dahdouh E, Cendejas-Bueno E, Ruiz-Carrasco G, Schüffelmann C, Lázaro-Perona F, Castro-Martínez M, Moreno-Ramos F, Escosa-García L, Alguacil-Guillén M, Mingorance J.** Intestinal loads of extended-spectrum beta-lactamase and Carbapenemase

- genes in critically ill pediatric patients. *Front Cell Infect Mi.* 2023; 13: 1180714. Article. IF: 4.6; Q2
- **de la Calle M, Rodríguez-Molino P, Gómez MPR, Baquero-Artigao F.** Cytomegalovirus seroprevalence in pregnant women in Madrid: First step for a systematic screening. *Enferm Infect Micr Cl.* 2023; 41(1): 55-6. Editorial Material. IF: 2.6; Q3
- **de Salazar A, Martínez MJ, Navero-Castillejos J, Negro A, Galán JC, Molinero ER, Lagarejos E, Muñoz-Almagro C, Rodríguez AH, Lepe JA, Pagarolas AA, Castro SP, Cintas MIZ, González MDG, Niubó-Bosch J, Gutiérrez Arroyo A, Vázquez A, García F, Fariñas MPSS.** The imperative for quality control programs in Monkeypox virus DNA testing by PCR: CIBERINFEC quality control. *J Med Virol.* 2023; 95(11): e29240. Article. IF: 6.8; D1
- **Díaz-García J, Gómez A, Machado M, Alcalá L, Reigadas E, Sánchez-Carrillo C, Pérez-Ayala A, de la Pedrosa EGG, González-Romo F, Cuétara MS, García-Esteban C, Quiles-Melero I, Zurita ND, Muñoz-Algarra M, Durán-Valle MT, Sánchez-García A, Muñoz P, Escibano P, Guínea J.** Non-Candida isolates from blood cultures and intra-abdominal samples: data derived from a multicentre prospective study conducted in Madrid. *Rev Esp Quim.* 2023; 36(5): 541-4. Letter. IF: 1.9; Q4
- **Díaz-García J, Machado M, Alcalá L, Reigadas E, Pérez-Ayala A, de la Pedrosa EGG, González-Romo F, Cuétara MS, García-Esteban C, Quiles-Melero I, Zurita ND, Muñoz-Algarra M, Durán-Valle MT, Sánchez-García A, Muñoz P, Escibano P, Guínea J.** Trends in antifungal resistance in *Candida* from a multicenter study conducted in Madrid (CANDIMAD study): fluconazole-resistant *C. parapsilosis* spreading has gained traction in 2022. *Antimicrob Agents Ch.* 2023; 67(11): e0098623. Article. IF: 4.1; Q2
- **Díaz-García J, Machado M, Alcalá L, Reigadas E, Sánchez-Carrillo C, Pérez-Ayala A, de la Pedrosa EGG, González-Romo F, Merino P, Cuétara MS, García-Esteban C, Quiles-Melero I, Zurita ND, Muñoz-Algarra M, Durán-Valle MT, Martínez-Quintero GA, Sánchez-García A, Muñoz P, Escibano P, Guínea J.** Antifungal resistance in *Candida* spp within the intra-abdominal cavity: study of resistance acquisition in patients with serial isolates. *Clin Microbiol Infect.* 2023; 29(12): 1604.e1-6. Article. IF: 10.9; D1
- **Doesum JAV, Salmantón-García J, Marchesi F, Di Blasi R, Falces-Romero I, Cabrita A, Farina F, Besson C, Weinbergerová B, Van Praet J, Schönlein M, López-García A, Lamure S, Guidetti A, De**



3.3. Infectious Diseases and Immunity Area

- Ramón-Sánchez C, Batinic J, Gavriilaki E, Tragiannidis A, Tisi MC, Plantefeve G, Petzer V, Ormazabal-Vélez I, de Almeida JM, Marchetti M, Maertens J, Machado M, Kulasekararaj A, Hernández-Rivas JA, Silva MGD, Fernández N, Espigado I, Drgona L, Dragonetti G, Metafuni E, Calbacho M, Blennow O, Wolf D, van Anrooij B, Rodrigues RN, Nordlander A, Martín-González JA, Liévin R, Jiménez M, Gräfe SK, García-Sanz R, Córdoba R, Rahimli L, van Meerden T, Cornely OA, Pagano L. Impact of SARS-CoV-2 vaccination and monoclonal antibodies on outcome post-CD19-directed CAR T-cell therapy: an EPICOVIDE-HA survey. *Blood Adv.* 2023; 7(11): 2645-5. Article. IF: 7.4; Q1
- Egger M, Salmantón-García J, Barac A, Gangneux JP, Guegan H, Arsic-Arsenijevic V, Matos T, Tomazin R, Klimko N, Bassetti M, Hammarström H, Meijer EE, Meis JF, Prattes J, Krause R, Sipahi OR, Scharmann U, White PL, Desoubeaux G, García-Rodríguez J, García-Vidal C, Martín-Pérez S, Ruiz M, Tumbarello M, Talento AF, Rogers B, Lagrou K, van Praet J, Arikán-Akdagli S, Arendrup MC, Koehler P, Cornely OA, Hoenigl M. Predictors for prolonged hospital stay solely to complete intravenous antifungal treatment in patients with candidemia: results from the ECMM candida III multinational european observational cohort study. *Mycopathologia.* 2023; 188(6): 983-94. Article. IF: 3.6; Q2
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 - Falces-Romero I, Quiles-Melero I, García-Rodríguez J. Isolation of filamentous basidiomycetes from respiratory samples in a tertiary care Spanish hospital. *Rev Iberoam Micol.* 2023; 40(4): 51-3. Article. IF: 1.5; Q4
 - Galar A, Juárez M, Sousa-Casasnovas I, Catalán P, Valerio M, Antunez-Muiños P, Barbeito-Castiñeiras G, Blanco-Alonso S, Folgueira MD, García-Acuña JM, Lalueza A, Lázaro-Perona F, de Sá EL, Martín L, Muñoz E, Portero F, Ramos-Martínez A, Romero-Gómez MP, Rosillo S, Fernández-Avilés F, Martínez-Sellés M, Bouza E, Muñoz P. Systematic influenza screening in cardiac intensive care units during the influenza season: A prospective study in Spain. *Int J Infect Dis.* 2023; 136: 37-42. Article. IF: 4.8; Q1
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 - Ligeró-López J, García-Rodríguez J, Ruiz-Carrascoso G. Diagnosis of gastrointestinal infections: comparison between traditional microbiology and a commercial syndromic molecular-based panel. *Fems Microbiol Lett.* 2023; 370(0): fna122. Article. IF: 2.2; Q3
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3.3. Infectious Diseases and Immunity Area

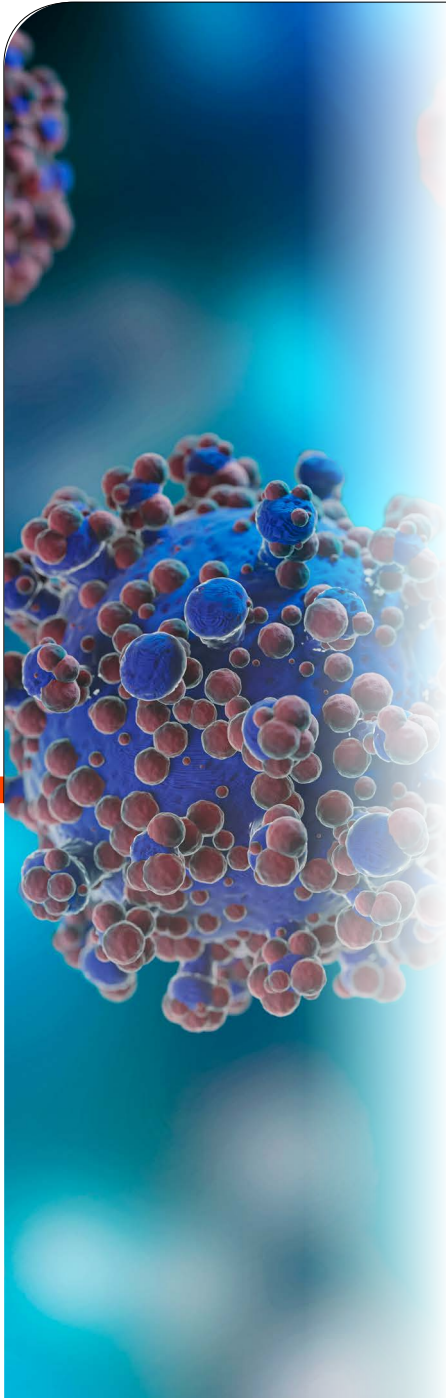


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Research projects

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- **Mingorance Cruz J.** Aplicación de los métodos de tipado genómico y molecular a la elaboración del mapa microbiológico del Hospital Universitario La Paz. Genómica S.A.U. 2012-Ongoing. *Management centre: FIBHULP*
- **Mingorance Cruz J.** Aplicaciones de la pcr digital (quantstudio) en microbiología clínica. Proquinorte S.A. 2022-Ongoing. *Management centre: FIBHULP*
- **Mingorance Cruz J.** Contrato I3 Estabilizado (CESI311). CM. 2011-2025. *Management centre: FIBHULP*
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- **Mingorance Cruz J.** Identificación de los factores que modifican la carga intestinal de EPCS y desarrollo de modelos predictivos del riesgo de infección mediante algoritmos de inteligencia artificial (PI22/01523). ISCIII. 2023-2025. *Management centre: FIBHULP*

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- **Prados-Rosales R.** Role of mycobacterial dynamin-like proteins in the biogenesis of membrane vesicles, and host-pathogen interactions (1R01AI161821-01). National Institutes of Health. 2021-2024. *Management centre: FUAM*

Clinical trials

- **Loeches Yagüe, María Belén.** tratamiento antimicrobiano ambulatorio oral vs. parenteral para la endocarditis infecciosa. Type/Phase: IV; Sponsored by: Fundació De Recerca Clínic Barcelona-Institut D'Investigacions Biomèdiques August Pi I Sunyer (Fundació Clínic Per A La Recerca Biomedica); *Signed date: 11/01/2023*

Patents and trademarks

- **Vicente Muñoz M, Mingorance Cruz J, Rueda González MS, inventors; CSIC, assignee.** Method for determining state of growth and viability of bacterial FtsZ population, whether natural or cultivated, is based on determining existence of FtsZ rings in actively growing individual cells. P200200370; 2002 February 15.
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3.3.3 Immuno-Rheumatology Group

Publications: 22 | Q1:7

COMPOSITION

María Eugenia Miranda Carús.
 Facultativo Especialista de Área en Reumatología. Hospital Universitario La Paz

- **Pilar Aguado Acín.** Facultativo Especialista de Área en Reumatología. Hospital Universitario La Paz
- **Alejandro Balsa Criado.** Jefe de Sección de Reumatología. Hospital Universitario La Paz. Profesor Asociado. Facultad de Medicina. Universidad Autónoma de Madrid
- **María Gema Bonilla Hernán.** Facultativo Especialista de Área en Reumatología. Hospital Universitario La Paz
- **Ana Castilla Plaza.** Facultativo Especialista de Área en Reumatología. Hospital Universitario La Paz
- **Eugenio de Miguel Mendieta.** Facultativo Especialista de Área en Reumatología. Hospital Universitario La Paz
- **Francisco de Borja Hernández de Breijo.** Investigador Postdoctoral. Hospital Universitario La Paz
- **Paula Fortea Gordo.** Investigadora Predoctoral. Hospital Universitario La Paz
- **Sara García Carazo.** Facultativo Especialista de Área en Reumatología. Hospital Universitario La Paz
- **Emilio Martín Mola.** Jefe de Servicio de Reumatología. Hospital Universitario La Paz. Profesor Asociado. Facultad de Medicina. Universidad Autónoma de Madrid
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- **Irene Monjo Henry.** Facultativo Especialista de Área en Reumatología. Hospital Universitario La Paz



- **María Victoria Navarro Compán.** Facultativo Especialista de Área en Reumatología. Hospital Universitario La Paz
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- **Chamaida Plasencia Rodríguez.** Facultativo Especialista de Área en Reumatología. Hospital Universitario La Paz
- **Diana Peiteado López.** Facultativo Especialista de Área en Reumatología. Hospital Universitario La Paz
- **Alejandro Villalba Yllán.** Facultativo Especialista de Área en Reumatología. Hospital Universitario La Paz

STRATEGIC OBJETIVES

- Our objective is to investigate the pathogenesis and evolution of rheumatic diseases, specifically focusing on imaging, genetics, metabolic pathways and immunopathogenesis.

RESEARCH LINES

- Immunopathogenesis, genetic, evolution, prognosis and biomarkers of inflammatory and autoimmune arthritis
- Imaging of inflammatory and autoimmune arthritis
- Immunopathogenesis and genetics of osteoporosis
- Immunogenicity of biological therapies with monoclonal antibodies
- Immunopathogenesis, evolution, prognosis and biomarkers of ocular inflammatory pathology
- Classification and Clinical outcomes of patients with inflammatory and autoimmune arthritis

RESEARCH ACTIVITY

Publications

- **Avouac J, Marotte H, Balsa A, Chebbah M, Le Clanche S, Verhagen LAW, Filková M, Mueller RB, Mongey AB, Taylor PC.** Teleconsultation in rheumatology: A literature review and opinion paper. *Semin Arthritis Rheu.* 2023; 63: 152271. Review. IF: 4.6; Q1
- **Balsa A, Fontecha PDD, Fernández LS, Martín JV, Martínez VN, Vázquez FL, Hernández MVH, Corominas H, Caliz RC, García JMA, Rodríguez GC, Roteta NI, Carvajal AM, Far-**

- ras MNP, Rioboo JP, Park HS, Pego YT, García VV.** Recommendations by the Spanish Society of Rheumatology on risk management of biological treatment and JAK inhibitors in patients with rheumatoid arthritis. *Reumatol Clin.* 2023; 19(10): 533-48. Article. IF: 1.2; Q4
- **Balsa A, Wassenberg S, Tanaka Y, Tournadre A, Orzechowski HD, Rajendran V, Lendl U, Stiers PJ, Watson C, Caporali R, Galloway J, Verschuere P.** Effect of filgotinib on body mass index and effect of baseline bmi on the efficacy and safety of filgotinib in rheumatoid arthritis.



- Rheumatol Ther. 2023; 10(6): 1555-74. Article. IF: 2.9; Q2
- **Benavent D, Capelusnik D, Ramiro S, Navarro-Compán V.** Looking through the window of opportunity in axial spondyloarthritis?. *Joint Bone Spine.* 2023; 90(6): 105603. Review. IF: 3.8; Q1
 - **Benavent D, Fernández-Luque L, Sanz-Jardon M, Bilionis I, Novella-Navarro M, Navarro-Compán V, González-Sanz PL, Calvo E, Lojo L, Balsa A, Plasencia-Rodríguez C.** Implementation of a hybrid healthcare model in rheumatic musculoskeletal diseases: 6-months results of the multicenter Digireuma study. *Bmc Rheumatol.* 2023; 7(1): 32. Article. IF: 2.1; Q3
 - **Benavent D, Jochems A, Pascual-Salcedo D, Jochems G, Plasencia-Rodríguez C, Ramiro S, Arends S, Spoorenberg A, Balsa A, Navarro-Compán V.** Translation and cross-cultural adaptation of the mSQUASH into Spanish. *Reumatol Clin.* 2023; 19(8): 436-41. Article. IF: 1.2; Q4
 - **Benavent D, Jochems A, Pascual-Salcedo D, Jochems G, Plasencia-Rodríguez C, Ramiro S, van Lankveld W, Balsa A, Navarro-Compán V.** Coping with rheumatic stressors (CORS) questionnaire: Spanish translation and cross-cultural adaptation. *J Patient Rep Outcomes.* 2023; 7(1): 11. Article. IF: 2.4; Q2
 - **Benavent D, Navarro-Compán V.** Clearing the fog: A closer look at the differences between axial psoriatic arthritis and axial spondyloarthritis. *Arp Rheumatol.* 2023; 2(1): 3-6. Editorial Material. IF: 1.4; Q3
 - **García-Vicuña R, Juanola X, Navarro-Compán V, Moreno-Ramos MJ, Castillo-Gallego C, Moreno M, Galíndez E, Montoro M, Gómez I, Rebollo-Laserna FJ, Loza E.** Management of specific clinical profiles in axial spondyloarthritis: an expert's document based on a systematic literature review and extended delphi process. *Rheumatol Ther.* 2023; 10(5): 1215-40. Review. IF: 2.9; Q2
 - **Garrido-Cumbrera M, Christen L, Marzo-Ortega H, Correa-Fernández J, Sanz-Gómez S, Navarro-Compán V.** Fears and hopes of patients with rheumatic and musculoskeletal diseases during the COVID-19 pandemic across Europe. Results from the REUMAVID study (phase 1 and phase 2). *Musculoskeletal Care.* 2023; 21(3): 932-5. Article. IF: 1.5; Q3
 - **Garrido-Cumbrera M, Collantes-Estévez E, Navarro-Compán V, Zarco-Montejo P, Sastre C, Correa-Fernández J, Gratacós J.** Patients with Axial spondyloarthritis are great consumers of healthcare resources, especially young and women: results from the spanish atlas. *Rheumatol Ther.* 2023; 10(3): 729-39. Article. IF: 2.9; Q2
 - **Hernández-Breijo B, Novella-Navarro M, Genre F, Navarro-Compán V, Martínez-Feito A, Remuzgo-Martínez S, González-Gay MA, Balsa A, Plasencia-Rodríguez C.** Serum leptin concentration is associated with the attainment of clinical outcomes in patients with axial spondyloarthritis treated with TNF inhibitors. *Clin Exp Rheumatol.* 2023; 41(3): 565-73. Article. IF: 3.4; Q2
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 - **Kwan YH, Phang JK, Woon TH, Liew JW, Dubreuil M, Proft F, Ramiro S, Molto A, Navarro-Compán V, de Hooge M, Meghnathi B, Ziade N, Zhao SS, Llop M, Baraliakos X, Fong W.** Social media use among members of the assessment of spondyloarthritis international society: results of a web-based survey. *J Med Internet Res.* 2023; 25: e39155. Article. IF: 5.8; D1
 - **Navarro-Compán V, Baraliakos X, Magrey M, Oestoe A, Saffore CD, Mittal M, Song IH, Ganz F, Stigler J, Deodhar A.** Effect of Upadacitinib on disease activity, pain, fatigue, function, health-related quality of life and work productivity for biologic refractory ankylosing spondylitis. *Rheumatol Ther.* 2023; 10(3): 679-91. Article. IF: 2.9; Q2
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 - **Novella-Navarro M, Cabrera-Alarcón J, López-Juanes N, Villalba A, Fernández EF, Monjo I, Peiteado D, Nuño L, Plasencia-Rodríguez C, Balsa A.** Patient and physician assessment in



3.3. Infectious Diseases and Immunity Area

- difficult-to-treat rheumatoid arthritis: patterns of subjective perception at early stages of b/tsDMARD treatment. *Rmd Open*. 2023; 9(3): e003382. Article. IF: 5.1; Q1
- **Novella-navarro M, Genre F, Martínez-Feito A, Pulito-Cueto V, Plasencia-Rodríguez C, Balsa A.** Obesity and adipose tissue cytokines in rheumatoid arthritis treated with IL-6 inhibitors: does the route of administration matter? *Clin Exp Rheumatol*. 2023; 41(7): 1563-4. Letter. IF: 3.4; Q2
 - **Novella-Navarro M, Plasencia-Rodríguez C, Tornero C, Navarro-Compán V, Cabrera-Alarcón JL, Peiteado D, Nuño L, Monjo I, Franco-Gómez K, Villalba A, Balsa A.** Correspondence on: 'EU-LAR definition of difficult-to-treat rheumatoid arthritis'. *Ann Rheum Dis*. 2023; 82(3): e55. Letter. IF: 20.3; D1
 - **Novella-Navarro M, Ruiz-Esquide V, Torres-Ortiz G, Chacur CA, Tornero C, Fernández-Fernández E, Monjo I, Sanmartí R, Plasencia-Rodríguez C, Balsa A.** A paradigm of difficult-to-treat rheumatoid arthritis: subtypes and early identification. *Clin Exp Rheumatol*. 2023; 41(5): 1114-9. Article. IF: 3.4; Q2
 - **Plasencia-Rodríguez C, Martínez-Feito A, Hernández M, del Pino-Molina L, Novella-Navarro M, Serrano Y, González-Muñoz M, Peiteado D, Bonilla G, Monjo I, Nuño L, Tornero C, López-Granados E, Balsa A, Nozal P.** Immune response after SARS-CoV-2 vaccination in patients with inflammatory immune-mediated diseases receiving immunosuppressive treatment. *Allergy Asthma Clin Immunol*. 2023; 19(1): 71. Article. IF: 2.6; Q2

Research projects

- **Aguado Acín P.** Caracterización e historia natural de la hipofosfatasa en pacientes adultos con confirmación genética frente a pacientes con fosfatasa alcalina baja y test genético negativo. Hipofosfatasa del adulto. Alexion Pharmaceutical Inc. 2017-Ongoing. *Management centre: FIBHULP*
- **Balsa Criado A.** Actualización y renovación de la actividad investigadora en el servicio de reuma-

tología del Hospital Universitario La Paz. Roche Farma S.A. 2016-Ongoing. *Management centre: FIBHULP*

- **Balsa Criado A.** Desarrollo de biochips para monitorización de infliximab y la presencia de anticuerpos frente a infliximab en sangre. IMG Pharma Biotech. 2017-Ongoing. *Management centre: FIBHULP*
- **Balsa Criado A.** Hacia la Telemonitorización en Enfermedades Inflamatorias Inmunomediadas: Implementación de un Modelo Asistencial Mixto (MAM) en una Unidad de Terapias Complejas (PI22/00777). ISCIII. 2022-Ongoing. *Management centre: FIBHULP*
- **Balsa Criado A.** Mejora de herramientas y procedimientos para facilitar la consulta virtual en pacientes con enfermedad inflamatoria. Abbvie Spain S.L.U. 2021-Ongoing. *Management centre: FIBHULP*
- **Balsa Criado A.** Puerta digital a la unidad de terapias complejas de reumatología. Abbvie Spain S.L.U. 2022-Ongoing. *Management centre: FIBHULP*
- **de Miguel Mendieta E.** Analisis de imagenes ecograficas para el diagnostico de arteritis de celulas gigantes mediante tecnicas de deep learning. Roche Farma S.A. 2021-Ongoing. *Management centre: FIBHULP*
- **Martínez Feito A.** Relevancia de la presencia y titulo de autoanticuerpos (factor reumatoide y antipéptido citrulinado ciclico) en los niveles de farmacos anti-tnf en pacientes con artritis reumatoide. UCB Pharma S.A. 2021-Ongoing. *Management centre: FIBHULP*
- **Miranda Carús ME.** Células T helper foliculares (Tfh), T foliculares reguladoras (Tfr) y T helper periféricas (Tph) en Artritis Reumatoide preclínica, temprana y establecida: herramientas para la medicina personalizada (PI20/00141). ISCIII. 2021-2023. *Management centre: FIBHULP*
- **Miranda Carús ME.** Efecto del metotrexato en la frecuencia y función de las células T helper foliculares; implicaciones patogénicas y pronósticas. Laboratorios Gebro Pharma S. A. 2020-Ongoing. *Management centre: FIBHULP*

- **Miranda Carús ME.** Frecuencia y función de las células T helper foliculares circulantes y plasmablastos en pacientes con artritis reumatoide, y su relación con los niveles de autoanticuerpos: odificaciones asociadas con el bloqueo de la coestimulación por Abatacept. Bristol Myers Squibb S.A. U. 2016-Ongoing. *Management centre: FIBHULP*
- **Navarro Compán MV.** Resonancia magnética de sacroilíacas y desarrollo de un cuestionario para identificar espondiloartritis axial precoz en pacientes con dolor lumbar crónico remitidos a otros especialistas distintos al reumatólogo. Novartis Farmaceutica S.A. 2021-Ongoing. *Management centre: FIBHULP*
- **Navarro Compán MV.** Towards a definition of early axial and peripheral spondyloarthritis. Assessment In Spondyloarthritis International Society. 2021-2023. *Management centre: FIBHULP*
- **Pascual-Salcedo Pascual MD, Herranz Pinto P.** Identificación precoz de buenos respondedores primarios a las terapias biológicas en la psoriasis moderada a grave. Laboratorios Leo Pharma S.A. 2014-Ongoing. *Management centre: FIBHULP*
- **Miranda Carús ME.** Stratification of Patients using advanced Integrative modeling of Data Routinely acquired for diagnosing Rheumatic complaints (SPIDeRR). EU. 2023-2028. *Management centre: FIBHULP*
- **Balsa Criado A.** Hacia la telemonitorización en enf. inflamatorias inmunomediadas: implementación de un modelo asistencial mixto (MAM) en una unidad de terapias complejas (PI22/00777). ISCIII. 2023-2025. *Management centre: FIBHULP*
- **Plasencia Rodríguez C.** Identificación de biomarcadores farmacogenéticos asociados a eficacia y toxicidad a ratamientos en pacientes con artritis reumatoide: estudio biofar (2022,26). Fundación José Luis Castaño para al Desarrollo del Laboratorio Clínico. 2023-2024. *Management centre: FIBHULP*

Clinical trials

- **Balsa Criado A.** Eficacia y seguridad de SAR441344 para el tratamiento del lupus eritematoso sistémico: estudio aleatorizado, doble ciego, controlado con placebo, fase 2, prueba de concepto.
Type/Phase: II
Sponsored by: Sanofi Aventis S.A
Signed date: 30/10/2023
- **Balsa Criado A.** Estudio de fase II, multicéntrico, aleatorizado, doble ciego, controlado con placebo y de búsqueda de dosis con gsk385827 en participantes adultos con dolor de moderado a grave debido a artrosis de rodilla (mars-17).
Type/Phase: II
Sponsored by: Glaxosmithkline Research And Development Limited
Signed date: 11/10/2023
- **Balsa Criado A.** Estudio de fase III, aleatorizado, doble ciego, controlado con placebo para demostrar la eficacia y la seguridad de tildrakizumab en sujetos con artritis psoriásica activa i que habían recibido tratamiento previo con anti-tnf (inspire 1).
Type/Phase: III
Sponsored by: Sun Pharmaceutical Industries, Ltd
Signed date: 13/07/2023
- **Balsa Criado A.** Estudio de fase III, aleatorizado, doble ciego, controlado con placebo para demostrar la eficacia y la seguridad de tildrakizumab en sujetos con artritis psoriásica activa ii que no habían recibido tratamiento previo con anti-tnf (inspire 2).
Type/Phase: III
Sponsored by: Sun Pharmaceutical Industries, Ltd
Signed date: 24/07/2023
- **Balsa Criado A.** Estudio en fase III, de 1 grupo, multicéntrico y sin enmascaramiento, de extensión del estudio argx-113-2007 para investigar la seguridad, la tolerabilidad y la eficacia a largo plazo del efgartigimod ph20 s.c. en participantes de 18 años o más con miopatía inflamatoria idiopática activa.



3.3. Infectious Diseases and Immunity Area

Type/Phase: III

Sponsored by: Argenx Bv (Argenx Bvba)

Signed date: 23/06/2023

- **Balsa Criado A.** Estudio fase 3, aleatorizado, doble ciego y controlado con placebo para evaluar la eficacia y la seguridad del deucravacitinib en pacientes con artritis psoriásica activa naïve a medicamentos biológicos antirreumáticos modificadores de la enfermedad".

Type/Phase: III

Sponsored by: Bristol-Myers Squibb International Corporation (Bmsic)

Signed date: 30/10/2023

- **Balsa Criado A.** Hacia la telemonitorización en enfermedades inflamatorias inmunomediadas: implementación de un modelo asistencial mixto (mam) en una unidad de terapias complejas..

Type/Phase: No EPA

Sponsored by: Fundacion Para La Investigacion Biomedica Hospital Universitario La Paz

Signed date: 05/09/2023

- **Balsa Criado A.** Multicentre, randomized, open-label study to prove an additional benefit of the full-spectrum cannabis extract ver-01 over opioids in the treatment of patients with chronic non-specific low back pain.

Type/Phase: III

Sponsored by: Vertanical GmbH

Signed date: 28/07/2023

- **Balsa Criado A.** Programa en fase III aleatorizado, comparativo con placebo, doble ciego y con grupos paralelos para evaluar la eficacia y la seguridad de filgotinib en participantes adultos con espondiloartritis axial activa.

Type/Phase: III

Sponsored by: Galapagos Nv

Signed date: 28/02/2023

- **Balsa Criado A.** Uso de ixekizumab como tratamiento para la espondiloartritis axial en la práctica clínica en España.

Type/Phase: EPA-OD

Sponsored by: Lilly, S.A.

Signed date: 08/11/2023

- **Bonilla Hernán MG.** Criterios de cribado de enfermedad pulmonar intersticial difusa en pacientes con artritis reumatoide. estudio de validez.

Type/Phase: OTROS

Sponsored by: Fundacion Española De Reumatologia

Signed date: 07/12/2023

- **De Miguel Mendieta E.** Ensayo de fase 3, multicéntrico, aleatorizado, doble ciego, controlado con placebo y de grupos paralelos para investigar la eficacia y la seguridad de secukinumab 300 mg administrado por vía subcutánea frente a placebo, en combinación con una pauta con reducción gradual de la dosis de glucocorticoides, en pacientes con arteritis de células gigantes (acg).

Type/Phase: III

Sponsored by: Novartis Farmaceutica, S.A.

Signed date: 03/01/2023

- **De Miguel Mendieta E.** Ensayo de fase 3, multicéntrico, aleatorizado, doble ciego, controlado con placebo y de grupos paralelos para investigar la eficacia y la seguridad de secukinumab 300 mg administrado por vía subcutánea frente a placebo, en combinación con una pauta con reducción gradual de la dosis de glucocorticoides, en pacientes con arteritis de células gigantes (acg).

Type/Phase: III

Sponsored by: Novartis Farmaceutica, S.A.

Signed date: 10/08/2023

- **De Miguel Mendieta E.** Ensayo de fase III, multicéntrico, aleatorizado, doble ciego, controlado con placebo y de grupos paralelos en el que se evalúan la eficacia y la seguridad de secukinumab administrado por vía subcutánea frente a placebo, en combinación con una pauta con reducción gradual de la dosis de glucocorticoides, en pacientes con polimialgia reumática (pmr).

Type/Phase: III

Sponsored by: Novartis Farmaceutica, S.A.

Signed date: 22/02/2023

- **De Miguel Mendieta E.** Estudio en fase III, aleatorizado, multirregional, doble ciego, de doble simulación, de grupos paralelos y controlado con placebo y alopurinol para evaluar la eficacia y la seguridad de tigilixostat en pacientes que padecen gota e hiperuricemia.

Type/Phase: III

Sponsored by: Lg Chem Ltd

Signed date: 10/11/2023

- **Navarro Compán MV.** Cohorte de inicio para la clasificación de espondiloartritis axial.

Type/Phase: No EPA

Sponsored by: Fundacion Para La Investigacion Biomedica De Cordoba Fibico

Signed date: 02/03/2023

- **Plasencia Rodríguez C.** Registro español de acontecimientos adversos de terapias biológicas y biosimilares en enfermedades reumáticas (fase iii).

Type/Phase: EPA-AS

Sponsored by: Fundacion Española De Reumatologia

Signed date: 18/04/2023

Patents and trademarks



- **Pascual-Salcedo Pascual MD, Balsa Criado A, Plasencia Rodríguez C, authors; FIBHULP, assignee.**

Brand name: BioDrug Analysis BIDA. CM 13.808.531,

2015 March 10.

- **Fernández Luna JL, Martínez Taboada VM, López Hoyos M, Torices del Val S, Muñoz Cacho P, Varela Egocheaga I, Juliá Cano A, Marsal Barril S, Balsa Criado A, inventors; FIBHULP, Fundación Instituto de Investigación Marqués de Valdecilla, Servicio Cántabro de Salud, Universidad de Cantabria, Fundació Hospital Universitari Vall D'Hebron - Institut de Recerca (VHIR), assignees.** Method for predicting the clinical response to anti-inflammatory agent therapies. P201600636, PCT/ES2017/000089; 2016 July 26.
- **Plasencia C.** Trademark name: MAM Modelo Asistencial Mixto; CM 18637540; 2022 January 13.





3.3.4 Innate Immune Response Group

Publications: 28 | Q1:22

COMPOSITION

Eduardo López-Collazo

Investigador Senior (Contrato Miguel Servet - I2). Jefe de Laboratorio. FIBHULP. Subdirector Científico

Carlos del Fresno Sánchez

Investigador Postdoctoral (Contrato Miguel Servet - Tipo I). FIBHULP

- **Susana Alemany de la Peña.** Investigadora Senior. Jefe de Laboratorio. IIB "Alberto Sols"
- **Daniel Arvelo del Rosario.** Investigador Predoctoral. FIBHULP
- **Gülce Bicakcioglu.** Técnico Grado Superior. FIBHULP
- **Gloria Cristina Bonel Pérez.** Ayudante de investigación. FIBHULP
- **Lisardo Boscá Gomar.** Investigador Senior. Jefe de Laboratorio. IIB "Alberto Sols"
- **Antonio Castrillo Viguera.** Investigador Senior. Jefe de Laboratorio. IIB "Alberto Sols"
- **Luna Ridan Cordeiro Minute.** Investigadora Sara Borrel. FIBHULP
- **Laura Córdoba García.** Responsable HUB - Organoides. FIBHULP
- **Francisco Javier Cueto Rodríguez.** Investigador Senior. FIBHULP
- **Álvaro del Balzo Castillo.** Enfermero: HULP
- **Julia del Prado Montero.** Investigadora Predoctoral. FIBHULP
- **Jesús Fernández Felipe.** Investigador Postdoctoral. FIBHULP
- **Olivia Fernández Molina.** Ayudante de Investigación. FIBHULP
- **Jaime Fernández Pascual.** Técnico Anatomía Patológica. FIBHULP
- **Laura Gómez Lage.** Enfermera. Hospital Universitario La Paz

- **Santiago Gómez Ruiz.** Profesor Titular. Universidad Rey Juan Carlos
- **María Susana Guerra García.** Investigadora Postdoctoral. Universidad Autónoma de Madrid
- **Kilián Jesús Gutiérrez Viñas.** Responsable de laboratorio de Citometría de Flujo. FIBHULP
- **Laura Hurtado Navarro.** Investigadora Predoctoral. FIBHULP
- **Roberto Lozano Rodríguez.** Investigador Predoctoral. FIBHULP
- **Cristina de Manuel Gómez.** Facultativo Especialista de Área en Pediatría. Hospital Universitario La Paz
- **Charbel Antonio Maroun Eid.** Facultativo Especialista de Área en Urgencias. Hospital del Norte
- **Pablo Mata Martínez.** Investigador Predoctoral. FIBHULP
- **Elena Muñoz del Val.** Facultativo especialista de área en Medicina Familiar y Comunitaria. Hospital Universitario La Paz
- **Alejandro Pascual Iglesias.** Bioinformático. FIBHULP
- **Rebeca Pérez de Diego.** Investigadora Senior (Contrato Ramón y Cajal). FIBHULP
- **Sanjiv Prashar.** Profesor Titular. Universidad Rey Juan Carlos
- **Marta Roche Molina.** Investigadora Postdoctoral. FIBHULP
- **Gonzalo Saénz de Santamaría Díez.** Investigador Predoctoral. FIBHULP
- **Verónica Terrón Arcos.** Técnico de Laboratorio. FIBHULP
- **Jaime Valentín Quiroga.** Investigador Predoctoral. FIBHULP

STRATEGIC OBJETIVES

- This group focuses on the study of the reprogramming of the immune response in the context of inflammatory diseases (e.g., sepsis, cystic fibrosis, lung and colon cancer) using the description of the various molecular mechanisms that underlie the reprogramming of monocytes/macrophages.



RESEARCH LINES

- Molecular and cellular mechanisms of sepsis.
- Evolution markers an molecular/cellular basis of Long Covid19.
- Evolution and prognostic markers in infectious (sepsis and COVID-19) and tumour (lung, breast, colorectal) diseases.
- Molecular and cellular mechanisms of metastasis (lung, breast and colorectal).
- Immunomodulation in various clinical contexts (infectious diseases, tumours, cystic fibrosis, etc.).
- Immunophenotyping and immune response to vaccines (HIV, tumours, etc.).



RESEARCH ACTIVITY

Master Theses

- **Bravo Robles L.** Inmunoterapia oncológica a través de mucosas basada en la memoria inmune innata [dissertation]. *Madrid: UCM: 2023(26/06/2023). Director: del Fresno Sánchez C.*
- **Ochaita Aguado A.** Impacto de la quimioterapia en el paisaje inmunológico del cáncer [dissertation]. *Madrid: UCM: 2023(06/07/2023). Director: López-Collazo E; Cueto Rodríguez EJ.*
- **Cueto Rodríguez EJ.** Búsqueda de marcadores inmunitarios predictivos en pacientes con sepsis [dissertation]. *Granada: Universidad de Granada: 2023(17/07/2023). Director: López Collazo E.*

Final Degree Theses

- **Zapata G.** Caracterización inmunológica de la respuesta a crioblación en pacientes con cáncer de mama [dissertation]. *Madrid: UAH: 2023(01/06/2023). Director: del Fresno Sánchez C.*
- **Gutiérrez M.** Estudio de células híbridas humanas resultado de la fusión entre monocitos y células madre tumorales derivadas de adenocarcinoma de colon [dissertation]. *Madrid: Universidad Politécnica de Madrid: 2023(24/07/2023). Director: López Collazo E.*

Publications

- **Avendaño-Ortiz J, Ponce-Alonso M, Llanos-González E, Barragán-Prada H, Barbero-Herranz R, Lozano-Rodríguez R, Marquez-Garrido EJ, Hernández-PTrez JM, Morosini MI, Canton R, del Campo R, López-Collazo E.** The impact of colistin resistance on the activation of innate immunity by lipopolysaccharide modification. *Infect Immun.* 2023; 91(2): e0001223. Article. IF: 2.9; Q3
- **Avendaño-Ortiz J, Redondo-Calvo FJ, Lozano-Rodríguez R, Terrón-Arcos V, Bergón-Gutiérrez M, Rodríguez-Jiménez C, Rodríguez JF, del Campo R, Gómez LA, Bejarano-Ramírez N, Pérez-Ortiz JM, López-Collazo E.** Thiosulfinate-enriched allium sativum extract exhibits differential effects between healthy and sepsis

patients: The implication of HIF-1 α . *Int J Mol Sci.* 2023; 24(7): 6234. Article. IF: 4.9; Q1

- **Bécares M, Albert M, Tárrega C, Coloma R, Falqui M, Luhmann EK, Radoshevich L, Guerra S.** ISG15 is required for the dissemination of vaccinia virus extracellular virions. *Microbiol Spectr.* 2023; 11(3): e0450822. Article. IF: 3.7; Q2
- **Colás-Algora N, Muñoz-Pinillos P, Cacho-Navas C, Avendaño-Ortiz J, de Rivas G, Barroso S, López-Collazo E, Millán J.** Simultaneous targeting of il-1 signaling and il-6-trans signaling preserves human pulmonary endothelial barrier function during a cytokine storm-brief report. *Arterioscl Throm Vas.* 2023; 43(11): 2213-22. Article. IF: 7.4; Q1
- **Contreras-Jurado C, Montero-Pedrazuela A, Pérez RF, Alemany S, Fraga MF, Aranda A.** The thyroid hormone enhances mouse embryonic fibroblasts reprogramming to pluripotent stem cells: role of the nuclear receptor corepressor 1. *Front Endocrinol (Lausanne).* 2023; 14: 1235614. Article. IF: 3.9; Q2
- **de la Aleja AG, Herrero C, Torres-Torresano M, Schiaffino MT, del Castillo A, Alonso B, Vega MA, Puig-Kröger A, Castrillo A, Corbí AL.** Inhibition of LXR controls the polarization of human inflammatory macrophages through upregulation of MAFB. *Cell Mol Life Sci.* 2023; 80(4): 96. Article. IF: 6.2; Q1
- **de Pablo N, Meana C, Martínez-García J, Martínez-Vicente P, Albert M, Guerra S, Angulo A, Balsinde J, Balboa MA.** Lipin-2 regulates the antiviral and anti-inflammatory responses to interferon. *Embo Rep.* 2023; 24(12): e57238. Article. IF: 6.5; Q1
- **del Fresno C, Schulte LN, López-Collazo E.** Editorial: Role of hypoxia-inducible factors in metabolic immune cell adaptation during sepsis. *Front Immunol.* 2023; 14: 1194504. Editorial Material. IF: 5.7; Q1
- **Díaz-García E, García-Sánchez A, Alfaro E, López-Fernández C, Mañas E, Cano-Pumarega I, López-Collazo E, García-Río F, Cubillos-Zapata C.** PSGL-1: a novel immune

checkpoint driving T-cell dysfunction in obstructive sleep apnea. *Front Immunol.* 2023; 14: 1277551. Article. IF: 5.7; Q1

- **Díaz-García E, García-Sánchez A, Sández-Rubio D, Alfaro E, López-Fernández C, Casitas R, Baena EM, Cano-Pumarega I, Cubero P, Marín-Oto M, López-Collazo E, Marín JM, García-Río F, Cubillos-Zapata C.** SMAD4 expression in monocytes as a potential biomarker for atherosclerosis risk in patients with obstructive sleep apnea. *Int J Mol Sci.* 2023; 24(9): 7900. Article. IF: 4.9; Q1
- **Díaz-García E, Nanwani-Nanwani K, García-Tovar S, Alfaro E, López-Collazo E, Quintana-Díaz M, García-Río F, Cubillos-Zapata C.** NLRP3 inflammasome overactivation in patients with aneurysmal subarachnoid hemorrhage. *Transl Stroke Res.* 2023; 14(3): 334-46. Article. IF: 3.8; Q1
- **Falqui M, Perdiguero B, Coloma R, Albert M, Marcos-Villar L, McGrail JP, Sorzano COS, Esteban M, Gómez CE, Guerra S.** An MVA-based vector expressing cell-free ISG15 increases IFN-I production and improves HIV-1-specific CD8 T cell immune responses. *Front Cell Infect Mi.* 2023; 13: 1187193. Article. IF: 4.6; Q2
- **Fernández-Pérez L, Guerra B, Recio C, Cabrera-Galván JJ, García I, de la Rosa JV, Castrillo A, Iglesias-Gato D, Díaz M.** Transcriptomic and lipid profiling analysis reveals a functional interplay between testosterone and growth hormone in hypothyroid liver. *Front Endocrinol (Lausanne).* 2023; 14: 1266150. Article. IF: 3.9; Q2
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3.3. Infectious Diseases and Immunity Area

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3.3. Infectious Diseases and Immunity Area

Research projects

- **del Fresno Sánchez C.** Prueba en concepto para nuevas inmunoterapias contra el cáncer dirigidas a la memoria inmunitaria innata (Semilla AECC). Fundación Científica de la Asociación Española Contra el Cáncer. 2022-Ongoing. *Management centre: FIBHULP*
- **del Fresno Sánchez C.** Cancer immunotherapy through mucosae based on innate immune memory. FIBHULP. 2022-Ongoing. *Management centre: FIBHULP*
- **del Fresno Sánchez C.** Identifying the effector mechanisms of the antineoplastic ca10-based vaccine and its potential clinical application/niveles de ca10 como parametro pronostico y de evolución en cancer colorrectal y su correlación con el sistema inmunitario circulante" (PI-4925). Immunotek. 2021-Ongoing. *Management centre: FIBHULP*
- **del Fresno Sánchez C.** Development of a new treatment against colorectal cancer based on the combination of trained immunity and immune checkpoint inhibitors (CP20/00106). ISCIII. 2021-2023. *Management centre: FIBHULP*
- **del Fresno Sánchez C.** Biopsia Poli-Funcional Inmunitaria líquida (PoliFIL): una nueva plataforma para predecir y mejorar respuestas a inmunoterapia del cáncer usando moduladores inmunes innatos (PI21/01178). ISCIII. 2022-2024. *Management centre: FIBHULP*
- **López Collazo E.** Contrato Miguel Servet Categoría A (CES08/002). CM. 2009-2025. *Management centre: FIBHULP*
- **López Collazo E.** Los inmune-checkpoints en la sepsis: un abordaje para el diagnóstico y la terapia (PI18/00148). ISCIII. 2019-2023. *Management centre: FIBHULP*
- **López Collazo E.** Caracterización de la inmunidad innata en niños nacidos de madres portadoras de VIH. Fundación Familia Alonso. 2019-Ongoing. *Management centre: FIBHULP*
- **López Collazo E.** Contribución de las células híbridas tumorales a la metástasis del cáncer de pulmón: estudio exhaustivo en modelos animales y pacientes con metástasis avanzada. FIBHULP. 2018-Ongoing. *Management centre: FIBHULP*
- **López Collazo E.** Detection of pro-metastatic hybrids in primary tumour, peripheral blood and metastasis from patients with cancer: a strategy for its deactivation. Siemens Gamesa Renewable Energy S. A. 2020-Ongoing. *Management centre: FIBHULP*
- **López Collazo E.** Estudio del sistema inmune infiltrado en el cáncer de pulmón y búsqueda de marcadores pronósticos en células circulantes de pacientes que sufren esta enfermedad. Immunostep S. L. 2014-Ongoing. *Management centre: FIBHULP*
- **López Collazo E.** Fallo en trasplante renal infantil: un abordaje inmunológico para los efectos secundarios y el rechazo. Fundación Familia Alonso. 2020-Ongoing. *Management centre: FIBHULP*
- **López Collazo E.** Inmune checkpoint en pacientes con COVID-19: una propuesta para la estratificación y la terapia dirigida al huésped. Encinar Rodríguez, Jesus. 2020-Ongoing. *Management centre: FIBHULP*
- **López Collazo E.** La metástasis tumoral infantil: una propuesta para eliminarla. Fundación Familia Alonso. 2018-Ongoing. *Management centre: FIBHULP*
- **López Collazo E.** Transplantation (SOT & HSCT) in children transchild. Comunidad de Madrid. 2016-Ongoing. *Management centre: FIBHULP*
- **López Collazo E.** El desarrollo de biomodelos partiendo de animales genéticamente transformados, biopsias, piezas de cirugía, células madres y vesículas extracelulares contribuirá al estudio e implantación de nuevas terapias y de una medicina personalizada (). FIBHULP. 2020-Ongoing. *Management centre: FIBHULP*
- **López Collazo E.** Análisis de muestras del proyecto ensayo clínico para la realización de la investigación clínica sobre una nueva técnica diagnóstica basada en pcr a tiempo real, para determinar la predisposición a infecciones en pacientes con infarto de miocardio, necesario para su aprobación regulatoria. Crazy Science & Business Sl. 2021-Ongoing. *Management centre: FIBHULP*
- **López Collazo E.** Estudio de la interacción entre células troncales de cancer colorrectal y el sistema inmune innato. study of the interaction between colorectal cancer stem cells and the innate immune system. FIBHULP. 2022-Ongoing. *Management centre: FIBHULP*
- **López Collazo E.** El estudio de los agentes patógenos que provocan las enfermedades infecciosas, así como la interacción del sistema inmunológico con ellos establecerá marcadores de tempranos de evolución y potenciales dianas farmacéuticas, así como repercutirá en la modernización y agilización de la toma de decisiones terapéuticas. FIBHULP. 2020-Ongoing. *Management centre: FIBHULP*
- **López Collazo E.** La metástasis del cáncer de ovario en la niñez y la adolescencia: un abordaje inmunológico para su erradicación. Fundación Familia Alonso. 2020-Ongoing. *Management centre: FIBHULP*
- **López Collazo E.** Sepsis: un estudio longitudinal exhaustivo de la respuesta inmune para la estratificación de los pacientes y una medicina personalizada (PI21/00869). ISCIII. 2022-2024. *Management centre: FIBHULP*
- **López Collazo E.** UCIPREDICT. UE. 2022-2026. *Management centre: CIEMAT*
- **Lozano Rodríguez R.** Contrato predoctoral (FI19/00334). ISCIII. 2020-2023. *Management centre: FIBHULP*
- **Pérez de Diego R.** Identificación de nuevos errores innatos de la inmunidad hacia el diagnóstico de precisión y prevención de enfermedades inmunológicas (PI22/00790). ISCIII. 2023-2025. *Management centre: FIBHULP*
- **Pérez de Diego R.** Medicina de precisión en inmunodeficiencias primarias: desentrañando nuevas etiologías genéticas mediante aproximaciones ómicas. Opesa Centro de Formación. 2022-Ongoing. *Management centre: FIBHULP*
- **López Collazo E.** Plataforma de caracterización celular de alta dimensionalidad (CellIDA) (IFCS21/00009). ISCIII. 2022-2026. *Management centre: FIBHULP*
- **López Collazo E.** Abordaje multiómico y estructural al estudio de los mecanismos de respuesta del hepatocito al daño inflamatorio (S2022/BMD-7232). CM. 2023-2026. *Management centre: FIBHULP*
- **Pérez de Diego R.** The human genetic and immunological determinants of the clinical manifestations of SARS-CoV-2 infection: Towards personalized medicine (UNDirNE). UE. 2022-2026. *Management centre: FIBHULP*
- **Mallonas Masferrer J, López-collazo E.** A phase 1 Clinical Trial to evaluate safety and immunogenicity of HIV-1 Envelope-based vaccine (ICI23/00025). ISCIII. 2023-2026. *Management centre: IdiBAS*
- **López-Collazo E.** Estudio inmunológico comparativo de la alopecia areata en pacientes pediátricos. Fundación Familia Alonso. 2023-2026. *Management centre: FIBHULP*
- **López-Collazo E.** Viral intestinal reservoir and microbiota dysbiosis as pathological base for long COVID. MERCK. 2023-2026. *Management centre: FIBHULP*
- **del Fresno Sánchez C.** Inmunoterapia bacteriana frente a infecciones recurrentes en pacientes pediátricos con fibrosis quística (2023.56). Fundación Familia Alonso. 2022-2024. *Management centre: FIBHULP*

Patents and trademarks

- **Llamas Matías MA, López-Collazo E, inventors; FIBHULP, Llamas Matías MA, Empiro S.L., assignees.** Method for determine the risk of developing an infectious disease. P201330768, PCT/ES2014/070434, EP3006570; 2013 May 27.
- **Vela Cuenca M, González Navarro P, Valentín Quiroga J, Escudero López A, Pérez Martínez A, Fernández Casanova L, inventors; FIBHULP, CNIO, assignees.** Anti-CXCR4 antibody combined with activated and expanded natural killer cells for cancer immunotherapy. 62/642,313 US Provisional Application; 2018 March 13.



3.3.5 Complement Defects in Human Pathology

Publications: 9 | Q1:7

COMPOSITION

Margarita López Trascasa

Investigadora "Ad honorem". IdiPAZ. Profesora de la Facultad de Medicina. Universidad Autónoma de Madrid

Pilar Sánchez Corral Gómez

Investigadora Senior (Contrato Miguel Servet-12). Jefe de Laboratorio. Hospital Universitario La Paz

- **Fernando Corvillo Rodríguez.** Investigador postdoctoral. Hospital Universitario La Paz
- **Laura Espinosa Román.** Jefa de Servicio Nefrología Pediátrica. Hospital Universitario La Paz
- **María del Rosario García Sánchez.** Investigadora predoctoral. FIBHULP
- **Laura González Sánchez.** Investigadora postdoctoral. Hospital Universitario La Paz
- **Alberto López Lera.** Investigador Postdoctoral. Contratado CIBERER. Hospital Universitario La Paz
- **Marta Melgosa Hijosa.** Facultativo Especialista de Área en Nefrología Infantil. Hospital Universitario La Paz
- **Pilar Nozal Aranda.** Facultativo Especialista de Área en Inmunología. Investigadora Postdoctoral. Hospital Universitario La Paz



STRATEGIC OBJETIVES

- This is a national reference group for the study of primary or acquired defects in the complement system.
- The main aim is to gain an understanding of the molecular mechanisms underlying in complement deficiency or dysregulation in several human diseases, the majority of which are classified as rare diseases.
- In this context, the group implements and applies various methodological strategies (immunological, biochemical, proteomic and genetic) to detect clinically relevant deficiencies or functional defects in complement components. By following a clearly translational approach, the group also develops new diagnostic tests which are implemented in the clinical practice, especially for treatment adjustment and patient follow-up.
- The research lines could be classified as: screening and characterization of genetic or acquired complement defects that cause renal pathology (I), functional and molecular diagnosis of deficiencies affecting individual components of the complement system (II), diagnosis and molecular studies in Hereditary Angioedema and screening for disease modifying genes (III), study of pathogenic mechanisms in acquired lipodystrophies (IV).

RESEARCH LINES

- Screening and characterization of genetic and acquired Complement defects in renal disease.
- Biochemical and molecular diagnosis of isolated Complement deficiencies.
- Biochemical and molecular diagnosis of Hereditary and Acquired forms of bradykinin-mediated Angioedema.
- Pathogenic mechanisms of acquired lipodystrophies: Barraquer-Simons syndrome, and Lawrence syndrome.
- Complement defects in Age Related Macular Degeneration



RESEARCH ACTIVITY

Master Theses

- **García Sánchez MR.** Impact of FH desialylation on the regulation of the Alternative Pathway and contribution to pathology [dissertation]. *Madrid: UCM: 2023(16/07/2023). Director: Sánchez-Corral Gómez MP, Corvillo Rodríguez F.*

Publications

- **Bakkaloglu SA, Vidal E, Bonthuis M, Neto G, Paripovic D, Asberg A, Hijosa MM, Vondrak K, Jankauskiene A, Roussinov D, Awan A, Jager KJ.** European chronic kidney disease registries for children not on kidney replacement therapy: tools for improving health systems and patient-centred outcomes. *Clin Kidney J.* 2023; 16(11): 1980-5. Article. IF: 3.9; Q1
- **Caravaca-Fontán F, Cavero T, Díaz-Encarnación M, Cabello V, Ariceta G, Quintana LF, Marco H, Barros X, Ramos N, Rodríguez-Mendiola N, Cruz S, Fernández-Juárez G, Rodríguez A, de José AP, Rabasco C, Rodado R, Fernández L, Pérez-Gómez V, Avila A, Bravo L, Espinosa N, Allende N, de la Nieta MDS, Rodríguez E, Rivas B, Melgosa M, Huerta A, Miquel R, Mon C, Fraga G, de Lorenzo A, Draibe J, González F, Shabaka A, López-Rubio ME, Fenollosa MA, Martín-Penagos L, Da Silva I, Titos JA, de Córdoba SR, de Jorge EG, Praga M.** Clinical profiles and patterns of kidney disease progression in c3 glomerulopathy. *Kidney360.* 2023; 4(5): 659-72. Article. IF: 3.2; Q1
- **Corvillo F, Abel BS, López-Lera A, Ceccarini G, Magno S, Santini F, Araújo-Vilar D, Brown RJ, Nozal P, López-Trascasa M.** Characterization and clinical association of autoantibodies against perilipin 1 in patients with acquired generalized lipodystrophy. *Diabetes.* 2023; 72(1): 71-84. Article. IF: 6.2; Q1
- **García-Solis B, van den Rym AD, Martínez-Martínez L, Franco T, Pérez-Caraballo JJ, Markle J, Cubillos-Zapata C, Marín A, Recio MJ, Regueiro JR, Navarro-Zapata A, Me-**

stre-Durán C, Ferreras C, Cotázar CM, Mena R, de la Calle-fabregat C, López-Lera A, Arquero MF, Pérez-Martínez A, López-Collazo E, Sánchez-Ramón S, Casanova JL, Martínez-Barricarte R, de la Calle-Martín O, de Diego RP. Inherited human ezrin deficiency impairs adaptive immunity. *J Allergy Clin Immunol.* 2023; 152(4): 997-1009. Article. IF: 11.4; D1

- **Iglesias GT, Fernández-Fournier M, López-Molina M, Piniella D, Laso-García F, Gómez-de Frutos MC, Alonso-López E, Botella L, Chamorro B, Sánchez-Velasco S, Puertas I, Barranco AT, Nozal P, Díez-Tejedor E, Gutiérrez-Fernández M, Otero-Ortega L.** Dual role of peripheral B cells in multiple sclerosis: emerging remote players in demyelination and novel diagnostic biomarkers. *Front Immunol.* 2023; 14: 1224217. Article. IF: 5.7; Q1
- **Molina LD, Gallego LYB, Nozal P, Soto-Serrano Y, Martínez-Feito A, Reche-Yebra K, González-Torbay A, de la Cámara RCM, Gianelli C, Cámara C, González-García J, González-Muñoz M, Rodríguez-Pena R, Granados EL.** Detection of specific RBD+ IgG+ memory B cells by flow cytometry in healthcare workers and patients with inborn errors of immunity after BNT162b2 mRNA COVID-19 vaccination. *Front Immunol.* 2023; 14: 1136308. Article. IF: 5.7; Q1
- **Plasencia-Rodríguez C, Martínez-Feito A, Hernández M, del Pino-Molina L, Novella-Navarro M, Serrano Y, González-Muñoz M, Peiteado D, Bonilla G, Monjo I, Nuño L, Tornero C, López-Granados E, Balsa A, Nozal P.** Immune response after SARS-CoV-2 vaccination in patients with inflammatory immune-mediated diseases receiving immunosuppressive treatment. *Allergy Asthma Clin Immunol.* 2023; 19(1): 71. Article. IF: 2.6; Q2
- **Zirngibl M, Buder K, Luthle T, Tönshoff B, Weitz M, (Espinosa Román L).** Diagnostic and therapeutic management of vesico-ureteral reflux in pediatric kidney transplantation-Results of

an online survey on behalf of the European Society for Paediatric Nephrology. *Pediatr Transplant.* 2023; 27(2): e14449. Article. IF: 1.2; Q3

- **Zurowska A, Drozynska-Duklas M, Topaloglu R, Bouts A, Boyer O, Shenoy M, Vivarelli M, (Melgosa Hijosa, M).** Rituximab-associated hypogammaglobulinemia in children with idiopathic nephrotic syndrome: results of an ESPN survey. *Pediatr Nephrol.* 2023; 38(9): 3035-42. Article. IF: 2.6; Q1

Research projects

- **Sánchez-Corral Gómez P.** Contrato Miguel Servet Categoría A (CES07/030). CM. 2008-2025. Management centre: FIBHULP
- **Sánchez-Corral Gómez P.** Perfiles cuantitativos de las proteínas FH/FHRS del complemento como biomarcadores de predisposición y pronóstico en el síndrome hemolítico-urémico primario y secundario (PI19/00970). ISCIII. 2020-2024. Management centre: FIBHULP
- **López Trascasa M.** Estudio de las bases moleculares del Síndrome Hemolítico Urémico Atípico y creación de un registro español de SHU-Atípico. (PI-1106). Secugen S.L. 2011-Ongoing. Management centre: FIBHULP
- **Sánchez-Corral Gómez P.** Caracterización funcional de la deglicosilación y proteólisis del FH del Complemento y relevancia en la patología del Síndrome Hemolítico-Urémico Atípico. Fundación SENEPRO. 2022-Ongoing. Management centre: FIBHULP
- **Sánchez-Corral Gómez P.** Caracterización de patrones de expresión del FH y proteínas FHRS del complemento mediante western-blot e inteligencia artificial. correlación genotipo-fenotipo en patología renal y ocular (PI22/00211). ISCIII. 2023-2025. Management centre: FIBHULP
- **Sánchez-Corral Gómez P.** El sistema del complemento en salud y enfermedad (Complemento III-CM) (P2022/BMD-7278). CM. 2023-Ongoing. Management centre: FIBHULP

Cibers and Retics

- **López Trascasa M.** The European Consortium of Lipodystrophies. (ECLIP). EU. (31/12/2023). FIBHULP

Clinical trials

- **Espinosa Román, Laura.** Estudio con enmascaramiento doble, controlado con placebo, de aumento progresivo de la dosis para evaluar la eficacia, la seguridad y la farmacocinética de la voclosporina en adolescentes con nefritis lúpica. **Type/Phase:** III
Sponsored by: Aurinia Pharmaceuticals Inc
Signed date: 06/01/2023
- **López Lera, Alberto.** Identificación y caracterización funcional de variantes genéticas asociadas a fenotipos clínicos específicos en angioedema hereditario por déficit de C1 inhibidor. **Type/Phase:** No EPA
Sponsored by: Fundacio Hospital Vall D'Hebron
Signed date: 28/07/2023

Patents and trademarks

- **López Trascasa M, authors; FIBHULP, assignee.** Brand name: COMPLEMENTest; CM 009.658.791; 2011, January 14.





3.3.6 Lymphocyte Pathophysiology in Immunodeficiencies Group



Publications: 22 | Q1:12

COMPOSITION

Eduardo López Granados
Coordinador de Inmunología. Hospital Universitario La Paz

- **María Bravo García-Morato.** Facultativo Especialista de Área en Inmunología. Hospital Universitario La Paz
- **Carmen Cámara Hijón.** Facultativo Especialista de Área en Inmunología. Hospital Universitario La Paz
- **Álvaro Clemente Bernal.** Técnico de Grado Superior. FIBHULP
- **Ricardo Cuesta Martín de la Cámara.** Biólogo Interno Residente en la especialidad de Inmunología. Hospital Universitario La Paz
- **Andrea González Torbay.** Médico Interno Residente en Inmunología. Hospital Universitario La Paz

- **Carla Cecilia Gianelli.** Facultativo Especialista de Área en Inmunología. Hospital Universitario La Paz
- **Diego Plaza López de Sabando.** Facultativo Especialista de Área en Hemato-Oncología Pediátrica. Hospital Universitario La Paz
- **Keren Reche Yebra.** Técnico de Laboratorio. FIBHULP
- **Ángel Julián Robles Marhuenda.** Facultativo Especialista de Área en Medicina Interna. Hospital Universitario La Paz
- **Rebeca Rodríguez Pena.** Facultativo Especialista de Área en Inmunología. Hospital Universitario La Paz
- **María Carmen Salcedo Moreno.** Técnico de Laboratorio. Hospital Universitario La Paz
- **Elena Sánchez Zapardiel.** Facultativo Especialista de Área en Inmunología. Hospital Universitario La Paz
- **Ana Sastre Urguelles.** Facultativo Especialista de Área en Hemato-Oncología Pediátrica. Hospital Universitario La Paz
- **Juan Manuel Torres Canizales.** Médico Inmunólogo. Hospital Universitario La Paz

STRATEGIC OBJETIVES

- Our group attempts to unravel the molecular bases of primary immunodeficiencies (PIDs), a large group of rare conditions (more than 400 types described so far) that virtually affect any cell type of the immune system and increase the risk of infections, autoimmunity and cancer in patients. We take a multidisciplinary clinical, anatomic, genetic, epigenetic and functional approach. By correlating clinical and experimental data, we aim to achieve a better understanding of these rare diseases and lay the grounds for, repurposed or new, more effective treatments.
- Taking advantage of the knowledge and resources developed to dissect the immune system in PIDs, we are developing new schemes for immune monitoring of transplanted patients, to better estimate immunosuppression and tolerance, and early detection of severe complications as infections and rejection. Finally, we explore novel approaches for monitoring, and fine tuning of immunotherapies

RESEARCH LINES

- To define the anatomical, cellular, molecular and (epi)genetic bases of immunological dysfunction in patients diagnosed with primary immunodeficiency in our clinic.
- The maturation and functional specialization of human B lymphocytes, and its pathophysiology in primary and secondary antibody immunodeficiencies.
- The analysis of the immunological reconstitution after haemopoietic stem cell transplantation, and the discovery and clinical validation of immunological biomarkers for immunosuppression and tolerance in solid organ transplantation.
- The development and clinical implementation of patient-tailored monitoring schemes of immunotherapies in wide clinical use.

RESEARCH ACTIVITY

Publications

- **Álvarez-Troncoso J, Molina SC, Robles-Marhuenda A, Martínez-Robles E, Ríos-Blanco JJ.** Therapeutic challenges and cardiovascular risk in patients with HMGCR-associated immune-mediated necrotizing myopathy (HMGR-IMNM) secondary to statins. *Eur J Intern Med.* 2023; 114: 143-5. Letter. IF: 5.9; Q1
- **Bareke H, Ibáñez-Navarro A, Guerra-García P, Pérez CG, Rubio-Aparicio P, de Sabando DPL, Sastre-Urgelles A, Ortiz-Cruz EJ, Pérez-Martínez A.** Prospects and advances in adoptive

natural killer cell therapy for unmet therapeutic needs in pediatric bone sarcomas. *Int J Mol Sci.* 2023; 24(9): 8324. Review. IF: 4.9; Q1

- **Bravo-Queipo-de-Llano B, Bonet D, del Rosal T, Cámara C, de Valbuena MR, Pérez A, Grasa CD, Méndez-Echevarría A.** A challenging differential diagnosis in a patient with autosomal dominant STAT3 deficiency. *Pediatr Pulm.* 2023; 58(2): 585-91. Article. IF: 2.7; Q1
- **Daza-Cajigal V, Segura-Guerrero M, López-Cueto M, Robles-Marhuenda A, Cámara C, Gerra-Galán T, Gómez-de-la-Torre**



3.3. Infectious Diseases and Immunity Area

- R, Avendaño-Monje CL, Sánchez-Ramón S, Bosque-López MJ, Quintero-Duarte A, Bonet-Vidal ML, Pons J.** Clinical manifestations and approach to the management of patients with common variable immunodeficiency and liver disease. *Front Immunol.* 2023; 14: 1197361. Article. IF: 5.7; Q1
- **del Pino-Molina L, Bravo Gallego LY, Soto Serrano Y, Reche Yebra K, Marty Lobo J, González Martínez B, Bravo García-Morato M, Rodríguez Pena R, van der Burg M, López Granados E.** Research-based flow cytometry assays for pathogenic assessment in the human B-cell biology of gene variants revealed in the diagnosis of inborn errors of immunity: a Bruton's tyrosine kinase case-study. *Front Immunol.* 2023; 14: 1095123. Article. IF: 5.7; Q1
 - **Donà D, Bravo-Gallego LY, Remacha EF, Cananzi M, Gastaldi A, Canizalez JT, Stephenne X, Lacaille F, Lindemans C, Calore E, Galea N, Benetti E, Nachbaur E, Sandes AR, Teixeira A, Ferreira S, Klaudel-Dreszler M, Ackermann O, Boyer O, Espinosa L, Guereta LG, Sciveres M, Fischler B, Schwerk N, Neland M, Nicastro E, Dello Strologo L, Toporski J, Vainumae I, Rascon J, Urbonas V, del Rosal T, López-Granados E, Perilongo G, Baker A, Vega PJ.** Vaccination practices in pediatric transplantation: a survey among member centers of the European reference network transplantchild. *Pediatr Transplant.* 2023; 27(7): e14589. Article. IF: 1.2; Q3
 - **Fonollosa A, Pelegrín L, García-Morillo S, Buján-Rivas S, Distefano L, Robles-Marhuenda A, Fernández-Martín J, González-García A, García-Aparicio A, Ortego-Centeno N, Llorenç V, de la Maza MS, Pinedo C, Sopeña B, Cocho L, Carreño E, Blanco R, Antón J, Pérez-Quintana M, Marques-Soares JR, Artaraz J, Ruiz-Arruza I, Soto-Peleiteiro A, Gómez-Caverzaschi V, Araújo O, Espinosa G, Adan A, Fabiani C, Cantarini L, Hernández-Rodríguez J.** Ocular involvement in adult and paediatric patients with monogenic autoinflammatory diseases: a Spanish multicentre retrospective study. *Clin Exp Rheumatol.* 2023; 41(10): 2105-14. Article. IF: 3.4; Q2
 - **Gonzaga A, Andreu E, Hernández-Blasco LM, Meseguer R, Al-Akioui-Sanz K, Soria-Juan B, Sanjuán-Giménez JC, Ferreras C, Tejedo JR, López-Lluch G, Goterris R, Macià L, Sempere-Ortells JM, Hmadcha A, Borobia A, Vicario JL, Bonora A, Aguilar-Gallardo C, Poveda JL, Arbona C, Alenda C, Tarín F, Marco FM, Merino E, Jaime F, Ferreres J, Figueira JC, Cañada-Illana C, Querol S, Guerreiro M, Eguizabal C, Martín-Quirós A, Robles-Marhuenda A, Pérez-Martínez A, Solano C, Soria B.** Rationale for combined therapies in severe-to-critical COVID-19 patients. *Front Immunol.* 2023; 14: 1232472. Review. IF: 5.7; Q1
 - **González-Pérez M, Baranda J, Berges-Buxeda MJ, Conde P, Pérez-Olmeda M, Lozano-Ojalvo D, Cámara C, Llópez-Carratalá MD, González-Parra E, Portolés P, Ortiz A, Portolts J, Ochando J.** Maintenance of potent cellular and humoral immune responses in long-term hemodialysis patients after 1273-mRNA Sars-Cov-2 vaccination. *Pharmaceuticals (Basel).* 2023; 16(4): 574. Article. IF: 4.3; Q2
 - **Marín-Candón A, García-García I, Arias P, Carcas AJ, Díaz-García L, Ochoa RF, Cano NH, Pinto PH, González MJ, López-Granados E, Martínez-Feito A, Mayor-Ibarguren A, Rosas-Alonso R, Seco-Meseguer E, Borobia AM.** Identifying biomarkers of treatment response to ciclosporin in atopic dermatitis through multiomic predictive modelling: DERMATOMICS study protocol. *BMJ Open.* 2023; 13(7): e072350. Article. IF: 2.4; Q1
 - **Molina LD, Gallego LYB, Nozal P, Soto-Serrano Y, Martínez-Feito A, Reche-Yebra K, González-Toribay A, de la Cámara RCM, Gianelli C, Cámara C, González-García J, González-Muñoz M, Rodríguez-Pena R, Granados EL.** Detection of specific RBD+ IgG+ memory B cells by flow cytometry in healthcare workers and patients with inborn errors of immunity after BNT162b2 mRNA COVID-19 vaccination. *Front Immunol.* 2023; 14: 1136308. Article. IF: 5.7; Q1
 - **Muñoz-Serrano AJ, Estefanía-Fernández K, Oterino C, Ramírez-Amoros C, Navarro G, Sastre A, Pérez-Martínez A, Barrena S, Oliveros FH, Martínez L.** Sarcopenia as a prognostic factor in patients with hepatoblastoma: does it influence surgical outcomes and survival? Preliminary retrospective study. *J Pediatr Surg.* 2023; 58(11): 2149-55. Article. IF: 2.4; Q1
 - **Peña-Burgos EM, de Sabando DPL, Utrilla C, Pozo-Kreilinger JJ, Sastre A, Rubio P, Escudero A, Mendiola-Sabio M, Pérez-Martínez A.** First reported case of malignant ectomesenchymoma with p.Leu122Arg mutation in MYO1 gene: Extensive intra- and extracranial tumor in a 15-year-old female. *Head Neck Pathol.* 2023; 17(3): 855-63. Article. IF: 3.2; Q2
 - **Plasencia-Rodríguez C, Martínez-Feito A, Hernández M, del Pino-Molina L, Novella-Navarro M, Serrano Y, González-Muñoz M, Peiteado D, Bonilla G, Monjo I, Nuño L, Tornero C, López-Granados E, Balsa A, Nozal P.** Immune response after SARS-CoV-2 vaccination in patients with inflammatory immune-mediated diseases receiving immunosuppressive treatment. *Allergy Asthma Clin Immunol.* 2023; 19(1): 71. Article. IF: 2.6; Q2
 - **Robles-Marhuenda A, Cobo-Ibáñez T, Noblejas-Mozo A, Muñóz-Fernández S.** Biological sequential therapy with rituximab-belimumab in patients with recurrent lupus nephritis. *Rheumatol Clin.* 2023; 19(5): 290-1. Letter. IF: 1.2; Q4
 - **Sánchez MDC, Carrascos RJ, Aparicio PR, de Sabando DPL, Urgelles AS, Pozo-Kreilinger JJ, Gutiérrez JCL, Cervantes MG, Cruz EJO, Pérez-Martínez A.** Therapeutic strategies and clinical evolution of patients with infantile fibrosarcoma: a unique paediatric case series. *Clin Transl Oncol.* 2023; 25(11): 3307-11. Article. IF: 2.8; Q2
 - **Sanz KA, Parente CE, Ferreras C, Ribes MM, Navarro A, Mestre C, Clares L, Vicario JL, Balas A, de Paz R, Granados EL, Zapardiel ES, Jiménez C, López-Oliva M, Ramos E, Hernández-Oliveros F, Pérez-Martínez A.** Familial CD45RA- T cells to treat severe refractory infections in immunocompromised patients. *Front Med (Lausanne).* 2023; 10: 1083215. Article. IF: 3.1; Q1
 - **Shepherd JLV, Robles EJA, Hijón CC, Breijo BH, Novella-Navarro M, Schay PB, de la Cámara RC, Criado AB, Granados EL, Rodríguez CP.** Predicting anti-TNF treatment response in rheumatoid arthritis: An artificial intelligence-driven model using cytokine profile and routine clinical practice parameters. *Heliyon.* 2024; 10(1): e22925. Article. IF: 3.4; Q1
 - **Suárez EM, Barranco A, Muñoz I, Hernández B, Marhuenda A.** Non-late-onset neutropenia following treatment of multiple sclerosis with ocrelizumab. *Neurologia.* 2023; 38(7): 463-6. Article. IF: 2.9; Q2
 - **Troncoso JA, Abanades CS, Marhuenda AR, Robles EM, Mozo AN, Gómez RF, David EP, Blanco JJR.** Cardiac involvement in a Spanish unicentric prospective cohort of patients with systemic lupus erythematosus. *Lupus.* 2023; 32(1): 111-8. Article. IF: 1.9; Q3
 - **Troncoso JA, González AN, Robles EM, Torre RS, Marhuenda AR.** Tofacitinib is an effective treatment for refractory scleromyositis associated with anti-PM/Scl. *Cureus.* 2023; 15(1): e34125. Article. IF: 1.0; Q3
 - **Turnbull C, Bones J, Stanley M, Medhavy A, Wang H, Lorenzo AMD, Cappello J, Shanmuganandam S, Pandey A, Seneviratne S, Brown GJ, Meng XP, Fulcher D, Burgio G, Man SM, Collantes CD, Gasior M, Granados EL, Martín P, Jiang SH, Cook MC, Ellyard JI, Athanasopoulos V, Corry B, Canete PF, Vinuesa CG.** DECTIN-1: A modifier protein in CTLA-4 haploinsufficiency. *Sci Adv.* 2023; 9(49): eadi9566. Article. IF: 11.7; D1



3.3. Infectious Diseases and Immunity Area



Research projects

- **López Granados E.** Actualización y renovación de la actividad en el servicio de inmunología del hospital universitario la paz. Octapharma, S.A. 2012-Ongoing. *Managment centre: FIBHULP*
- **López Granados E.** Desarrollo de ensayos de validación funcional como complemento del diagnóstico molecular de errores congénitos de la respuesta inmunológica. Fundación Mutua Madrileña. 2022-Ongoing. *Managment centre: FIBHULP*
- **López Granados E.** Estudio exploratorio sistemático de la competencia en la respuesta linfocitaria al Sars-Cov-2, en diversas situaciones del huésped y según severidad de la COVID-19 (InmunoCOVID). Cytognos. 2021-Ongoing. *Managment centre: FIBHULP*
- **López Granados E.** European Rare Disease Co-ordination and support action (ERICA). UE. 2020-2024. *Managment centre: FIBHULP*
- **López Granados E.** Síndrome inflamatorio multisistémico asociado a covid-19 en niños (Mis-c): bases genéticas, epigenéticas e inmunopatogénicas. Fundació Marató Tv3. 2021-Ongoing. *Managment centre: FIBHULP*
- **López Granados E.** Un esfuerzo integral para intentar descifrar las bases (epi) genéticas, fenotípicas y funcionales de la desregulación del linfocito B en deficiencias de anticuerpos, para un mejor pronóstico y tratamiento de los pacientes. (PI20/01371). ISCIII. 2021-2023. *Managment centre: FIBHULP*
- **Sánchez Zapardiel E.** Validación de nuevas técnicas de estimación de la inmunosupresión y detección del rechazo en trasplante hepático pediátrico (PI19/01311). ISCIII. 2020-2024. *Managment centre: FIBHULP*
- **López Granados E, del Pino Molina L.** Ensayos basados en citometría de flujo para la evaluación patogénica de la vía PI3K-Akt-Mtor. Pharming. 2023-2025. *Managment centre: FIBHULP*
- **López Granados E.** Patrocinio Thermo Fisher para actividades formativas en autoinmunidad. Thermo Fisher. 2023-Ongoing. *Managment centre: FIBHULP*

Cibers and Retics

- **López Granados E.** Centro de Investigación Biomédica en Red de Enfermedades Raras. (CIBERER). ISCIII. (31/12/2023). FIBHULP

Clinical trials

- **Plaza López De Sabando D.** loggic/firefly-2: ensayo en fase iii, aleatorizado, internacional y multicéntrico de day101 en monoterapia frente a la quimioterapia estándar en pacientes con glioma pediátrico de bajo grado que presentan una alteración de raf activadora que requiere tratamiento sistémico de primera línea.
Type/Phase: III
Sponsored by: Day One Biopharmaceuticals, Inc
Signed date: 27/06/2023
- **Plaza López De Sabando D.** loggic core bioclinical data bank.
Type/Phase: OTROS
Sponsored by: German Cancer Research Center
Signed date: 22/05/2023
- **Robles Marhuenda AJ.** Estudio abierto, multicéntrico, de dos cohortes y un solo grupo para evaluar la eficacia, la seguridad y la tolerabilidad, la farmacocinética y la farmacodinámica de emapalumab en niños y adultos con síndrome de activación de macrófagos (sam) en la enfermedad de still (incluida la artritis idiopática juvenil sistémica y la enfermedad de still del adulto) o con sam en el lupus eritematoso sistémico.
Type/Phase: III
Sponsored by: Swedish Orphan Biovitrum Ab Sobi
Signed date: 17/10/2023

Patents and trademarks

- **Van Dongen JJM, Orfao de Matos Correia E Vale JA, Van Der Burg M, Pérez Andrés M, Van Zelm MC, Kalina T, Vlkova M, López Granados E, Blanco Álvarez E, Kienzler AK, inventors; Erasmus University Medical Center Rotterdam, assignee.** Reagents, methods, and kits for diagnosing primary immunodeficiencies. PCT/NL2015/050762, US62/072,498; 2014 Oct 30.



3.3.7 Drug Hypersensitivity and Innate Immune Response Group



Publications: 12 | Q1: 9

COMPOSITION

Teresa Bellón Heredia.

Investigadora Senior (Contrato Miguel Servet -I2). Jefe de laboratorio. FIBHULP

- **María del Rosario Cabañas Moreno.** Facultativo Especialista de Área en Alergología. Hospital Universitario La Paz
- **Sofía Caiqin Linares Reyes.** Investigadora Predoctoral. FIBHULP
- **Celia Martínez Prieto.** Técnico de Grado Superior. Hospital Universitario La Paz
- **Beatriz Sanz Minguela.** Técnico de Grado Superior. Hospital Universitario La Paz
- **Guillermo Servera Negre.** Facultativo Especialista en Dermatología Médico-Quirúrgica y Venereología. Hospital Universitario La Paz

STRATEGIC OBJETIVES

- Cutaneous adverse drug reactions are unpredictable and represent a plethora of skin diseases with various degrees of severity. The spectrum ranges from mild to potentially fatal multisystem maladies. Those of most concern are usually referred to as severe cutaneous adverse reactions (SCARs), and include acute generalized exanthematous pustulosis (AGEP), drug reaction with eosinophilia and systemic symptoms (DRESS), also known as drug induced hypersensitivity syndrome or hypersensitivity síndrome (DIHS/HSS), Stevens-Johnson's syndrome (SJS), and toxic epidermal necrolysis (TEN). Among them, SJS and TEN are the most severe clinical entities and are nowadays considered as variants of the same disease characterized by keratinocyte necrosis and epidermal detachment with the formation of subepidermal bullae. From the immunopathogenic point of view, SCARs are T-cell mediated type IV hypersensitivity reactions. However, T cells can orchestrate different types of immune responses and this functional heterogeneity has led to a further sub-classification into type IVa-IVd hypersensitivity that considers the distinct cytokine production pattern by T cell subpopulations, and emphasizes the participation of different effector cells causing inflammation and tissue damage. Current knowledge supports the active participation of cytotoxic lymphocytes in different clinical entities.
- Our project aims to a better understanding of the immune mechanisms underlying the etiopathogenesis of these diseases. The study is performed in the framework of the consortium PIELenRed (Plataforma interdisciplinar para el estudio de reacciones cutáneas graves en red) integrated by researchers belonging to different hospitals in Madrid.
- Reactivation of latent herpesvirus has been described during the development of some of the previously mentioned clinical entities. In order to improve our understanding of the behaviour of the immune system during viral replication, collaboration has been established with the Kidney Transplant Unit (Nephrology Service, HULP). Kidney transplant recipients are being followed immediately before and after transplant in order to identify patients with active CMV replication.
- General objectives for the next 5 years
- The main objectives are:
 - I. Biobanking of samples of severe cutaneous adverse reactions to medications (DRESS, AGEP and SJS/TEN) associated to the registry PIELenRed, and integrated in the international registry RegiSCAR.
 - II. To investigate in vitro test for drug causality assessment.
 - III. To explore the involvement of the innate immune response (in particular natural cytotoxic activity) during the development of SCARs.
 - IV. Identification of biomarkers of susceptibility.
 - V. To find biomarkers for disease and response to treatments.
 - VI. To explore the potential of microRNAs in SJS/TEN as biomarkers of disease and of response to treatments, as well as their relationship with pathogenic mechanisms.



RESEARCH LINES

- Biobanking of biological samples from patients with severe cutaneous adverse reactions to medications (DRESS, AGEP and SJS/TEN).
- Development and evaluation of in vitro tests for drug causality assessment.
- Identification of biomarkers of susceptibility.
- Involvement of NK receptors in the etiopathogenesis of Stevens-Johnson syndrome /Toxic epidermal necrolysis (SJS/TEN).
- Differential analysis of the cytokine pattern involved in different SCARs (AGEP, DRESS and SJS/TEN).
- Analysis of miRNAs as biomarkers of disease and response to treatments.

RESEARCH ACTIVITY

Final Degree Theses

- **Linares Reyes SC.** Regulación de la expresión de IL15 e IL15RA en fibroblastos de piel: Relevancia para el tratamiento de pacientes con Síndrome de Stevens-Johnson /necrosis epidérmica tóxica. [dissertation]. *Tenerife : Universidad de la Laguna: 2023(01/06/2023). Director: Bellón Heredia T.*

Publications

- **Angelo KM, Smith T, Camprubí-Ferrer D, Balerdi-Sarasola L, Menéndez MD, Servera-Negre G, Barkati S, Duvignaud A, Huber KLB, Chakravarti A, Bottieau E, Greenaway C, Grobusch MP, Pedro DM, Asgeirsson H, Popescu CP, Martín C, Licitra C, de Frey A, Schwartz E, Beadsworth M, Lloveras S, Carsten C, Guagliardo SAJ, Whitehill F, Huits R, Hamer DH, Kozarsky P, Libman M.** Epidemiological and clinical characteristics of patients with monkeypox in the GeoSentinel Network: a cross-sectional study. *Lancet Infect Dis.* 2023; 23(2): 196-206. Article. IF: 36.4; D1
- **Balas A, Moreno-Hidalgo MA, de la Calle-prieto F, Vicario JL, Arsuaga M, Trigo E, de Miguel-Buckley R, Bellón T, Díaz-Menéndez M.** Coronavirus-19 disease risk and protective factors associated with HLA/KIR polymorphisms in Ecuadorian patients residing in Madrid. *Hum Immunol.* 2023; 84(11): 571-7. Article. IF: 3.1; Q3

- **Herranz-Pinto P, Alonso-Pacheco ML, Feltes-Ochoa R, Mayor-Ibarguren A, Servera-Negre G, Busto-Leis JM, González-Fernández MA, Herrero-Ambrosio A.** Real-world performance of a new strategy for off-label use of guselkumab in moderate to severe psoriasis: super-responder patients as the epitome of efficacy and optimisation. *Clin Drug Invest.* 2023; 43(7): 517-527. Article. IF: 2.9; Q2
- **Marks ME, Botta RK, Abe R, Beachkofsky TM, Boothman I, Carleton BC, Chung WH, Cibotti RR, Dodiuk-Gad RP, Grimstein C, Hasegawa A, Hoofnagle JH, Hung SI, Kaffenberger B, Kroshinsky D, Lehloeny R, Martín-Pozo M, Micheletti RG, Mockenhaupt M, Nagao K, Pakala S, Palubinsky A, Pasiela HB, Peter J, Pirmohamed M, Reyes M, Saeed HN, Shupp J, Sukasem C, Syu JY, Ueta M, Zhou L, Chang WC, Becker P, Bellon T, Bonnet K, Cavalleri G, Chodosh J, Dewan AK, Dominguez A, Dong XZ, Ezhkova E, Fuchs E, Goldman J, Himed S, Mallal S, Markova A, McCawley K, Norton AE, Ostrov D, Phan M, Sanford A, Schlundt D, Schneider D, Shear N, Shinkai K, Tkaczyk E, Trubiano JA, Volpi S, Bouchard CS, Divito SJ, Phillips EJ.** Updates in SJS/TEN: collaboration, innovation, and community. *Front Med (Lausanne).* 2023; 10: 1213889. Review. IF: 3.1; Q1
- **Narváez-Fernández EJ, Entrala A, Nin-Valencia A, Mir-Ihara P, Losantos-García I, Domínguez-Ortega J, González-Fernández MA, Quirce S, Hernández-Cano N, Cabañas R, Caballero T.** Long-term omalizumab

in elderly patients with chronic urticaria: is it a safe therapy?. *Int Arch Allergy Imm.* 2023; 184(10): 1003-9. Article. IF: 2.5; Q3

- **Nin-Valencia A, Domínguez-Ortega J, Cabañas R, Sánchez H, Fiandor A, Lluch M, Ramírez E, Gómez-Traseira C, Rodríguez A, González-Muñoz M.** The lymphocyte transformation test in delayed hypersensitivity reactions induced by ibuprofen and/or metamizole. *J Invest Allerg Clin.* 2023; 33(1): 52-3. Editorial Material. IF: 6.1; Q1
- **Nin-Valencia A, Fiandor A, Lluch M, Quirce S, Caballero T, Heredia RR, González-Muñoz M, Caballero ML, Cabañas R.** Safe administration of Sars-Cov-2 vaccine after desensitization to a biologic containing polysorbate 80 in a patient with polyethylene glycol-induced severe anaphylaxis and sensitization to polysorbate 80. *J Invest Allerg Clin.* 2023; 33(2): 151-3. Article. IF: 6.1; Q1
- **Olsson-Brown A, Yip V, Ogji ED, Jolly C, Ressel L, Sharma A, Bergfeld W, Liu X, Khirwadkar N, Bellon T, Dickinson A, Ahmed S, Langton A, Watson R, Pirmohamed M, Carr DF.** TNF- α -mediated keratinocyte expression and release of matrix metalloproteinase 9: putative mechanism of pathogenesis in stevens-johnson syndrome/toxic epidermal necrolysis. *J Invest Dermatol.* 2023; 143(6): 1023-30. Article. IF: 5.7; D1
- **Rodríguez-Pérez R, de las Vecillas L, Cabañas R, Bellon T.** Tools for etiologic diagnosis of drug-induced allergic conditions. *Int J Mol Sci.* 2023; 24(16): 12577. Review. IF: 4.9; Q1
- **Sobral-Costas TG, Escudero-Tornero R, Servera-Negre G, Bernardino JI, Arroyo AG, Díaz-Menéndez M, Busto-Leis JM, Álvarez PR, Pinto PH, Cudos ES.** Human monkeypox outbreak: Epidemiological data and therapeutic potential of topical cidofovir in a prospective cohort study. *J Am Acad Dermatol.* 2023; 88(5): 1074-82. Article. IF: 12.8; D1
- **Sobral-Costas TG, Escudero-Tornero R, Servera-Negre G, Bernardino JI, Arroyo AG, Díaz-Menéndez M, Busto-Leis JM, Álvarez PR, Pinto PH, Cudos ES.** Topical cidofovir in monkeypox: our experience. Comment on Monkeypox: is topical cidofovir a good idea? *Clin Exp Dermatol.* 2023; 48(6): 700-1. Letter. IF: 3.7; Q1
- **Zingoni A, Bellón T.** Editorial: Women in NK and innate lymphoid cell biology. *Front Immunol.* 2023; 14: 1157166. Editorial Material. IF: 5.7; Q1

Research projects

- **Bellón Heredia T.** Contrato Miguel Servet Categoría B (CES06/016). ISCIII. 2007-2025. *Management centre: FIBHULP*
- **Bellón Heredia T.** Impacto de los inhibidores de calcineurina sobre linfocitos efectores citotóxicos en síndrome de Stevens-Johnson/ necrosis epidérmica tóxica de análisis de il-15 como biomarcador (PI18/00718). ISCIII. 2019-2023. *Management centre: FIBHULP*
- **Bellón Heredia T.** Creación de un centro de referencia para el estudio de los mecanismos implicados en las reacciones de hipersensibilidad a las membranas de hemodiálisis basadas en polysulfona (PI-3009). Nipro Euope NV. 2017-Ongoing. *Management centre: FIBHULP*
- **de las Vecillas Sánchez L.** Estudio de la inmunomodulación celular inducida en las desensibilizaciones a quimioterápicos tras reacciones inmediatas y tardías. Sociedad Española de Alergología e Inmunología Clínica (SEAIC). 2022-2024. *Management centre: Fundación SEAIC*
- **Bellón Heredia T.** ELISpot como método diagnóstico para identificación del fármaco causal en pacientes con reacciones graves de hipersensibilidad cutánea a medicamentos: comparación con TTL FIBHULP. 2022-2023. *Management centre: FIBHULP*

Patents and trademarks

- **Selgas Gutiérrez R, Bellón Heredia T, Rodríguez Sanz AI, Álvarez Builla J, Vaquero López JJ, Sánchez Alonso P, Alajarín Fernández R, inventors; FIBHULP, Universidad de Alcalá, assignees.** Use of compounds derived from salts of pyridazine[1',6':1,2]pyrido[3,4-b]indolinium as anti-inflammatory agents. P201331143, PCT/ES2014/070603; 2013 July 25.
- **Selgas Gutiérrez R, Bellón Heredia T, Rodríguez Sanz AI, Álvarez Builla J, Vaquero López JJ, Sánchez Alonso P, Alajarín Fernández R, inventors; FIBHULP, Universidad de Alcalá, assignees.** Use of compounds derived from salts of piridazine[3,2-b]benzimidazolium as anti-inflammatory agents. P201430411, PCT/ES2014/070603; 2013 July 25.



3.3.8 Immunomediante Gastrointestinal Diseases and other Digestive Pathologies Group



STRATEGIC OBJETIVES

- Our work focuses on diseases of the Digestive System with special dedication to Inflammatory Bowel Disease (IBD) and other immune-mediated diseases.
- The group is formed by gastroenterologists, biologists, pharmacists and nurses; all of them are part of a multidisciplinary working group.
- In addition to promoting our own research projects in our area, we participate in numerous clinical trials of molecules in development.
- Our objectives are to optimize existing treatments, promote measures to improve the quality of life and translational research in search of precision medicine, incorporating new technologies to the management of our patients.

RESEARCH LINES

- Correlation of drug levels with therapeutic response
- Intestinal ultrasound
- Dysplasia detection techniques in IBD
- Hypercoagulability studies in IBD
- Immunological basis of inflammatory bowel disease: changes in cellular and inflammatory mediator expression with different therapies.

RESEARCH ACTIVITY

Publications

- Acosta MBD, Fernández-Clotet A, Mesonero F, García-Alonso EJ, Casanova MJ, Fernández-de la Varga M, Cañete F, de Castro L, Gutiérrez A, Sicilia B, Cano V, Merino O, de Francisco R, González-Partida I, Surís G, Torrealba L, Ferreiro-Iglesias R, Castro B, Márquez L, Sobrino A, Elorza A, Calvet X, Varela P, Vicente R, Bujanda L, Lario L, Manceñido N, García-Sepulcre MF, Iglesias E, Rodríguez C, Piqueras M, Rosique JAF, Lucendo AJ, Benítez O, García M, Olivares D, González-Muñoz C, López-Cauce B, Alvarado VJM, Spicakova K, Brotóns A, Bermejo

- F, Almela P, Ispizua N, Gilabert P, Tardillo C, Muñoz F, Navarro P, Domínguez REM, Sendra P, Hinojosa E, Sáinz E, Martín-Arranz MD, Carpio D, Ricart E, Caballol B, Núñez L, Barrio J, Gisbert JP, Iborra M, Calafat M, Hernández V, Pérez R, Cabriada JL, Domènech E, Rodríguez-Lago I. Long-term outcomes of biological therapy in crohn's disease complicated with internal fistulizing disease: BIOSCOPE Study From GETECCU. *Am J Gastroenterol.* 2023; 118(6): 1036-46. Article. IF: 8.0; D1
- Barreiro-de Acosta M, Molero A, Artime E, Díaz-Cerezo S, Lizán L, de Paz HD, Martín-Ar-

Publications: 8 | Q1:2

COMPOSITION

María Dolores Martín Arranz.

Jefa de Sección de Aparato Digestivo. Hospital Universitario La Paz. Profesora Asociada. Unidad Autónoma de Madrid

- **Laura García Ramírez.** Investigadora Predoctoral. FIBHULP
- **Eduardo Martín Arranz.** Facultativo Especialista de Área en Aparato Digestivo. Hospital Universitario La Paz
- **Jesús Noci Belda.** Enfermero . Hospital Universitario La Paz

- **Joaquín Poza Córdón.** Facultativo Especialista de Área en Aparato Digestivo. Hospital Universitario La Paz
- **José Luis Rueda García.** Facultativo Especialista de Área en Aparato Digestivo. Hospital Universitario La Paz
- **María Sánchez Azofra.** Facultativo Especialista de Área en Aparato Digestivo. Hospital Universitario La Paz
- **Cristina Julia Suárez Ferrer.** Facultativo Especialista de Área en Aparato Digestivo. Hospital Universitario La Paz
- **Tamara Verges Martínez-Meco.** Investigadora Predoctoral. FIBHULP



3.3. Infectious Diseases and Immunity Area

ranz MD. Epidemiological, clinical, patient-reported and economic burden of inflammatory bowel disease (ulcerative colitis and Crohn's disease) in Spain: a systematic review. *Adv Ther.* 2023; 40(5): 1975-2014. Review. IF: 3.4; Q2

- **Cristina SF, Martín-Arranz MD, Martín-Arranz E, Morata FR, García AL, Cantero JMB, Gismero FM, Barreiro-de Acosta M.** Current management of bowel failure due to Crohn's disease in Spain: Results of a GETECCU survey. *Gastroent Hepat-Barc.* 2023; 46(6): 439-45. Article. IF: 2.2; Q3
- **Martín Arranz MD, García-Ramírez L, Martín Arranz E, Montero Vega D, Rueda García JL, Sánchez-Azofra M, Poza Cordón J, Noci Belda J, Verges Martínez-Meco T, Blanco San Miguel P, Suárez-Ferrer C.** Serologic response to COVID-19 vaccines in patients with inflammatory bowel disease: a prospective study. *Rev Esp Enferm Dig.* 2023; 115(8): 444-9. Article. IF: 2.7; Q2
- **Martín-Arranz MD, García-Ramírez L, Hernández-Pérez M, Vega DM, Martín-Arranz E, Sánchez-Azofra M, Cordón JP, García JLR, Belda JN, Martínez-Meco TV, San Miguel PB, Ferrer CS.** Seroprevalence of ANTI-SARS-CoV-2 antibodies in patients with inflammatory bowel disease. *Sci Rep-Uk.* 2023; 13(1): 7044. Article. IF: 3.8; Q1
- **Roig CA, Ferrer CS, García JLR, Cordón JP, Sánchez-Azofra M, Arranz EM, Díaz IG, Costa CA, Martín-Arranz MD.** Influence of biologic therapy on cardiovascular risk factors in patients with inflammatory bowel disease. *Gastroent Hepat-Barc.* 2023; 46(2): 109-15. Article. IF: 2.2; Q3
- **Roig CA, Martos RF, Arranz EM, Sanz RR.** Double major papilla: diagnostic challenge of an unusual anatomical variant. *Rev Esp Enferm Dig.* 2023; 115(5): 274. Letter. IF: 2.7; Q2
- **Roig CA, Soto YZ, Serrano EM, Arranz EM, Martos RF.** Duodenal pyogenic granuloma: an unusual cause of chronic anemia. *Rev Esp Enferm Dig.* 2023; 115(9): 530. Letter. IF: 2.7; Q2

Research projects

- **Martín Arranz MD.** Efecto terapéutico de la administración colonoscópica de células madre mesenquimales derivadas de tejido adiposo humano de diferentes donantes (HASC) en un modelo de colitis de rata por enema de TNBS. Abbvie Spain S.L.U. 2010-Ongoing. *Management centre: FIBHULP*
- **Martín Arranz MD.** Protocolo de abordaje temprano de pacientes con enfermedad inflamatoria intestinal. Abbvie Spain S.L.U. 2021-Ongoing. *Management centre: FIBHULP*
- **Martín Arranz MD.** Dynamics of a4b7+ dendritic cells in inflammatory bowel disease. personalised medicine with biological therapies. dinamica de las células dendríticas a4b7+ en la enfermedad inflamatoria intestinal. avances hacia una medicina personalizada. FIBHULP. 2022-Ongoing. *Management centre: FIBHULP*
- **Martín Arranz MD.** Programa de actualización en el conocimiento de la enfermedad inflamatoria intestinal. Abbvie Spain S.L.U. 2020-Ongoing. *Management centre: FIBHULP*

Clinical trials

- **Martín Arranz MD.** A phase 2 long-term extension (Ite) study to evaluate the safety and efficacy of efa-va-leukin alfa in subjects with moderately to severely active ulcerative colitis. *Type/Phase: II*
Sponsored by: Amgen, Inc
Signed date: 22/03/2023
- **Martín Arranz MD.** Beneficio a largo plazo de ustekinumab en la colitis ulcerosa en la práctica clínica. *Type/Phase: EPA-OD*
Sponsored by: Fundación Hospital Universitario La Princesa
Signed date: 14/02/2023
- **Martín Arranz MD.** A phase IIB, double-blind, randomised, placebo-controlled trial to evaluate the efficacy and tolerability of zed1227 in celiac disease subjects experiencing symptoms despite gluten-free diet. *Type/Phase: IIb*
Sponsored by: Dr. Falk Pharma, GmbH
Signed date: 03/02/2023

- **Martín Arranz MD.** Estudio de fase III aleatorizado, doble ciego, controlado con placebo y multicéntrico para evaluar la eficacia y la seguridad de abx464 administrado una vez al día como tratamiento de inducción en sujetos con colitis ulcerosa activa moderada o grave - abtce. *Type/Phase: III*
Sponsored by: Abivax
Signed date: 05/06/2023
- **Martín Arranz MD.** Estudio de fase III aleatorizado, doble ciego y multicéntrico para evaluar la eficacia y la seguridad a largo plazo de abx464 25 mg o 50 mg administrado una vez al día como tratamiento de mantenimiento en sujetos con colitis ulcerosa activa moderada o grave - abtce maintenance. *Type/Phase: III*
Sponsored by: Abivax
Signed date: 15/11/2023
- **Martín Arranz MD.** Ensayo de extensión abierta a largo plazo con brazikumab en pacientes con enfermedad de Crohn activa de moderada a grave (intrepid ole. *Type/Phase: III*
Sponsored by: AstraZeneca Farmaceutica Spain, S.A.
Signed date: 23/01/2023
- **Martín Arranz MD.** Estudio de fase 2b, aleatorizado, en doble ciego, controlado con principio activo y con placebo, de grupos paralelos y multicéntrico, para evaluar la eficacia y la seguridad de la combinación de guselkumab y golimumab como tratamiento de inducción y de mantenimiento en participantes con enfermedad de Crohn activa de grado moderado o severo. *Type/Phase: IIb*
Sponsored by: Janssen Inc
Signed date: 27/02/2023
- **Martín Arranz MD.** Estudio de fase 2b, aleatorizado, en doble ciego, controlado con principio activo y con placebo, de grupos paralelos y multicéntrico, para evaluar la eficacia y la seguridad de la combinación de guselkumab y golimumab como tratamiento de inducción y de mantenimiento en participantes con colitis ulcerosa activa de grado moderado o severo. *Type/Phase: IIb*
Sponsored by: Janssen Research & Development, LLC
Signed date: 07/03/2023

- **Martín Arranz MD.** Estudio de fase IIB, multicéntrico, aleatorizado, controlado con placebo y de determinación de la dosis para evaluar la eficacia y la seguridad de JNJ-77242113 para el tratamiento de la colitis ulcerosa activa moderada a grave. *Type/Phase: IIb*
Sponsored by: Janssen Research & Development, LLC
Signed date: 29/11/2023
- **Martín Arranz MD.** Estudio multicéntrico aleatorizado, doble ciego y controlado con placebo, con tratamiento de mantenimiento durante 52 semanas y una extensión abierta para evaluar la eficacia y la seguridad de risankizumab en sujetos con colitis ulcerosa que respondan al tratamiento de inducción en los estudios m16-067 o m16-065. *Type/Phase: III*
Sponsored by: Abbvie Deutschland GmbH
Signed date: 20/06/2023
- **Martín Arranz MD.** Estudio prospectivo, post-comercialización, no intervencionista para evaluar la efectividad de risankizumab en práctica clínica real en la enfermedad de Crohn (APPRISE). *Type/Phase: EPA-SP*
Sponsored by: Abbvie Spain, S.L.U.
Signed date: 12/12/2023
- **Martín Arranz MD.** Estudio de fase 2b, aleatorizado, en doble ciego, controlado con principio activo y con placebo, de grupos paralelos y multicéntrico, para evaluar la eficacia y la seguridad de la combinación de guselkumab y golimumab como tratamiento de inducción y de mantenimiento en participantes con enfermedad de Crohn activa de grado moderado o severo. *Type/Phase: IIb*
Sponsored by: Janssen Inc
Signed date: 11/09/2023
- **Martín Arranz MD.** Registro no intervencionista de larga duración para evaluar la seguridad y la efectividad de humira (adalimumab) en pacientes con colitis ulcerosa (cu) de actividad moderada a grave (LEGACY). *Type/Phase: EPA-LA*
Sponsored by: Abbvie Spain, S.L.U.
Signed date: 07/12/2023



3.3.9 MicroRNA Regulation of Immune Tolerance, Autoimmunity and Cancer Group

COMPOSITION

Alicia González Martín.

Investigadora Ramón y Cajal. Universidad Autónoma de Madrid

- **Rocío Bartolomé Cabrero.** Investigadora Predoctoral. Universidad Autónoma de Madrid
- **María del Pilar González Molina.** Investigadora Predoctoral. Universidad Autónoma de Madrid

- **Laura Gámez Reche.** Investigador Predoctoral. Universidad Autónoma de Madrid
- **Laura Mañas Cordero.** Técnico de Investigación. Universidad Autónoma de Madrid
- **Eleftheria Papaioannou.** Investigadora Juan de la Cierva. Universidad Autónoma de Madrid
- **Ana María Prieto Muñoz.** Técnico de Investigación. Universidad Autónoma de Madrid
- **Javier Sanz Gallardo.** Investigador Predoctoral. Universidad Autónoma de Madrid

STRATEGIC OBJETIVES

- Our laboratory is interested in understanding the cellular and molecular mechanisms of immune tolerance, autoimmunity and cancer. Specifically, we focus on studying how microRNAs (miRNAs) and their target genes regulate immune tolerance, autoimmune diseases and antitumor immunity. In addition, we are actively developing innovative genome engineering strategies for therapeutic purposes.
- MicroRNAs have recently emerged as important factors in the post-transcriptional control of protein concentrations in metazoan organisms. For the past few years, we studied the functions of miRNAs in the mammalian immune system. We identified the first miRNA that regulates B cell tolerance and established its causative role in the development of lethal autoimmunity (González-Martín et al, *Nature Immunology*, 2016 Apr; 17: 433-40). We also discovered critical roles for other microRNAs in different immune tolerance mechanisms and autoimmune diseases (González-Martín and Lai et al, *Nature Communications*, 2016 Aug 2; 7:12207, Ichiyama et al, *Immunity*, 2016 Jun 21; 44:1284-98 and Liu et al, *Journal of Experimental Medicine*, Aug 22; 213:1901-19). In addition, we developed the first B cell receptor reprogramming strategy using the latest genome editing technologies (*Elife*, 2019 Jan 17; 8). Previously, work on tumor immunology established an important role for the chemokine receptor CCR5 in T cell antitumor responses (González-Martín et al, *Cancer Research*, 2011 Aug 15; 71:5455-66). Overall, our studies have established miRNAs as critical regulators of immune tolerance and autoimmunity, and revealed new mechanisms controlling antitumor immunity.
- Current research in the laboratory continues to identify and study the roles of miRNAs and their target genes in immune tolerance, autoimmunity and tumor immunology by combining genetic, genomic, biochemical, and functional screen approaches to understand the functions and molecular mechanisms of miRNA control at molecular, cellular, and system levels. The mechanisms identified might provide valuable biomarkers or therapeutic targets for the treatment of autoimmune diseases and for cancer immunotherapy.

RESEARCH LINES

- Identification of miRNAs and target genes that regulate B lymphocyte tolerance and study of their potential role in the development and progression of autoimmune diseases, with the aim of identifying new therapeutic targets for the treatment of these diseases.
- Identification of new therapeutic targets to improve the efficacy of cancer immunotherapy.
- B-lymphocyte genome engineering for the development of cellular vaccines.

RESEARCH ACTIVITY

Final Degree Theses

- **Villadangos Reyes L.** Regulation of B cell activation by microRNAs[dissertation]. *Madrid: UAM: 2023(29/05/2023). Director: González Martín A.*

1282440B-100). AEI. 2022-2025. *Management centre: UAM*

Research projects

- **González Martín A.** Systematic analysis of tumor-specific B cell immunity (CNS2022-136069). AEI. 2023-2025. *Management centre: UAM*
- **González Martín A.** Harnessing microRNAs for improved lung cancer immunotherapies. Fundación Ramón Areces. 2023-2026. *Management centre: UAM*
- **González Martín A.** MicroRNA regulatory networks in B cell tolerance and autoimmunity (PID2021-

1282440B-100). AEI. 2022-2025. *Management centre: UAM*

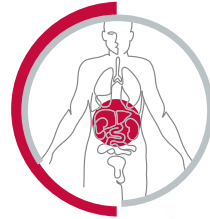
• **González Martín A.** Harnessing microRNAs for improved lung cancer immunotherapies. Fundación FERO. 2023-2026. *Management centre: UAM*

• **González Martín A.** B cell engineering in murine and human primary B cells (OPP11839562019). Bill and Melinda Gates Foundation. 2019-2024. *Management centre: UAM*

Patents and trademarks

- **Voss J, Huang D, González-Martín A, Andrabi R, Burton D, inventors; The Scripps Research Institute, assignees.** B Cell receptor modification in B cells. PCT/US/45255. 2018 August 3





3.4 Large System Pathologies Area

Documents: 296 | Originals: 219 | D1: 49 | Q1: 159

Area coordinator: Francisco García Río

coordinadorsistemas@idipaz.es

RESEARCH GROUPS

- 3.4.1 Internal Medicine and Systemic Diseases - *Francisco Arnalich Fernández*
- 3.4.2 Organic Dysfunction and Failure in the Aggression - *José Manuel Añón Elizalde*
- 3.4.3 Respiratory Diseases - *Francisco García Río/Carolina Cubillos Zapata*
- 3.4.4 Regulation of Gene Expression and by Hypoxia - *Luis del Peso Ovalle*
- 3.4.5 Nephrology - *María Gemma Fernández Juárez*
- 3.4.6 Diagnosis and Treatment of Allergic Diseases - *Santiago Quirce Gancedo*
- 3.4.7 Patient Blood Management - *Manuel Quintana Díaz*
- 3.4.8 Health Care Nurses Research - *Esther Rey Cuevas*
- 3.4.9 Emergency and Critical Pathology - *Alejandro Martín Quirós*
- 3.4.10 Hospital Pharmacy - *Alicia Herrero Ambrosio*
- 3.4.11 Translational Hepatology - *Francisco Javier García-Samaniego Rey*



3.4 Large System Pathologies Area

Strategic Objectives	Development forecast for the coming years:	Actions
<p>Large System Pathologies Area includes 16 research groups that focus their interest on the study of pathogenic mechanisms and therapeutic options in some of the most prevalent diseases in our environment: respiratory, allergological, renal, digestive, gynaecological, and ophthalmological and paediatric, both in stable phase and at different levels of severity. In addition, we maintain interest in their involvement in the different phases of development, analyzing both the neonatal phase and old age.</p>	<p>Redefinition of the area with a more transversal character. Although this proposal requires a greater elaboration and consensus of all the groups in the area, the reformulation of the area is proposed as a new one focused, for example, on inflammation and hypoxia.</p>	<p>Conduct seminars and coordination meetings among groups of different areas</p>
	<p>Incorporation of related groups from other areas (immunorheumatology, hepatology, among others) and consolidation of some emerging groups.</p>	<p>Promote work and synergies with other research groups of the institute with a deeper trajectory</p>
	<p>To ensure that 50% of the publications are in the first quartile of each thematic area.</p>	<p>Improve the annual number of publications in the first quartile</p>
	<p>To promote intramural collaborations between groups.</p>	<p>Promote work and synergies with other research groups of the institute with a deeper trajectory.</p>

HIGH IMPACT PUBLICATIONS

Zamarrón E, Jaureguizar A, García-Sánchez A, Díaz-Cambriles T, Alonso-Fernández A, Lores V, Mediano O, Troncoso-Acevedo F, Cabello-Pelegriñ S, Morales-Ruiz E, Ramírez-Prieto MT, Valiente-Díaz MI, Gómez-García T, Casitas R, Martínez-Cerón E, Galera R, Cubillos-Zapata C, **García-Río F**. Continuous positive airway pressure effect on albuminuria progression in patients with obstructive sleep apnea and diabetic kidney disease a randomized clinical trial. *Am J Resp Crit Care*. 2023; 207(6): 757-67. Article. IF: 19,3; D1

Díaz-García E, Sanz-Rubio D, García-Tovar S, Alfaro E, Cubero P, Gil AV, Marín JM, **Cubillos-Zapata C**, **García-Río F**. Inflammasome activation mediated by oxidised low-density lipoprotein in patients with sleep apnoea and early subclinical atherosclerosis. *Eur Respir J*. 2023; 61(3): 2201401. Article. IF: 16,6; D1

Cubillos-Zapata C, Martínez-García MA, Díaz-García E, García-Tovar S, Campos-Rodríguez F, Sánchez-de-la-Torre M, Nagore E, Martorell-Calatayud A, Blasco LH, Pastor E, Abad-Capa J, Montserrat JM, Cabriada-Nuño V, Cano-Pumarega I, Corral-Peñañiel J, Arias E, Mediano O, Somoza-González M, Dalmau-Arias J, Almendros I, Farré R, Gozal D, **García-Río F**. Obstructive sleep apnoea is related to melanoma aggressiveness through paraspeckle protein-1 upregulation. *Eur Respir J*. 2023; 61(2): 2200707. Article. IF: 16,6; D1

Domínguez-Ortega J, **Luna-Porta J**, Olaguibel JM, Barranco P, Arismendi E, Barroso B, Betancor D, Bobolea I, Caballero ML, Cárdbaba B, Cruz MJ, Curto E, González-Barcala FJ, Losantos-García I, Martínez-Rivera C, Mendez-Brea P, Mullol J, Muñoz X, Picado C, Plaza V, del Pozo V, Rial MJ, Sastre J, Soto L, Valero A, Valverde-Monge M, **Quirce S**. Exacerbations among patients with asthma are largely dependent on the presence of multimorbidity. *J Invest Allerg Clin*. 2023; 33(4): 281-8. Article. IF: 6,1; Q1

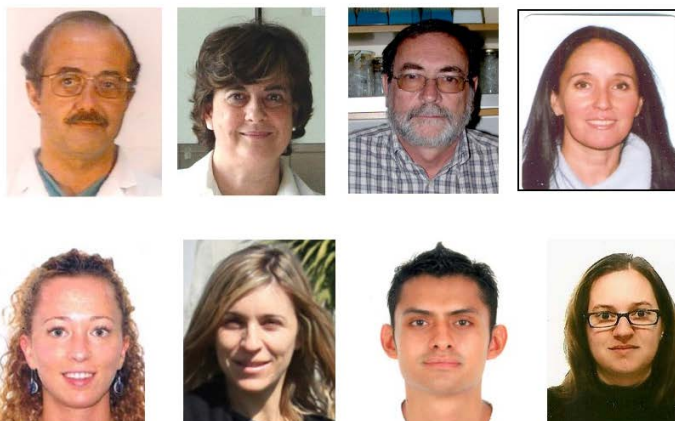
Nin-Valencia A, Fiandor A, Lluch M, Quirce S, Caballero T, Heredia RR, González-Muñoz M, Caballero ML, Cabañas R. Safe administration of SARS-CoV-2 vaccine after desensitization to a biologic containing polysorbate 80 in a patient with polyethylene glycol-induced severe anaphylaxis and sensitization to polysorbate 80. *J Invest Allerg Clin*. 2023; 33(2): 151-3. Article. IF: 6,1; Q1

Scientific Events by Large System Pathologies

- **17/02/2023**. Scientific Seminar - Tecnología altamente eficiente para un aire limpio y seguro: desarrollo de purificadores de aire avanzados para inactivar patógenos en aerosoles



3.4.1 Internal Medicine and Systemic Diseases Group



Publications: 29 | Q1:15

COMPOSITION

Francisco Arnalich Fernández.

Investigador "Ad Honorem". IdiPAZ. Catedrático. Facultad de Medicina UAM. Universidad Autónoma de Madrid

- **José Luis Cedillo Mireles.** Investigador Predoctoral (contrato FPU). Universidad Autónoma de Madrid
- **María del Carmen Fernández Capitán.** Jefa de Servicio de Medicina Interna. Profesora asociada ciencias de la Salud. Facultad Medicina UAM. Hospital Universitario La Paz
- **Clara Hernández Blanco.** Facultativo Especialista de Área en Medicina Interna. Hospital Universitario La Paz
- **Raquel Marín Baselga.** Facultativo Especialista de Área en Medicina Interna. Hospital Universitario La Paz

- **Carmen Montiel López.** Catedrática de Farmacología y Terapéutica. Facultad de Medicina, UAM. Universidad Autónoma de Madrid
- **Ramón Puchades Rincón de Arellano.** Facultativo Especialista de Área en Medicina Interna. Hospital Universitario La Paz
- **María Angustias Quesada Simón.** Facultativo Especialista de Área en Medicina Interna. Hospital Universitario La Paz. Profesora asociada ciencias de la Salud. Facultad Medicina UAM. Universidad Autónoma de Madrid
- **Juan José Ríos Blanco.** Director Médico Hospital Universitario La Paz. Profesor asociado ciencias de la Salud. Facultad Medicina UAM. Hospital Universitario La Paz
- **Yale Tung Chen.** Facultativo Especialista de Área en Medicina Interna. Hospital Universitario La Paz

STRATEGIC OBJETIVES

- The current lines of research in the Group are multiple and are in constant change and evolution. Some of the most relevant are indicated below, regarding the lines of research

RESEARCH LINES

• **SARS-COV-2 INFECTION: DIFFERENTIAL MANIFESTATIONS AND UPDATED TREATMENT**

Main objective

To study the clinical and microbiological evolution of COVID-19 in the different waves of the pandemic and compare the clinical characteristics between patients who require hospital admission due to their severity with those of those that can be treated on an outpatient basis. – To precise characterization of the behavior of COVID-19 currently, and provide clues about the most appropriate measures to take once social distancing measures can be relaxed without putting the population at risk. most vulnerable population

• **THROMBOEMBOLIC DISEASE. PREVENTION, DIAGNOSIS AND TREATMENT**

Main objectives:

Improve the diagnosis, treatment, prognosis and monitoring of patients with VTE.
Improve VTE prevention (Thromboprophylaxis).
Transmit our knowledge to Hospital and Primary Care professionals.
Spread knowledge of VTE to patients themselves and to society in general.

• **SYSTEMIC AUTOIMMUNE DISEASES: MECHANISMS, DIAGNOSIS AND CURRENT TREATMENTS.**

The research of this group focuses on four main areas.

Systemic lupus erythematosus, antiphospholipid syndrome and systemic sclerosis
Sjögren's syndrome, autoimmune manifestations of hepatitis C virus infection and biological therapies
Systemic vasculitis
Autoinflammatory diseases

• **HEART FAILURE. MECHANISMS, DIAGNOSIS, AND TREATMENT UPDATE:**

The The mechanisms of Coronary Microvascular Dysfunction (CMD) Leading to Preheart Failure with Preserved Ejection Fraction (HFpEF) aims to people with suspected cardiac ischemia but without obstructive coronary artery disease to understand better understand the associated risks of heart damage and early mortality, as well as potential targets for HFpEF treatment and prevention.

• **VASCULAR RISK AND INFLAMMATION: PREVENTION, DIAGNOSIS AND TREATMENT:**

In atherosclerosis, there is a hardening of the arteries and an accumulation of fat and cholesterol that prevents good blood flow. Despite these characteristics, during the first years of the disease, atherosclerosis may not show symptoms in the patient and, therefore, it is vitally important to identify new risk factors capable of predicting the evolution of the disease in people who do not yet manifest. clinical sequelae.



3.4 Large System Pathologies Area

- CLINICAL ULTRASOUND IN INTERNAL MEDICINE:** clinical ultrasound as another complementary tool for the internist (which helps him solve the specific problem for which the patient consults, what they call second level ultrasound, more exhaustive and usually performed by radiologists).
 Main objectives:
 Improve the clinical history and physical examination from this global and comprehensive approach.
 Promote the targeted use of clinical ultrasound in the consultation (point of care) to document the clinical diagnosis, making it more decisive and more effective
- DIGITAL MEDICINE**
 Digital Health Research is to investigate, develop and innovate in the use of Information and Communications Technologies (ICT) in Health, with the aim of improving the health and well-being of people. To carry out this activity, the Unit is currently organized into 4 areas: Interoperability and Information Systems, Platforms and Devices, Clinical Validation and Evaluation
 Lines of study framed in basic research projects:
 - Study of the pathophysiological role of nicotinic α 7 and dup- α 7 receptors expressed in human macrophages, neurons and lung carcinoma cells.
 - Identification of signalling pathways connecting nicotinic α 7 receptors and negative regulators of TLR-mediated inflammation in human macrophages.

RESEARCH ACTIVITY

Doctoral theses

- Fernández Capitán MC.** Tromboembolismo pulmonar subsegmentario. Prevalencia, características, evolución y pronóstico[dissertation]. Madrid: UAM: 2023(15/06/2023). Director: Rodríguez Cobo A.

Publications

- Abanades CS, Mozo AN, Hernan GB, Troncoso JA, Blanco JJR.** Macitentan for the treatment of refractory digital ulcers in patients with connective tissue diseases. *Cureus*. 2023; 15(4): e38303. Article. IF: 1.0; Q3
- Álvarez-Troncoso J, López-Caballero L, Robles-Marhuend A, Sota-Abánades C, Ríos-Blanco JJ.** Influence of vaccination and immunosuppressive treatments on the coronavirus disease 2019 outcomes in patients with systemic autoimmune diseases. *Eur J Intern Med*. 2023; 108: 114-6. Letter. IF: 5.9; Q1
- Álvarez-Troncoso J, Molina SC, Robles-Marhuenda A, Martínez-Robles E, Ríos-Blanco JJ,**

Therapeutic challenges and cardiovascular risk in patients with HMGR-associated immune-mediated necrotizing myopathy (HMGR-IMNM) secondary to statins. *Eur J Intern Med*. 2023; 114: 143-5. Letter. IF: 5.9; Q1

- Becattini C, Giustozzi M, Portillo J, Fernández-Capitán C, Lobo JL, Peris ML, Font C, Grange C, Weinberg I, Monreal M.** Acute venous thromboembolism in patients with brain cancer: clinical course. *Res Pract Thromb Haemost*. 2023; 7(6): e102172. Article. IF: 3.4; Q2
- Carpio C, Qasem A, Buño A, Borobia AM, Arnalich F, Rey V, Lázaro T, Mariscal P, Laorden D, Salgueiro G, Moreno A, Peiró C, Lorenzo O, Álvarez-Sala R.** Krebs von den Lungen-6 (KL-6) Levels in Post-COVID Follow-up: Differences according to the severity of COVID-19. *J Clin Med*. 2023; 12(19): 6299. Article. IF: 3.0; Q1
- Casas-Rojo JM, Antón-Santos JM, Millán-Núñez-Cortés J, Gómez-Huelgas R, Ramos-Rincón JM, Rubio-Rivas M, Corrales-González MA, Fernández-Madera-Martínez MR, Beato-Pérez JL, Arna-**

- lich-Fernández F, Gállego-Lezaun C, Pérez-Martínez P, Molinos-Castro S, Tung-Chen Y, Madrazo M, Méndez-Bailón M, Monge-Monge D, García-García GM, García-Fenoll R, Gilabert N, Fuerte-Martínez R, Contreras-Sánchez M, Rhyman N, Peris-García J, Lumbreras-Bermejo C.** Mortality reduction in older COVID-19-patients hospitalized in Spain during the second pandemic wave from the SEMI-COVID-19 Registry. *Sci Rep-Uk*. 2023; 13(1): 17731. Article. IF: 3.8; Q1
- Casas-Rojo JM, Ventura PS, Santos JMA, de Latierra AO, Arévalo-Lorido JC, Mauri M, Rubio-Rivas M, González-Vega R, Giner-Galvan V, Perpiñá BO, Fonseca-Aizpuru E, Muiño A, Del Corral-Beamonte E, Gómez-Huelgas R, Arnalich-Fernández F, Barrio ML, Sancha-Lloret A, Lorite IR, Loureiro-Amigo J, Pintos-Martínez S, García-Sardón E, Montaña-Martínez A, Rojano-Rivero MG, Ramos-Rincón JM, López-Escobar A.** Improving prediction of COVID-19 mortality using machine learning in the Spanish SEMI-COVID-19 registry. *Intern Emerg Med*. 2023; 18(6): 1711-22. Article. IF: 3.2; Q1
- Cepeda JG, Esteves AL, Marín-Baselga R, Tung-Chen Y.** The role of lung ultrasonography in the SARS-CoV-2 vaccines and variants era: a case report. *Med Ultrason*. 2023; 25(2): 237-8. Letter. IF: 1.8; Q3
- de la Calle GM, Reyne AG, Lora-Tamayo J, Míguez AM, Arnalich-Fernández F, Pérez JLB, Núñez JAV, Martínez MAC, Rivera NA, García EO, Moreno BS, Castro SJF, Rhyman N, Fontan PMP, Piles L, Caleyá JFL, Villarejo MEF, Jiménez-García N, Boixeda R, Noya AG, Gutiérrez AG, Oterino JAM, Huelgas RG, Santos JMA, Bermejo CL.** Impact of days elapsed from the onset of symptoms to hospitalization in COVID-19 in-hospital mortality: Time matters. *Rev Clin Esp*. 2023; 223(5): 281-97. Article. IF: 2.3; Q2
- Fanlo P, Gracia-Tello BD, Aizpuru EF, Álvarez-Troncoso J, González A, Prieto-González S, Freire M, Argibay AB, Pallarés L, Todoli**

- JA, Pérez M, Buján-Rivas S, Ibáñez B.** Efficacy and safety of anakinra plus standard of care for patients with severe COVID-19: A randomized phase 2/3 clinical trial. *JAMA Netw Open*. 2023; 6(4): e237243. Article. IF: 10.5; D1
- Gil-Rodrigo A, Tung-Chen Y, Llamas-Fuentes R.** Reply to "Comparative analysis of chest radiography and lung ultrasound to predict intra-hospital prognosis of patients admitted for acute SARS-CoV-2 pneumonia (COVID-19)". *Med Clin (Barc)*. 2023; 161(7): 314-5. Letter. IF: 2.6; Q1
- Gutiérrez-Rojas A, Tung-Chen Y, Hernández-Montero E, Eisenhofer A, Diego I.** Point-of-care ultrasound diagnosis of gastric outlet obstruction syndrome. *J Med Ultrason*. 2023; 31(1): 48-50. Article. IF: 0.9; Q4
- López CN, de Abreu JMG, Pérez-Blanco V, Buckley RD, Gómez MPR, Díaz-Menéndez M.** Effectiveness of the BNT162b2 mRNA Covid-19 vaccine in Spanish healthcare workers. *Enferm Infecc Micr Cl*. 2023; 41(1): 33-5. Article. IF: 2.6; Q3
- Marín-Baselga R, Sanz-Ortega C, Platero-Dueñas L, Sorriguieta-Torre R, Palma-Milla S, Tung-Chen Y.** Nutritional assessment by ultrasound of the rectus femoris and preperitoneal adipose tissue as predictors of hospitalized patient complications. *Rev Clin Esp*. 2023; 223(10): 640-6. Article. IF: 2.3; Q2
- Martínez-Sanz J, Díaz-Álvarez J, Rosas M, Ron R, Iribarren JA, Bernal E, Gutiérrez F, Sancho AR, Cabello N, Olalla J, Moreno S, Serrano-Villar S.** Expanding HIV clinical monitoring: the role of CD4, CD8, and CD4/CD8 ratio in predicting non-AIDS events. *Ebiomedicine*. 2023; 95: 104773. Article. IF: 9.7; D1
- Mathews RP, Panicker MR, Hareendranathan AR, Chen YT, Jaremko JL, Buchanan B, Narayan KV, Kesavadas C, Mathews G.** Unsupervised multi-latent space rl framework for video summarization in ultrasound imaging. *IEEE J Biomed Health*. 2023; 27(1): 227-38. Article. IF: 6.7; D1
- Montero-Pérez-Barquero M, Escobar-Cervantes C, Dávila-Ramos MF, Suárez-Pedreira I, Pérez-Silvestre J, Ceresuela-Eito LM, Muela-Molinero A, Quesada-Simón MA, Formiga**



- F, González-Franco A, Casado-Cerrada J.** Benefits of dapagliflozin in the whole spectrum of heart failure in clinical practice: the RICA registry. *Future Cardiol.* 2023; 19(6): 323-32. Article. IF: 1.6; Q3
- **Otero R, Lobo JL, López R, Fernández C, Jiménez D, Muriel A, Alfonso M, Ballaz A, Núñez-Ares A, Rodríguez-Matute C, de Miguel-Díez J, Rodríguez-Chiaradía DA, Alcalde M, Elías T, Jara-Palomares L, Rivas A, Alonso A, García-Ortega A, Sancho T, Morillo R, García-Bragado F, Hernández-Blasco L, Uresandi F, Madridano O, Agüero R, Monreal M.** Feasibility of a screening algorithm for chronic thromboembolic pulmonary hypertension: The OSIRIS study. *Thromb Res.* 2023; 228: 1-9. Article. IF: 3.7; Q1
 - **Ramos-Rincon JM, López-Sampalo A, Cobos-Palacios L, Ricci M, Rubio-Rivas M, Díaz-Simón R, Martín-Escalante MD, Castañeda-Pérez S, Fernández-Madera-Martínez R, Beato-Pérez JL, García-García GM, García-Andreu MD, Arnalich-Fernández F, Molinos-Castro S, Vargas-Núñez JA, Artero A, Freire-Castro SJ, Fernández-Gómez J, Cubo-Romano P, Hernández-Milián A, Inés-Revueña SM, Boixeda R, Fernández-Pedregal E, Gómez-Huelgas R.** Nosocomial COVID-19: A Nationwide Spanish Study. *Gerontology.* 2023; 69(6): 671-83. Article. IF: 3.1; Q3
 - **Rodríguez-Cobo A, Fernández-Capitán C, Tung-Chen Y, Salgueiro-Origlia G, Ballaz A, Bortoluzzi C, Sarlon-Bartoli G, Pesce ML, Najib D, Monreal M.** Clinical significance and outcome in patients with asymptomatic versus symptomatic subsegmental pulmonary embolism. *J Clin Med.* 2023; 12(4): 1640. Article. IF: 3.0; Q1
 - **Ruiz-Hueso R, Salamanca-Bautista P, Quesada-Simón MA, Yun S, Conde-Martel A, Morales-Rull JL, Suárez-Gil R, García-García JA, Llàcer P, Fonseca-Aizpuru EM, Amores-Arriaga B, Martínez-González A, Armengou-Arxe A, Peña-Somovilla JL, López-Reboiro ML, Aramburu-Bodas O.** Estimating the prevalence of cardiac amyloidosis in old patients with heart failure-barriers and opportunities for improvement: The PREVAMIC Study. *J Clin Med.* 2023; 12(6): 2273. Article. IF: 3.0; Q1
 - **Sultan LR, Haertter A, Al-Hasani M, Demiris G, Cary TW, Tung-Chen Y, Sehgal CM.** Can artificial intelligence aid diagnosis by teleguided point-of-care ultrasound? a pilot study for evaluating a novel computer algorithm for covid-19 diagnosis using lung ultrasound. *AI (Basel).* 2023; 4(4): 875-87. Article. Not indexed
 - **Tolosa-Vilella C, Rodero-Roldán MD, Guillén-del-Castillo A, Ballvé AM, Boldova-Agaur R, Marí-Alfonso B, Feijoo-Massó C, Colunga-Argueelles D, Rubio-Rivas M, Trapiella-Martínez L, Iniasta-Arandia N, Callejas-Moraga E, García-Hernández EJ, Sáez-Comet L, González-Echávarri C, Ortega-Centeno N, Freire M, Vargas-Hitos JA, Ríos-Blanco JJ, Todolí-Parra JA, Rodríguez-Pintó I, Chamorro AJ, Pla-Salas X, Madoño-Vuelta AB, Ruiz-Muñoz M, Fonollosa-Pla V, Simeón-Aznar CP.** Nailfold videocapillaroscopy patterns in systemic sclerosis: implications for cutaneous subsets, disease features and prognostic value for survival. *Clin Exp Rheumatol.* 2023; 41(8): 1695-1703. Article. IF: 3.4; Q2
 - **Torres-Arrese M, Mata-Martínez A, Luordo-Tedesco D, García-Casasola G, Alonso-González R, Montero-Hernández E, Cobo-Marcos M, Sánchez-Sauce B, Cuervas-Mons V, Tung-Chen Y.** Usefulness of systemic venous ultrasound protocols in the prognosis of heart failure patients: results from a prospective multicentric study. *J Clin Med.* 2023; 12(4): 1281. Article. IF: 3.0; Q1
 - **Torres-Arrese M, Mata-Martínez A, Luordo-Tedesco D, García-Casasola-Sánchez G, Montero-Hernández E, Cobo-Marcos M, Tejada-Jurado F, Berrocal-Espinosa P, Martínez-Ballester JF, Tung-Chen Y.** Role of the femoral vein doppler in acute heart failure patients: results from a prospective multicentric study. *Rev Clin Esp.* 2023; 223(6): 359-65. Article. IF: 2.3; Q2
 - **Troncoso JA, Abanades CS, Marhuenda AR, Robles EM, Mozo AN, Gómez RF, David EP, Blanco JJR.** Cardiac involvement in a Spanish unicentric prospective cohort of patients with systemic lupus erythematosus. *Lupus.* 2023; 32(1): 111-8. Article. IF: 1.9; Q3
 - **Tung-Chen Y, Pérez MR, Huimann PH, Sanz-Lozano M, Sorados RT.** Usefulness of the Water-Bath Technique in Ultrasound Skin Imaging. *Actas Dermosifiliogr.* 2023; 114(9): T844-5. Letter. IF: 3.8; Q1
 - **Vázquez D, Arroja S, Cruz SG, Santos IF, Chen YT.** Evaluation of venous congestion by point-of-care ultrasound: state of the art. *Med Intern.* 2023; 30(2): 39-46. Review. Not indexed
 - **Yi TW, Smyth B, Di Tanna GL, Arnott C, Cardoza K, Kang A, Pollock C, Agarwal R, Bakris G, Charytan DM, de Zeeuw D, Heerspink HJL, Neal B, Wheeler DC, Cannon CP, Zhang H, Zinman B, Perkovic V, Levin A, Mahaffey KW, Jardine M.** Kidney and cardiovascular effects of canagliflozin according to age and sex: a post hoc analysis of the CREDENCE randomized clinical trial. *Am J Kidney Dis.* 2023; 82(1): 84-96. Article. IF: 9.4; D1

Research projects

- **Ríos Blanco JJ.** Estudio de hipertensión pulmonar en la cohorte de pacientes con infección VIH del Hospital La Paz. Glaxosmithkline S.A. 2010-Ongoing. *Management centre: FIBHULP*
- **Arnalich Fernández F.** Estudio de disfunción ventricular precoz en pacientes con esclerodermia. Glaxosmithkline S.A. 2011-Ongoing. *Management centre: FIBHULP*
- **Escribano Subías MP.** Hacia una clasificación ómica en la hipertensión arterial pulmonar (P121/01690). ISCIII. 2022-2024. *Management centre: UCM*



3.4.2 Organic Dysfunction and Failure in the Aggression Group

Publications:19 | Q1:14

COMPOSITION

José Manuel Añón Elizalde.

Jefe de Servicio en Medicina Intensiva. Hospital Universitario La Paz

- **Alejandro Agrifoglio Rotaeché.** Facultativo Especialista de Área en Medicina Intensiva. Hospital Universitario La Paz
- **María Soledad Arellano Serrano.** Facultativo Especialista de Área en Medicina Intensiva. Hospital Universitario La Paz
- **María José Asensio Martín.** Jefa de Sección en Medicina Intensiva. Hospital Universitario La Paz
- **Lucía Cachafeiro Fuciños.** Facultativo Especialista de Área en Medicina Intensiva. Hospital Universitario La Paz
- **Belén Civantos Martín.** Facultativo Especialista de Área en Medicina Intensiva. Hospital Universitario La Paz
- **Claudia Díaz Alvario.** Facultativo Especialista de Área en Medicina Intensiva. Hospital Universitario La Paz
- **María Belén Estebáñez Montiel.** Facultativo Especialista de Área en Medicina Intensiva. Coordinador de Trasplante. Hospital Universitario La Paz
- **Juan Carlos Figueira Iglesias.** Jefe de Sección en Medicina Intensiva. Hospital Universitario La Paz
- **Eva Mercedes Flores Cabeza.** Facultativo Especialista de Área en Medicina Intensiva. Hospital Universitario La Paz
- **Andoni García Muñoz.** Facultativo Especialista de Área en Medicina Intensiva. Hospital Universitario La Paz
- **Mónica Hernández Bernal.** Médico Adjunto Especialista en Unidad de Cuidados Intensivos. Hospital Universitario La Paz
- **Gonzalo Hernández Martínez.** Facultativo Especialista de Área en Medicina Intensiva. Hospital Universitario de Toledo
- **Alba López Fernández.** Facultativo Especialista de Área en Medicina Intensiva. Hospital Universitario La Paz
- **Jesús Javier Manzanares Gómez.** Facultativo Especialista de Área en Medicina Intensiva. Hospital Universitario La Paz
- **Pablo Millán Estañ.** Facultativo Especialista de Área en Medicina Intensiva. Hospital Universitario La Paz
- **Kapil Laxman Nanwani Nanwani.** Facultativo Especialista de Área en Medicina Intensiva. Hospital Universitario La Paz
- **Eva Perales Ferrera.** Facultativo Especialista de Área en Medicina Intensiva. Hospital Universitario La Paz
- **Montserrat Aránzazu Rodríguez Aguirregabiria.** Facultativo Especialista de Área en Medicina Intensiva. Hospital Universitario La Paz
- **Jorge Rodríguez Peláez.** Facultativo Especialista de Área en Medicina Intensiva. Hospital Universitario La Paz
- **Santos Manuel Sánchez Sánchez.** Jefe de Sección de Medicina Intensiva. Hospital Universitario La Paz
- **Santiago Yus Teruel.** Facultativo Especialista de Área en Medicina Intensiva. Hospital Universitario La Paz



STRATEGIC OBJETIVES

- The global objective of the investigation team on DYSFUNCTION AND ORGAN FAILURE IN AGGRESSION is the optimization of the patient management in the really critical ill patients who can develop Organ Dysfunction or Organ Failure. Multiorgan Dysfunction & Multiorgan Failure Syndrome (MOF-MOD Syndrome) are correlated with bad prognostic and high mortality rates
- D-FMO Syndrome is correlated both with the disease severity and the therapeutic efforts. The therapeutic management of the patient must be early and directed to specific objectives
- Otherwise, the support measures must be directed to the specific situations (like sepsis, trauma ...) and to the Organs or Systems in Dysfunction or Failure (coagulation, haemodynamic, respiratory or renal ...) Finally, the detection or D-FMO Syndrome employing not only single markers (clinic) but early and organ specific biomarkers (basic or advanced biochemical markers, molecular markers ...) can bring a higher efficacy and better results
- Finally, the detection or D-FMO Syndrome employing not only single markers (clinic) but early and organ specific biomarkers (basic or advanced biochemical markers, molecular markers ...) can bring a higher efficacy and better results



3.4 Large System Pathologies Area



RESEARCH LINES

- Biomarkers
- Resuscitation income
- Therapeutic support
- Mechanical ventilation
- Artificial airway
- Post-Intensive Care Syndrome
- Sedation

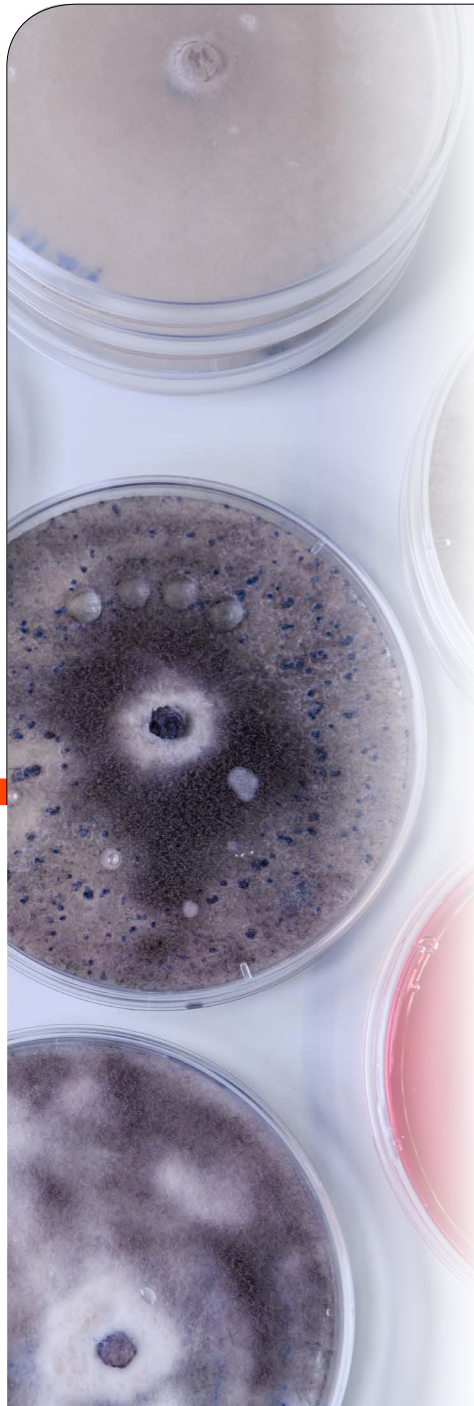
RESEARCH ACTIVITY

Publications

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3.4 Large System Pathologies Area



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- **Yébenes-Calvo R, Díez-Vidal A, Liras-Hernández MG, Civantos-Martín B.** Abdominal sepsis in an immunocompromised patient. *Enferm Infecc Microbiol Clin*. 2023; 41(4): 243-4. Editorial Material. IF: 2.6; Q3

Clinical trials

- **Cachafeiro Fuciños, Lucía.** ensayo en fase iii aleatorizado, comparado con placebo, doble ciego y multicéntrico, para evaluar la eficacia y la seguridad de la trimodulina (bt588) en sujetos adultos hospitalizados con neumonía grave adquirida en la comunidad (ngac).
Type/Phase: III
Sponsored by: Biotech Ag
Signed date: 28/11/2023

Patents and trademarks

- **Herrero Ambrosio A, Ramírez García E, Ojeda Feo JJ, Pérez Rodríguez J, Asensio Martín MJ, González Sánchez ML, Moro Agud M, Lorente Romeo M, López Nieto M, Gómez Rioja R, authors.** FIBHULP, assignee. Trademark name: SINOIRES; CM 13.080.056; 2014 July 14.





3.4.3 Respiratory Diseases Group



Publications: 35 | Q1:21

COMPOSITION

Francisco José García Río.

Jefe de Sección de Neumología. Hospital Universitario La Paz. Catedrático de Universidad. Facultad de Medicina. Universidad Autónoma de Madrid

Carolina Cubillos Zapata.

Investigadora Postdoctoral. Contrato Miguel Servet tipo I. Hospital Universitario La Paz

- **Sergio Alcolea Batres.** Facultativo Especialista de Área en Neumología. Hospital Universitario La Paz
- **Enrique Alfaro García.** Investigador Predoctoral. FIBHULP
- **Rodolfo Álvarez-Sala Walther.** Jefe de Servicio de Neumología. Hospital Universitario La Paz. Catedrático. Facultad de Medicina. Universidad Autónoma de Madrid
- **Juan José Cabanillas Martín.** Facultativo Especialista de Área en Neumología. Hospital Universitario La Paz
- **Carlos Javier Carpio Segura.** Facultativo Especialista de Área en Neumología. Hospital Universitario La Paz
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- **Elena Díaz García.** Investigador Posdoctoral. CIBERER
- **Raúl Galera Martínez.** Facultativo Especialista de Área en Neumología. Hospital Universitario La Paz
- **Luis Gómez Carrera.** Jefe de Sección de Neumología. Hospital Universitario La Paz
- **María Antonia Gómez Mendieta.** Facultativo Especialista de Área en Neumología. Hospital Universitario La Paz
- **Ana Jaureguizar Oriol.** Facultativo Especialista de Área en Neumología. Hospital Universitario La Paz
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- **Elisabet Martínez Cerón.** Facultativo Especialista de Área en Neumología. Hospital Universitario La Paz
- **Paula Pérez Moreno.** Investigadora Predoctoral. Hospital Universitario La Paz
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- **David Romero Ribate.** Facultativo Especialista de Área en Neumología. Hospital Universitario La Paz
- **Ana Santiago Recuerda.** Facultativo Especialista de Área en Neumología. Hospital Universitario La Paz
- **Carlos Villasante Fernández-Montes.** Jefe de Sección de Neumología. Hospital Universitario La Paz
- **Ester Zamarrón de Lucas.** Facultativo Especialista de Área en Neumología. Hospital Universitario La Paz

STRATEGIC OBJETIVES

- Our group studies the molecular mechanisms of cardiovascular morbidity associated with sleep breathing disorders, in particular, the sleep apnoeahypopnea syndrome(SAHS).
- We also provide evidence for making clinical decisions on patients with these disorders. We conduct studies to evaluate the mechanisms involved in the development of arterial hypertension, arrhythmias, heart failure, ischaemic heart disease, pulmonary hypertension, pulmonary embolism, and carbohydrate metabolism disorders.
- In terms of the pathogenesis of airflow limitations, several of our projects have focused on small airway function, bronchial hyperresponsiveness and exercise adaptation in a number of obstructive diseases, particularly COPD, asthma and cystic fibrosis. We also evaluate the objective measurement of daily physical activity in these patients and contribute to the best definition of its determinants and its clinical and prognostic usefulness. We collaborate with other research groups to study the contribution of the innate immune system to the evolution of these diseases and the relationship between the response to hypoxia and the clinical expression of COPD and SAHS.
- Finally, in the field of the systematisation of lung function testing, we create reference values for various population groups and define the methodological aspects of the measurement of exhaled breath condensate and nitric oxide.

RESEARCH LINES

- Morbidity of sleep-disordered breathing
- Pathogenesis of airflow limitation
- Systematization of lung function testing



3.4 Large System Pathologies Area

RESEARCH ACTIVITY

Doctoral theses

- **Mariscal Aguilar PM.** Relación entre los niveles de contaminación atmosférica con la historia natural y mortalidad de la fibrosis pulmonar idiopática[dissertation]. *Madrid: UAM: 2023(05/07/2023). Director: Álvarez-Sala Walther R, Gomez Carrera L.*

Publications

- **Bhakta NR, MCGOWAN A, Ramsey KA, Borg B, Kivastik J, Knight SL, Sylvester K, Burgos F, Swenson ER, McCarthy K, Cooper BG, García-Río F, Skloot G, McCormack M, Mottram C, Irvin CG, Steenbruggen I, Coates AL, Kaminsky DA.** European Respiratory Society/American Thoracic Society technical statement: standardisation of the measurement of lung volumes, 2023 update. *Eur Respir J.* 2023; 62(4): 2201519. Article. IF: 16.6; D1
- **Blanco-Aparicio M, García-Río EJ, González-Barcala Francisco J, Jiménez-Ruiz CA, Muñoz X, Plaza V, Soto-Campos JG, Urrutia-Landa I, Almonacid C, Peces-Barba G, Álvarez-Gutiérrez EJ.** A study of the prevalence of asthma in the general population in Spain. *Open Respir Arch.* 2023; 5(2): 100245. Article. Not indexed
- **Bravo-Queipo-de-Llano B, García LS, Casas I, Pozo F, La Banda L, Alcolea S, Atucha J, Sánchez-León R, Pellicer A, Calvo C.** Surveillance of viral respiratory infections in the neonatal intensive care unit-evolution in the last 5 years. *Pathogens.* 2023; 12(5): 644. Article. IF: 3.3; Q2
- **Carpio C, Qasem A, Buño A, Borobia AM, Arnalich F, Rey V, Lázaro T, Mariscal P, Laorden D, Salgueiro G, Moreno A, Peiró C, Lorenzo O, Álvarez-Sala R.** Krebs von den Lungen-6 (KL-6) levels in post-covid follow-up: differences according to the severity of COVID-19. *J Clin Med.* 2023; 12(19): 6299. Article. IF: 3.0; Q1
- **Castillo EG, Pérez TA, Peláez A, González PP, Miravittles M, Alfageme I, Casanova C, Cosío BG, de Lucas P, García-Río F, González-Moro**

- JMR, Soler-Cataluña JJ, Sánchez G, Soriano JB, Ancochea J.** Trends of COPD in Spain: changes between cross sectional surveys 1997, 2007 and 2017. *Arch Bronconeumol.* 2023; 59(3): 142-51. Article. IF: 8.7; D1
- **Cosío BG, Casanova C, Soler-Cataluña JJ, Soriano JB, García-Río F, de Lucas P, Alfageme I, González-Moro JMR, Sánchez G, Ancochea J, Miravittles M.** Unravelling young COPD and pre-COPD in the general population. *ERJ Open Res.* 2023; 9(1): 00334-2022. Article. IF: 4.3; Q1
- **Cubillos-Zapata C, Martínez-García MA, Díaz-García E, García-Tovar S, Campos-Rodríguez F, Sánchez-de-la-Torre M, Nagore E, Martorell-Calatayud A, Blasco LH, Pastor E, Abad-Capa J, Montserrat JM, Cabriada-Nuño V, Cano-Pumarega I, Corral-Peñafiel J, Arias E, Mediano O, Somoza-González M, Dalmau-Arias J, Almendros I, Farré R, Gozal D, García-Río F.** Obstructive sleep apnoea is related to melanoma aggressiveness through paraspeckle protein-1 upregulation. *Eur Respir J.* 2023; 61(2): 2200707. Article. IF: 16.6; D1
- **Díaz-García E, García-Sánchez A, Alfaro E, López-Fernández C, Mañas E, Cano-Pumarega I, López-Collazo E, García-Río F, Cubillos-Zapata C.** PSG-1: a novel immune checkpoint driving T-cell dysfunction in obstructive sleep apnea. *Front Immunol.* 2023; 14: 1277551. Article. IF: 5.7; Q1
- **Díaz-García E, García-Sánchez A, Sanz-Rubio D, Alfaro E, López-Fernández C, Casitas R, Baena EM, Cano-Pumarega I, Cubero P, Marin-Oto M, López-Collazo E, Marin JM, García-Río F, Cubillos-Zapata C.** SMAD4 expression in monocytes as a potential biomarker for atherosclerosis risk in patients with obstructive sleep apnea. *Int J Mol Sci.* 2023; 24(9): 7900. Article. IF: 4.9; Q1
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- **Díaz-García E, Sanz-Rubio D, García-Tovar S, Alfaro E, Cubero P, Gil AV, Marin JM, Cubillos-Zapata C, García-Río F.** Inflammasome activation mediated by oxidised low-density lipoprotein in patients with sleep apnoea and early subclinical atherosclerosis. *Eur Respir J.* 2023; 61(3): 2201401. Article. IF: 16.6; D1
- **Gainza-Miranda D, Sanz-Peces EM, Cerdeira MV, Sánchez CP, Alonso-Babarro A.** Effectiveness of the integration of a palliative care team in the follow-up of patients with advanced chronic obstructive pulmonary disease: The home obstructive lung disease study. *Heart Lung.* 2023; 62: 186-92. Article. IF: 2.4; Q2
- **García-Martínez D, López-Rey JM, Gil OG, Cambra-Moo O, Notario B, Torres-Sánchez I, García-Río F, Bastir M, Martín AG.** How accurate are medical CT and micro-CT techniques compared to classical histology when addressing the growth of the internal rib parameters? *Anthropol Anz.* 2023; 80(3): 307-16. Article. IF: 0.4; Q3
- **García-Río F, Miravittles M, Soriano JB, Cosío BG, Soler-Cataluña JJ, Casanova C, de Lucas P, Alfageme I, González-Moro JMR, Herrero MGS, Ancochea J.** Prevalence of reduced lung diffusing capacity and CT scan findings in smokers without airflow limitation: a population-based study. *BMJ Open Respir Res.* 2023; 10(1): e001468. Article. IF: 3.6; Q1
- **García-Río F, Miravittles M, Soriano JB, Cosío BG, Soler-Cataluña JJ, Casanova C, de Lucas P, Alfageme I, González-Moro JMR, Herrero MGS, Ancochea J.** Dissociation between physical capacity and daily physical activity in COPD patients. A population-based approach. *Resp Med.* 2023; 207: 107115. Article. IF: 3.5; Q2
- **Gómez-Olivas JD, Campos-Rodríguez F, Nagore E, Martorell A, García-Río F, Cubillos C, Hernández L, Bañuls J, Arias E, Ortiz P, Cabriada V, Gardeazabal J, Montserrat JM, Carrera C, Masa JF, de Terreros JG, Abad J, Boada A, Mediano O, Castillo-García M, Chiner E, Landete P, Mayos M, Fortuna A, Barbé F, Sánchez-de-la-Torre M, Cano-Pumarega I, Pérez-Gil A, Gómez-García T, Cullen D, Somoza M, Formigón M, Aizpuru F, Oscullo G,**

- García-Ortega A, Almendros I, Farré R, Gozal D, Martínez-García MA.** Role of sleep apnea and long-term cpap treatment in the prognosis of patients with melanoma: a prospective multicenter study of 443 patients. *Chest.* 2023; 164(6): 1551-9. Article. IF: 9.5; D1
- **Hernández LC, Moreno RMG, Cartagena MNB, Peláez A, Sole A, Fernández AA, Montiel AF, Oliveira C, Oliveira G, Bonilla AG, Crespo BG, Clemente MG, García MS, Vázquez JQ, Castro EB, González JR, Marrero AE, Diab-Cáceres L, Hernández CR, de Lucas EZ, Sánchez CP, Aparicio MB, Neyra AL, Santiago VS, Paredes CL, Pecellin ID, de la Cruz OA, Gallego EQ.** Experience with elexacaftor/tezacaftor/ivacaftor in patients with cystic fibrosis and advanced disease. *Arch Bronconeumol.* 2023; 59(9): 556-65. Article. IF: 8.7; D1
- **Jiménez Ruiz CA, Pitti-Pérez R, de Granada-Orive JI, Pastor-Espla E, Solano-Reina S, Gorordo-Unzueta I, Mirambeaux-Villalona R, De Higes-Martínez E, Riesco-Miranda JA, Ramírez-Prieto MT, García-Río F, Rabade-Castedo C.** Prevalence, knowledge and perceptions of smoking and tobacco products and vape among SEPAR members. *Open Respir Arch.* 2023; 5(4): 100260. Article. Not indexed
- **Laorden D, Domínguez-Ortega J, Carpio C, Barranco P, Villamañán E, Romero D, Quirce S, Álvarez-Sala R.** Long COVID outcomes in an asthmatic cohort and its implications for asthma control. *Resp Med.* 2023; 207: 107092. Article. IF: 3.5; Q2
- **Laorden D, Zamarrón E, Romero D, Domínguez-Ortega J, Villamañán E, Losantos I, Gayá F, Quirce S, Álvarez-Sala R.** Evaluation of FEOS score and super-responder criteria in a real-life cohort treated with anti-IL5/IL5R. *Resp Med.* 2023; 211: 107216. Article. IF: 3.5; Q2
- **López-Rey JM, García-Martínez D, Martelli S, Beyer B, Palancar CA, Torres-Sánchez I, García-Río F, Bastir M.** Estimation of the upper diaphragm in KNM-WT 15000 (Homo erectus s.l.) and Kebara 2 (Homo neanderthalensis) using a Homo sapiens model. *J Hum Evol.* 2023; 185: 103442. Article. IF: 3.1; Q2



3.4 Large System Pathologies Area

- **Mangas-Moro A, Zamarrón-de-Lucas E, Carpio-Segura CJ, Álvarez-Sala-Walther R, Arribas-López JR, Hosp Univ La Paz.** Impact and characteristics of hospital-acquired influenza over 10 seasons in a third-level university hospital. *Enferm Infecc Microbiol Clin.* 2023; 41(7): 391-5. Article. IF: 2.6; Q3
 - **Mariscal-Aguilar P, Gómez-Carrera L, Carpio C, Zamarrón E, Bonilla G, Fernández-Velilla M, Torres I, Esteban I, Rejojo R, Díaz-Almirón M, Gayá F, Villamañán E, Prados C, Álvarez-Sala R.** Relationship between air pollution exposure and the progression of idiopathic pulmonary fibrosis in Madrid: Chronic respiratory failure, hospitalizations, and mortality. A retrospective study. *Front Public Health.* 2023; 11: 1135162. Article. IF: 3.0; Q2
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 - **Solano-Pérez E, Coso C, Castillo-García M, Romero-Peralta S, López-Monzoni S, Laviña E, Cano-Pumarega I, Sánchez-de-la-Torre M, García-Río F, Mediano O.** Diagnosis and treatment of sleep apnea in children: a future perspective is needed. *Biomedicines.* 2023; 11(6): 1708. Review. IF: 3.9; Q2
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- Research projects**
- **Álvarez-Sala Walther R.** Actualización y renovación de la actividad investigadora en el servicio de neumología del Hospital Universitario La Paz. Chiesi España S.A. 2015-Ongoing. *Management centre: FIBHULP*
 - **Casitas Mateo R.** Efecto a largo plazo de la promoción de la actividad física sobre las características clínicas y riesgo metabólico-vascular en pacientes con apnea obstructiva del sueño leve-moderada (Estudio PASOS). NEUMOMADRID. 2022-2023. *Management centre: NEUMOMADRID*
 - **Cubillos Zapata C.** El papel del inflammasoma en el progreso de las comorbilidades en pacientes con apnea obstructiva del sueño (CP18/00028). ISCIII. 2019-2023. *Management centre: FIBHULP*
 - **Cubillos Zapata C.** Identificación del riesgo de cáncer en pacientes con apnea obstructiva del sueño con la detección de inmunocheckpoints (P119/01363). ISCIII. 2020-2024. *Management centre: FIBHULP*
 - **Cubillos Zapata C.** Investigo Técnico. CM. 2022-2024. *Management centre: FIBHULP*
 - **Cubillos Zapata C.** Mecanismos de la activación y control del inflammasoma en la generación de comorbilidades en la apnea obstructiva del sueño (PI22/01257). ISCIII. 2022-2025. *Management centre: FIBHULP*
 - **Cubillos Zapata C.** Mecanismos de la activación y control del inflammasoma en la generación de comorbilidades en la apnea obstructiva del sueño (PI22/01257). ISCIII. 2023-2025. *Management centre: FIBHULP*
 - **Galera Martínez R.** evaluación del perfil de hipermetilación de microRNAs para la estimación de riesgo de cáncer de pulmón en pacientes con EPOC (PI22/01764). ISCIII. 2023-2025. *Management centre: FIBHULP*
 - **Galera Martínez R.** Evaluación del perfil de hipermetilación de microRNAs para la estimación del riesgo de cáncer de (PI22/01764). ISCIII. 2022-2025. *Management centre: FIBHULP*
 - **García Río F.** Análisis de la actividad del sistema inmune innato en pacientes con síndrome de apneas-hipopneas del sueño grave. Roche Farma S. A. 2014-Ongoing. *Management centre: FIBHULP*
 - **García Río F.** Análisis de la actividad física cotidiana en pacientes con síndrome de apneas-hipopneas del sueño. AIA Product t Sud Europa S.L. 2007-Ongoing. *Management centre: FIBHULP*
 - **García Río F.** Contribución de las alteraciones de la percepción de la disnea al diagnóstico de asma ficticio en obesos. Astrazeneca Farmacéutica Spain S. A. 2009-Ongoing. *Management centre: FIBHULP*
 - **García Río F.** Evaluación de la repercusión funcional y morfológica a medio-largo plazo del síndrome de distrés respiratorio agudo grave secundario a COVID-19. NEUMOMADRID. 2021-2023. *Management centre: NEUMOMADRID*
 - **García Río F.** Evaluación de las vías patogénicas de la asociación apnea del sueño y cáncer para una medicina de precisión (PI22/01262). ISCIII. 2022-2025. *Management centre: FIBHULP*
 - **García Río F.** Evaluación de las vías patogénicas de la asociación apnea del sueño y cáncer para una medicina de precisión (PI22/01262). ISCIII. 2023-2025. *Management centre: FIBHULP*
 - **García Río F.** Identificación de mecanismos, biomarcadores e intervenciones en comorbilidad en enfermedades respiratorias hipoxémicas mediante abordajes preclínicos, clínicos y computacionales (S2022/BMD-7224). CM. 2023-2026. *Management centre: FIBHULP*



3.4 Large System Pathologies Area



- **García Río F.** Identificación de Mecanismos, Biomarcadores e Intervenciones en comorbilidad en Enfermedades Respiratorias Hipoxémicas mediante abordajes preclínicos, clínicos y computacionales. (P2022/BMD7224). CM. 2022-2025. *Management centre: UAM*
- **García Río F.** Relación entre la actividad física cotidiana de pacientes con EPOC y la actividad de su sistema inmune innato y adaptativo. Identificación de biomarcadores pronósticos (PI19/01612). ISCIII. 2020-2023. *Management centre: FIBHULP*
- **Gómez Carrera L.** Auditoría clínica sobre manejo de fibrosis pulmonar idiopática en el área sanitaria del Hospital La Paz. Boehringer Ingelheim España S. A. 2016-Ongoing. *Management centre: FIBHULP*

Cibers and Retics

- **CB15/00037 García Río F.** CIBER de Enfermedades Respiratorias. (CIBERes). ISCIII. (31/12/2025). FIBHULP

Clinical trials

- **Alcolea Batres S.** Estudio de extensión abierto para evaluar la seguridad, tolerabilidad y eficacia del uso a largo plazo de treprostinil palmitilo en polvo para inhalación en pacientes con hipertensión arterial pulmonar. *Type/Phase: II*
Sponsored by: Insmed Incorporated
Signed date: 15/02/2023
- **Alcolea Batres S.** Estudio de fase 2, aleatorizado, doble ciego, multicéntrico y controlado con placebo para evaluar la seguridad y tolerabilidad de treprostinil palmitilo en polvo para inhalación en pacientes con hipertensión pulmonar asociada a enfermedad pulmonar intersticial. *Type/Phase: II*
Sponsored by: Insmed Incorporated
Signed date: 05/05/2023
- **Alcolea Batres S.** Estudio de fase 2, aleatorizado, doble ciego, multicéntrico y controlado con placebo para evaluar la seguridad y tolerabilidad de

treprostinil palmitilo en polvo para inhalación en pacientes con hipertensión pulmonar asociada a enfermedad pulmonar intersticial.

Type/Phase: II
Sponsored by: Insmed Incorporated
Signed date: 04/10/2023

- **Carpio Segura CJ.** A multi-cohort, randomised, placebo-controlled phase 2a study to assess the safety, pharmacokinetics, pharmacodynamics and clinical activity of ascending doses of rxc007 in patients with idiopathic pulmonary fibrosis. *Type/Phase: IIa*
Sponsored by: Redx Pharma Plc
Signed date: 18/01/2023
- **Carpio Segura CJ.** Estudio de fase 3, aleatorizado, controlado con placebo, con doble ciego y de grupos paralelos para evaluar la eficacia, la seguridad y la tolerabilidad de sar440340/regn3500/itepekimab (anti-il-33) en pacientes con enfermedad pulmonar obstructiva crónica (epoc) de moderada a grave. *Type/Phase: III*
Sponsored by: Sanofi-Aventis Recherche & Development
Signed date: 23/03/2023
- **Carpio Segura CJ.** Estudio de fase 3, aleatorizado, doble ciego y controlado con placebo para evaluar la eficacia, la seguridad y la tolerabilidad de brensocatib administrado una vez al día durante 52 semanas en sujetos con bronquiectasias sin fibrosis quística: estudio aspen. *Type/Phase: III*
Sponsored by: Insmed Incorporated
Signed date: 20/07/2023
- **Fernández Juárez GM.** Estudio de fase III, multicéntrico, aleatorizado, doble ciego, controlado con placebo para evaluar la eficacia y la seguridad de ro7434656, un inhibidor antisentido del factor b del complemento, en pacientes con nefropatía por iga primaria con alto riesgo de progresión. *Type/Phase: III*
Sponsored by: F.Hoffmann-La Roche Ltd
Signed date: 11/12/2023

- **García Río FJ.** A phase III, randomized, double-blind, placebo-controlled, multicenter study to evaluate the efficacy and safety of astegolimab in patients with chronic obstructive pulmonary disease. *Type/Phase: III*
Sponsored by: F.Hoffmann-La Roche Ltd
Signed date: 28/06/2023
- **Gómez Carrera L.** A multicenter, randomized, double-blind, placebo-controlled, phase 3 study to evaluate the efficacy, safety, and tolerability of bms-986278 in participants with idiopathic pulmonary fibrosis (ipf). *Type/Phase: III*
Sponsored by: Bristol Myers Squibb, S.A.U. Bristol-Myers Squibb Services Unlimited Company
Signed date: 24/07/2023
- **Romero Ribate D.** Estudio de cohortes retrospectivo para evaluar el impacto de un programa de apoyo al paciente en pacientes con asma grave tratados con benralizumab en vida real en España. estudio galerna. *Type/Phase: EPA-OD*
Sponsored by: Astrazeneca Farmaceutica Spain S.A.
Signed date: 18/04/2023
- **Zamarron de Lucas E.** Registro nacional de antibióticos inhalados en patología crónica de la vía aérea. *Type/Phase: EOm prospectivo*
Sponsored by: Respira. Fundación Española Del Pulmón.Separ
Signed date: 06/09/2023

Patents and trademarks

- **Díaz García E, Laxman Nanwani K, Quintana Díaz M, García Río F, Cubillos-Zapata C, inventors; FIBHULP, CIBER, assignees.** Biomarcadores para el pronóstico de pacientes que han sufrido una hemorragia subaracnoidea aneurismática (SAH). P202130180; 2021 March 3.



3.4.4 Regulation of Gene Expression and by Hypoxia Group



COMPOSITION

Luis del Peso Ovalle.

Profesor Titular. Departamento de Bioquímica. Facultad de Medicina. Universidad Autónoma de Madrid

- **Benilde Jiménez Cuenca.** Profesor Titular. Departamento de Bioquímica Facultad de Medicina. Universidad Autónoma de Madrid

STRATEGIC OBJECTIVES

- La homeostasis del oxígeno, central en fisiología, se encuentra alterada en patologías de alta incidencia tales como las enfermedades cardiovasculares y el cáncer. Por ello, la elucidación de las respuestas adaptativas celulares y moleculares a la hipoxia constituye un importante tema de investigación biomédica. Los factores de transcripción inducibles por hipoxia (HIF) desempeñan un papel fundamental en esta respuesta al controlar la expresión de la mayoría de los genes implicados en la adaptación a la hipoxia. El objetivo de nuestro grupo es contribuir a la comprensión de la respuesta transcripcional a la hipoxia y los mecanismos celulares y moleculares que subyacen a las respuestas de adaptación tales como la inducción de angiogénesis. Nuestro objetivo a largo plazo es explotar este conocimiento para mejorar el manejo clínico de patologías en las que el desarrollo de hipoxia tisular es una característica común.

RESEARCH LINES

- Characterization of the molecular mechanisms responsible for the transcriptional response to hypoxia.
- Identification of polymorphisms affecting HIF binding sites and characterization of their functional effect.
- Cellular and molecular mechanism of angiogenesis regulation by hypoxia..
- Regulation of metabolism by hypoxia and role of HIF in metabolic diseases.

RESEARCH ACTIVITY

Doctoral theses

- **Puente Santamaría L.** A computational approach to transcriptional regulation in response to hypoxia[dissertation]. *Madrid: UAM: 2023(25/09/2023). Director: del Peso Ovalle L.*

Final Degree Theses

- **Abanades Salmerón M.** Rol del eje HIF/BHLHE40 en la diferenciación de adipocitos marrones[dissertation]. *Madrid: UAM: 2023(25/05/2023). Director: del Peso Ovalle L.*

Research projects

- **del Peso Ovalle L.** Implementación de procedimientos para análisis de datos derivados de técnicas de secuenciación de alto rendimiento (IND2019/BMD-17134). CM. 2021-2023. *Management centre: UAM*
- **del Peso Ovalle L.** Contribución de BHLHE40 a la respuesta transcripcional a la hipoxia y su implicación en patologías metabólicas y respiratorias (PID2020-118821RB-I00). MICIN. 2021-2025. *Management centre: UAM*
- **del Peso Ovalle L.** Identificación de Mecanismos, Biomarcadores e Intervenciones en comorbilidad en Enfermedades Respiratorias Hipoxémicas mediante abordajes preclínicos, clínicos y computacionales. (P2022/ BMD-7224). CAM. 2023-2027. *Management centre: UAM*





3.4.5 Nephrology Group

Publications:20 | Q1:13

COMPOSITION

María Gemma Fernández Juárez.

Jefa de Servicio en Nefrología. Hospital Universitario La Paz

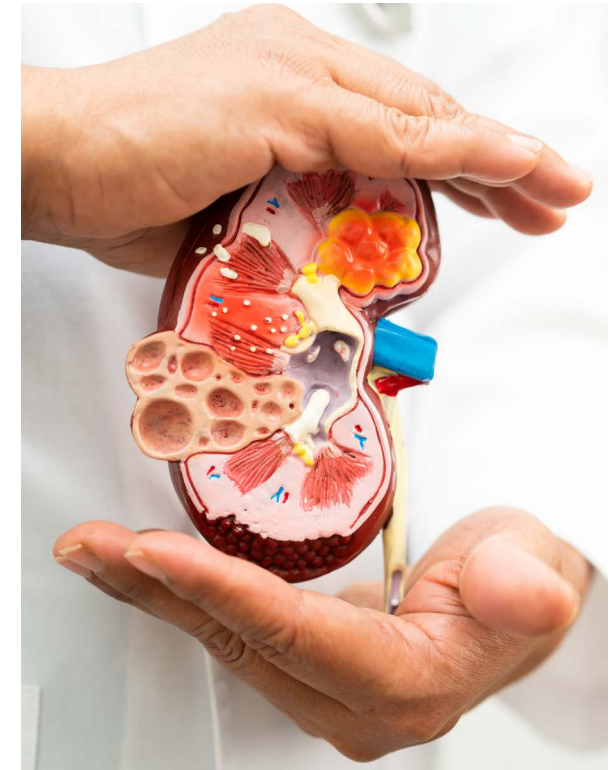
- **María José Castro Notario.** Enfermera. Hospital Universitario La Paz
- **Olga Costero Fernández.** Facultativo Especialista de Área en Nefrología. Hospital Universitario La Paz
- **Gloria del Peso Gilsanz.** Facultativo Especialista de Área en Nefrología. Hospital Universitario La Paz
- **María Elena González García.** Facultativo Especialista de Área en Nefrología. Hospital Universitario La Paz
- **Carlos Jiménez Martín.** Jefe de Sección de Nefrología. Hospital Universitario La Paz
- **María Ovidia López Oliva.** Facultativo Especialista de Área en Nefrología. Hospital Universitario La Paz
- **Almudena Pérez Torres.** Dietista-Nutricionista. Hospital Universitario Santa Cristina
- **Begoña Rivas Becerra.** Facultativo Especialista de Área en Nefrología. Hospital Universitario La Paz
- **Amir Shabaka Fernández.** Facultativo Especialista de Área en Nefrología. Hospital Universitario La Paz
- **Rafael Jesús Sánchez Villanueva.** Facultativo Especialista de Área en Nefrología. Hospital Universitario La Paz

STRATEGIC OBJETIVES

- The strategic objective of this care-research group is to enable, by developing a deep understanding of the various components that make up nephrology (kidney diseases in initial stages, progression of kidney disease, particular and general complications of dialysis and kidney transplantation), access by affected patients to the best diagnostic and therapeutic interventions available at any time. Each of the areas must ensure a minimum level of research and development activity representing the innovation in these areas. The lines of research are at times cross-sectional to the four components indicated for overall nephrology

RESEARCH LINES

1. Glomerular nephropathies:
 - Role of PLA2r levels in membranous nephropathy.
 - Study of the alternative pathway of complement in glomerular pathologies: vasculitis, membranous nephropathy, IgA glomerulonephritis...
 - Morbidity, mortality and progression of diabetic nephropathy and other glomerular nephropathies.
 - Adult polycystic kidney disease. Family studies and therapeutic approaches.
 - Association between cardiovascular disease and progression of nephropathies (NEFRONA multicenter studies).
2. Renal replacement therapy:
 - Evolution of peritoneal function in peritoneal dialysis. Implications for patient and technique survival. New peritoneal dialysis devices and solutions. Aquaporin 1 and its genetic polymorphisms. Involvement of alternatively activated macrophages and CC
 - Cardiovascular risk in dialysis patients. Study of endocrine alterations in dialysis patients. Role of FGF 21 in uremic insulin resistance.
 - Mouse model for peritoneal dialysis: exploration of the effects of dialysis fluids, pharmacological interventions and genetic manipulation (KO, transgenic).
3. Complications of renal transplantation.
 - Infection and CMV disease in renal transplantation. Personalized treatment.
 - Graft tolerance.



- Quality of life of the transplanted patient. Patient-reported transplant outcome.
- Individualization of immunosuppression.
- Knowledge of graft cortical microcirculation.
- Continuous active collaboration with the Spanish renal transplant group (SENTRA), some led by the La Paz group: Covid disease, renal prevention (iSGLT-2), pregnancy in renal transplantation, bacterial infections, thrombotic microangiopathy, asystole donation, relapses of different renal diseases after transplantation...



3.4 Large System Pathologies Area

RESEARCH ACTIVITY

Doctoral theses

- **Tejera Muñoz A.** El factor 2 de la red de comunicación celular (CCN2) ejerce un papel esencial en el mantenimiento de la estructura y las respuestas vasculares de la aorta en ratones.[dissertation]. *Madrid: UAM: 2023(24/03/2023). Director: Ruiz Ortega M, Rodrigues Díez, R.*

Publications

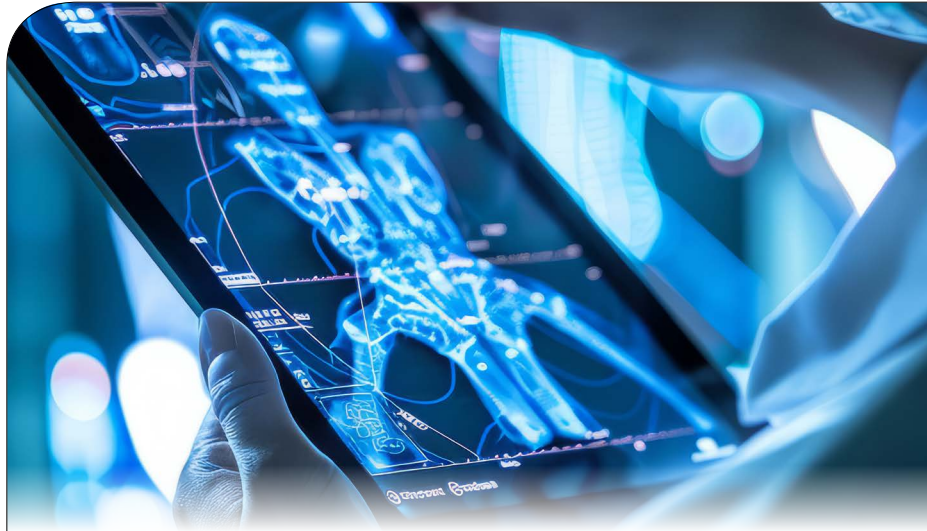
- **Anders HJ, Fernández-Juárez GM, Vaglio A, Romagnani P, Floege J.** CKD therapy to improve outcomes of immune-mediated glomerular diseases. *Nephrol Dial Transpl.* 2023; 8(Supplement 2): ii50-ii57. Article. IF: 4.8; Q1
- **Aresté N, Sánchez-Álvarez JE, Prieto-Velasco M, Molina P, Esteve-Simó V, Ojeda R, Buades JM, Goicoechea M, Sánchez-Villanueva R, Bezhold GA, Pérez-Morales RE, Santos AB, Peiró-Jordan R, Arenas MD.** Prevalence and severity of pruritus in Spanish patients with chronic kidney disease and impact on quality of life: a cross-sectional study. *Clin Kidney J.* 2023; 16(6): 1035-7. Letter. IF: 3.9; Q1
- **Caravaca-Fontán F, Cavero T, Díaz-Encarnación M, Cabello V, Ariceta G, Quintana LF, Marco H, Barros X, Ramos N, Rodríguez-Mendiola N, Cruz S, Fernández-Juárez G, Rodríguez A, de José AP, Rabasco C, Rodado R, Fernández L, Pérez-Gómez V, Avila A, Bravo L, Espinosa N, Allende N, de la Nieta MDS, Rodríguez E, Rivas B, Melgosa M, Huerta A, Miquel R, Mon C, Fraga G, de Lorenzo A, Draibe J, González F, Shabaka A, López-Rubio ME, Fenollosa MA, Martín-Penagos L, Da Silva I, Titos JA, de Córdoba SR, de Jorge EG, Praga M.** Clinical profiles and patterns of kidney disease progression in c3 glomerulopathy. *Kidney360.* 2023; 4(5): 659-72. Article. IF: 3.2; Q1
- **Esteve-Simó V, Pérez-Morales R, Buades-Fuster JM, Jiménez MDA, Areste-Fosalba N, Bezhold GA, Santos AB, Álvarez ES, Villanueva RS, Molina P, Ojeda R, Prieto-Velasco M, Goicoechea M.** Chronic kidney disease-associated pruritus and quality of life: learning from

our patients. *J Clin Med.* 2023; 12(13): 4505. Review. IF: 3.0; Q1

- **Fernández-Juárez G, Ronco P, Jha V.** Personalized treatment of PLA2R-related membranous nephropathy. *Clin J Am Soc Nephro.* 2023; 18(4): 530-2. Editorial Material. IF: 8.5; D1
- **Fructuoso AIS, Raba AB, Deras EB, Sánchez LAV, San Cecilio RV, Esteve AF, Vega LC, Martínez E, García MEG, Coronado PS, Morales NDV, Larrondo SZ, Cano NR, Blanca AM, Marrero DH, Castello IB, Ramos JP, Ochoa AS, Molas CF, Roncero FG, Ramírez AT, Guldriis SC, Flores IP.** Sodium-glucose cotransporter-2 inhibitor therapy in kidney transplant patients with type 2 or post-transplant diabetes: an observational multicentre study. *Clin Kidney J.* 2023; 6(16): 1022-34. Article. IF: 3.9; Q1
- **Goicoechea M, Arenas-Jiménez MD, Areste N, Pérez-Morales RE, Esteve V, Sánchez-Álvarez E, Bezhold GA, Blanco A, Sánchez-Villanueva R, Molina P, Ojeda R, Prieto-Velasco M, Buades JM.** Perception of spanish nephrologists on an old unsolved problem: pruritus associated with chronic kidney disease (CKD-aP). *Nefrologia.* 2023; 43(1): 102-10. Article. IF: 2.0; Q2
- **Hilhorst M, Bemelman EJ, Bruchfeld A, Fernández-Juárez GM, Floege J, Frangou E, Goumenos D, van Kooten C, Kronbichler A, Stevens KI, Turkmen K, Wiersinga WJ, Anders HJ.** Prophylactic and early outpatient treatment of COVID-19 in patients with kidney disease: considerations from the Immunonephrology Working Group of the European Renal Association (ERA-IWG). *Nephrol Dial Transpl.* 2023; 38(8): 1807-16. Article. IF: 4.8; Q1
- **López-Oliva MO, Pérez-Flores I, Molina M, Aladrén MJ, Trujillo H, Redondo-Pachón D, López V, Facundo C, Villanego F, Rodríguez M, Ruiz MC, Antón P, Rivas-Oural A, Cabello S, Portolés J, de la Vara L, Tabernero G, Valero R, Galeano C, Moral E, Ventura A, Coca A, Nuñez MA, Hernández-Gallego R, Shabaka A, Ledesma G, Bouarich H, Rodríguez MA, Tamajón LP, Cruzado L, Sánchez JE, Jiménez C.** Management of immunosuppressive therapy in kidney transplant recipients with COVID-19. A multicentre national study derived from the Spanish Society of Nephrology. *COVID registry. Nefrologia.* 2023; 43(4): 442-51. Article. IF: 2.0; Q2
- **Mazuecos A, Villanego F, Alonso A, Beneyto I, Crespo M, Díaz-Corte C, Franco A, González-Ronco F, Guirado L, Jiménez C, Juega J, Llorente S, Paul J, Rodríguez-Benot A, Ruiz JC, Sánchez-Fructuoso A, Torregrosa V, Rodrigo E, Hernández D, López V, López-Oliva M, Zarraga S.** Update of the recommendations on the management of the SARS-CoV-2 coronavirus pandemic (COVID-19) in kidney transplant patients. *Nefrologia.* 2023; 43(5): 531-45. Review. IF: 2.0; Q2
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- **Santos-Alonso C, Rivas B, Vega-Cabrera C, Arenzana CB, Gregorio LY, Riaño MA, Fernández EG, Rubio MAB.** Congenital porto-systemic shunt: An uncommon cause of membranoproliferative glomerulonephritis. *Nefrologia.* 2023; 43: 118-20. Letter. IF: 2.0; Q2
- **Sanz KA, Parente CE, Ferreras C, Ribes MM, Navarro A, Mestre C, Clares L, Vicario JL, Balas A, De Paz R, Granados EL, Zapardiel ES, Jiménez C, López-Oliva M, Ramos E, Hernández-Oliveros F, Pérez-Martínez A.** Familial CD45RA- T cells to treat severe refractory infections in immunocompromised patients. *Front Med (Lausanne).* 2023; 10: 1083215. Article. IF: 3.1; Q1
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- **Tato AM, Carrera N, García-Murias M, Shabaka A, Avila A, Mora MTM, Rabasco C, Soto K, Álvarez ED, Fernández-Lorente L, Rodríguez-Moreno A, Huerta A, Mon C, García-Carro C, Cabrera FG, Navarro JAM, Romera A, Gutiérrez E, Villacorta J, de Lorenzo A, Avilés B, Garca-González MA, Fernández-Juárez G.** Genetic testing in focal segmental glomerulosclerosis: to whom and when? *Clin Kidney J.* 2023; 16(11): 2011-22. Article. IF: 3.9; Q1



3.4 Large System Pathologies Area

Research projects

- **del Peso Gilsanz, Gloria.** Clinical validation of a continuous flow peritoneal dialysis system, with dialysate regeneration (CORDIAL). UE. 2020-2024. *Managment centre: FIBHULP*
- **del Peso Gilsanz G.** Relación de la funcionalidad de la membrana peritoneal y la patología cardiovascular en pacientes en diálisis peritoneal tratados con soluciones biocompatibles. repercusión sistémica de un problema local (PI22/00574). ISCIII. 2023-2025. *Managment centre: FIBHULP*
- **del Peso Gilsanz, Gloria.** Las células mesoteliales del efluente crecidas ex vivo reflejan las alteraciones peritoneales encontradas en la biopsia peritoneal. Oportunidades adicionales para biomarcadores en el efluente. Fundación SENEPRO. 2016-Ongoing. *Managment centre: FIBHULP*
- **Fernández Juárez GM.** Aproximación diagnóstica y terapéutica de las microangiopatías trombóticas. Alexion Pharma Spain S.L. 2022-Ongoing. *Managment centre: FIBHULP*
- **Fernández Juárez GM.** Descifrando el papel de factor h-related proteins en las enfermedades renales relacionadas con complemento (PI19/01695). ISCIII. 2020-2023. *Managment centre: FIBHULP*
- **Fernández Juárez GM.** Nefropatías asociadas con desregulación del complemento: estudio genético y de proteínas para determinar facto-

res de riesgo y de progresión de daño renal (PI-2749). SEN. 2023-Ongoing. *Managment centre: FIBHULP*

- **González García ME.** Prevalencia de fragilidad en pacientes con enfermedad renal crónica en lista de espera de trasplante renal en España: un estudio multicéntrico. SET. 2022-2023. *Managment centre: FIBHULP*
- **Jiménez Martín C.** Desarrollo y aplicación de un programa grupal de atención psicológica basada en las preferencias y valores con el objetivo de mejora de resultados en salud en el paciente con trasplante renal. Astellas Pharma, S.A. 2018-Ongoing. *Managment centre: FIBHULP*
- **Jiménez Martín C.** Evaluación de la microcirculación cortical del trasplante renal a largo plazo medida por ecografía con contraste y su correlación histopatológica por biopsia renal. Sociedad Madrileña de Trasplantes. 2019-Ongoing. *Managment centre: FIBHULP*
- **Sánchez Villanueva R.** Abordaje nutricional en pacientes con enfermedad renal. Fresenius Kabi España S.A.U. 2021-Ongoing. *Managment centre: FIBHULP*
- **Sánchez Villanueva R.** Creación de un centro de referencia para el estudio de los mecanismos implicados en las reacciones de hipersensibilidad a las membranas de hemodialisis basadas en polysulfona. Nipro Europe Nv. 2017-Ongoing. *Managment centre: FIBHULP*

Cibers and Retics

- **RD21/0005/0018 Bajo Rubio MA.** Inflamación e inmunopatología de órganos y sistemas. ISCIII. (31/12/2024). FIBHULP
- **RD21/0005/0030 Fernández Juárez GM.** Inflamación e inmunopatología de órganos y sistemas. ISCIII. (31/12/2024). FIBHULP

Clinical trials

- **Del Peso Gilsanz G.** A study to evaluate the efficacy and safety of xylocore, a glucose sparing experimental solution, for peritoneal dialysis. *Type/Phase: III*
Sponsored by: Iperboreal Pharma, S.R.L
Signed date: 13/11/2023
- **Del Peso Gilsanz G.** Seguimiento de las trayectorias de tratamiento en pacientes adultos con hiperpotasemia (track). estudio longitudinal, prospectivo y no intervencionista de la evolución del tratamiento de pacientes adultos con hiperpotasemia. *Type/Phase: E0m prospectivo*
Sponsored by: Astrazeneca Ab
Signed date: 24/01/2023
- **Del Peso Gilsanz G.** Seguimiento de las trayectorias de tratamiento en pacientes adultos con hiperpotasemia (track). estudio longitudinal, prospectivo y no intervencionista de la evolución del tratamiento de pacientes adultos con hiperpotasemia. *Type/Phase: E0m prospectivo*
Sponsored by: Astrazeneca Ab
Signed date: 28/09/2023
- **Sánchez Villanueva RJ.** A phase 3 randomized, double-blind, placebo-controlled study evaluating the efficacy and safety of dose-titrated pls240 in the treatment of secondary hyperparathyroidism in individuals with end stage kidney disease on hemodialysis (path-1) with an open-label extension. *Type/Phase: III*
Sponsored by: Pharmaceutical Product Development Spain, S.L
Signed date: 10/10/2023

- **Sánchez Villanueva RJ.** Relief census: estudio transversal para evaluar la prevalencia y la carga del prurito urémico en pacientes que se someten a hemodiálisis. *Type/Phase: No EPA*
Sponsored by: Vifor Pharma-Vifor International Inc
Signed date: 12/05/2023

Patents and trademarks

- **Selgas Gutiérrez R, Bellón Heredia T, Rodríguez Sanz AI, Álvarez Builla J, Vaquero López JJ, Sánchez Alonso P, Alajarín Fernández R, inventors; FIBHULP, Universidad de Alcalá, assignees.** Use of compounds derived from salts of piridazine[3,2-b]benzimidazolium as anti-inflammatory agents. P201430411, PCT/ES2014/070603; 2013 July 25.
- **Selgas Gutiérrez R, Bellón Heredia T, Rodríguez Sanz AI, Álvarez Builla J, Vaquero López JJ, Sánchez Alonso P, Alajarín Fernández R, inventors; FIBHULP, Universidad de Alcalá, assignees.** Use of compounds derived from salts of pyridazine[1',6':1,2]pyrido[3,4-b]indolinium as anti-inflammatory agents. P201331143, PCT/ES2014/070603; 2013 July 25.
- **López-Cabrera M, Aguilera Peralta AI, Selgas Gutiérrez R, Passlickdeetjen J, Buechel J, Steppan S, inventors; Fresenius Medical Care AG & Co. KGaA, assignee.** Method and kit for diagnosing epithelial to mesenchymal transition of the peritoneum (EMT-Chip). WO2017042253, DE102015115158; 2015 September 09.
- **Aguilera Peralta AI, López-Cabrera M, Selgas Gutiérrez R, Steppan S, Passlickdeetjen J, inventors; Fresenius Medical Care Deutschland GMBH, assignee.** Pharmaceutical compositions containing steviosides. PCT/EP2015/074955, EP3212199, US2017304335, CN107073022; 2014 October 31.



3.4.6 Diagnosis and Treatment of Allergic Diseases



Publications: 55 | **Q1:**34

COMPOSITION

Santiago Eugenio Quirce Gancedo.

Jefe de Servicio de Alergología. Hospital Universitario La Paz

- **María Pilar Encarnación Barranco Sanz.** Facultativo Especialista de Área en Alergología. Hospital Universitario La Paz
- **María Teresa Caballero Molina.** Facultativo Especialista de Área en Alergología. Hospital Universitario La Paz
- **María Luisa Caballero Soto.** Facultativo Especialista de Área en Farmacia hospitalaria . Hospital Universitario La Paz
- **Francisco Javier Contreras Porta.** Facultativo Especialista de Área en Alergología. Hospital Universitario La Paz
- **Leticia de las Vecillas Sánchez.** Facultativo Especialista en Alergología. Hospital Universitario La Paz
- **Francisco Javier Domínguez Ortega.** Jefe de Sección de Alergología. Hospital Universitario La Paz

- **Ana Fiandor Román.** Jefe de Sección de Alergología. Hospital Universitario La Paz
- **Carmen Gómez Traseira.** Facultativo Especialista de Área en Alergología. Hospital Universitario La Paz
- **Juan Alberto Luna Porta .** Facultativo Especialista de Área en Alergología. Hospital Universitario La Paz
- **María Magdalena Lluch Bernal.** Facultativo Especialista de Área en Alergología. Hospital Universitario La Paz
- **María Pedrosa Delgado.** Facultativo Especialista de Área en Alergología. Hospital Universitario La Paz
- **Elsa Phillips Angles.** Facultativo Especialista de Área en Alergología Pediátrica. Hospital Universitario La Paz
- **Mónica Rodríguez Álvarez.** Facultativo Especialista de Área en Alergología. Hospital Universitario La Paz
- **María Rosa Rodríguez Pérez.** Investigadora Senior. Contrato Miguel Servet (I2). Hospital Universitario La Paz
- **Margarita Tomás Pérez.** Facultativo Especialista de Área en Alergología. Hospital Universitario La Paz
- **Ana María Umpiérrez Rodríguez.** Facultativo Especialista de Área en Alergología. Hospital Universitario La Paz

STRATEGIC OBJETIVES

- These group members are specialists in various areas of allergic diseases, which enable them to perform clinical studies and basic research on the main allergic diseases (food allergies, asthma and rhinitis, urticaria/ angioedema and drug allergies). The group's strategic research objectives include:
 - The development of new techniques to improve the diagnosis of food allergies by determining the molecular sensitisation profile
 - The study of hyperresponsiveness and airway inflammation in asthma, as well as the role of allergen exposure and comorbidities in this disease
 - The study of the pathogenesis and treatment of eosinophilic diseases of the airways (asthma, eosinophilic bronchitis) and the gastrointestinal tract (eosinophilic oesophagitis)
 - The characterisation of various types of angioedema caused by Bradykinin (hereditary and acquired) and improvements in their diagnosis and treatment
 - Research on the epidemiology and pathomechanisms of severe adverse reactions caused by immune hypersensitivity reactions to drugs

RESEARCH LINES

- Food allergy (milk, egg, fruit, cereals): molecular diagnosis (by allergenic components) and treatment with oral desensitisation
- Epidemiology, physiopathology, diagnosis and treatment of angioedema and urticaria
- Studies on bronchial hyperresponsiveness to direct and indirect agents and airway inflammation
- Eosinophilic diseases of the respiratory tract (eosinophilic bronchitis) and digestive system (eosinophilic esophagitis)
- Persistent and difficult to control asthma: study on the influence of common and occupational allergens, comorbidities and new therapies
- Aspirin-exacerbated respiratory disease (AERD): inflammatory markers and desensitisation protocol
- Adverse immunologic reactions to drugs: study on the cellular and molecular mechanisms involved.
- Identification and characterization of new environmental allergens and modulating factors of allergenicity.



3.4 Large System Pathologies Area

RESEARCH ACTIVITY

Doctoral theses

- **Marques Mejías MA.** Broncoespasmo y urticaria aguda en el departamento de urgencias pediátricas: características, manejo e impacto de los factores ambientales[dissertation]. *Madrid: UAM: 2023(19/01/2023). Director: Quirce Gancedo SE.*

Publications

- **Adnan A, Acharya S, Alenazy LA, de las Vecillas L, Bianchi PG, Picard M, Calbache-Gil L, Romero-Pinedo S, Abadia-Molina AC, Kerr W, Pedicone C, Nagai J, Hollers E, Dwyer D, Castells M.** Multistep IgE mast cell desensitization is a dose- and time-dependent process partially regulated by SHIP-1. *J Immunol.* 2023; 210(6): 709-20. Article. IF: 3.6; Q2
- **Américo DA, Colás C, Dávila , Del Cuvillo A, Romero JD, Domínguez-Ortega J, Presa IJ, Sastre ML, Lacomba JM, Sala-Cunill A, Sánchez-García S, Pérez BV, Vidal C, Santiago ALV.** ALERGODATA: sentinel registry of health outcomes in allergic patients treated with biological therapies at specialized allergology clinics in Spain. *J Invest Allerg Clin.* 2023; 33(6): 479-82. Article. IF: 6.1; Q1
- **Annesi-Maesano I, Cecchi L, Biagioni B, Chung KF, Clot B, Coen MC, Amato GD, Damialis A, Domínguez-Ortega J, Galán C, Gilles S, Holgate S, Jeebhay M, Kazadzis S, Papadopoulos NG, Quirce S, Sastre J, Tummon F, Traidl-Hoffmann C, Walusiak-Skorupa J, Alonso-Coello P, Canelo-Aybar C, Cantero-Fortiz Y, Rigau D, Salazar J, Verdugo-Paiva F, Jutel M, Akdis CA, Agache I.** Is exposure to pollen a risk factor for moderate and severe asthma exacerbations? *Allergy.* 2023; 78(8): 2121-47. Review. IF: 12.6; D1
- **Arismendi E, Cisneros C, Blanco-Aparicio M, Martínez-Moragón E, Quirce S, Conejero DB, López-Moure A, Sánchez-Herrero MG.** REDES Study: Mepolizumab is effective in patients with severe asthma and comorbid nasal polyps. *J Invest Allerg Clin.* 2023; 33(6): 476-79. Editorial Material. IF: 6.1; Q1
- **Barroso B, Valverde-Monge M, Alobid , Olaguibel J, Rial M, Quirce S, Arismendi E, Barranco P, Betancor D, Bobolea , Cárdbaba B, Carmona C,**

- Curto E, Domínguez-Ortega J, González-Barcala F, Martínez-Rivera C, Mahillo-Fernández , Muñoz X, Picado C, Plaza , Munoz JR, Retes LS, Valero A, Delpozo , Mullol J, Sastre J.** Reply to olfactory function and biologic treatments: a comment on available real-life studies. *J Invest Allerg Clin.* 2023; 33(6): 503-4. Letter. IF: 6.1; Q1
- **Barroso B, Valverde-Monge M, Alobid , Olaguibel JM, Rial MJ, Quirce S, Arismendi E, Barranco P, Betancor D, Bobolea , Cárdbaba B, Carmona MJC, Curto E, Domínguez-Ortega J, González-Barcala FJ, Martínez-Rivera C, Mahillo-Fernández , Muñoz X, Picado C, Plaza , Muñoz JMR, Soto-Retes L, Valero A, del Pozo , Mullol J, Sastre J.** Improvement in olfaction in patients with CRSwNP and severe asthma taking anti-IgE and anti-I-5 biologics: a real-life study. *J Invest Allerg Clin.* 2023; 33(1): 37-44. Article. IF: 6.1; Q1
- **Betancor C, Olaguibel JM, Rodrigo-Muñoz JM, Puebla MJA, Arismendi E, Barranco P, Barroso B, Bobolea , Cárdbaba B, Cruz MJ, Curto E, Del Pozo , Domínguez-Ortega J, González-Barcala FJ, Luna-Porta JA, Martínez-Rivera C, Mullol J, Muñoz X, Picado C, Plaza , Quirce S, Rial MJ, Soto-Retes L, Valero A, Valverde-Monge M, Sastre J.** Lung function abnormalities and their correlation with clinical characteristics and inflammatory markers in adult asthma. *J Invest Allerg Clin.* 2023; 33(4): 294-6. Editorial Material. IF: 6.1; Q1
- **Betancor D, Villalobos-Vilda C, Olaguibel JM, Rodrigo-Muñoz JM, Puebla MJA, Arismendi E, Barranco P, Barroso B, Bobolea I, Cárdbaba B, Cruz MJ, Curto E, Del Pozo V, Domínguez-Ortega J, González-Barcala FJ, Luna-Porta JA, Martínez-Rivera C, Mullol J, Muñoz X, Picado C, Plaza V, Quirce S, Rial MJ, Soto-Retes L, Valero A, Valverde-Monge M, Sastre J.** The New ERS/ATS 2022 Bronchodilator response recommendation: comparison with the previous version in an asthma cohort. *Arch Bronconeumol.* 2023; 59(9): 608-11. Letter. IF: 8.7; D1
- **Blanco-Aparicio M, Domínguez-Ortega J, Cisneros C, Colás C, Casas F, del Cuvillo A, Alobid I, Quirce S, Mullol J.** Consensus on the management of united airways disease with type 2 inflammation: a multidisciplinary Delphi study. *Allergy Asthma Clin Immunol.* 2023; 19(1): 34. Article. IF: 2.6; Q2
- **Bousquet J, Anto JM, Sousa-Pinto B, Czarlewski W, Bedbrook A, Haahela T, Klimek L, Pfaar O,**

- Kuna P, Kupczyk M, Regateiro FS, Samolinski B, Valiulis A, Yorgancioglu A, Arnavielhe S, Basagaña X, Bergmann KC, Bosnic-Anticevich S, Brussino L, Canonica GW, Cardona V, Cecchi L, Chaves-Loureiro C, Costa E, Cruz AA, Gemicioğlu B, Fokkens WJ, Ivancevich JC, Kraxner H, Kvedariene V, Larenas-Linnemann DE, Laune D, Louis R, Makris M, Maurer M, Melén E, Micheli Y, Morais-Almeida M, Mullol J, Niedozytko M, Okamoto Y, Papadopoulos NG, Patella V, Pham-Thi N, Rouadi PW, Sastre J, Scichilone N, Sheikh A, Sova M, Ulrik CS, Taborda-Barata L, Todo-Bom A, Torres MJ, Tsiligianni I, Usmani OS, Valovirta E, Vasankari T, Vieira RJ, Wallace D, Wasserman S, Zidarn M, Yorgancioglu A, Zhang L, Chivato T, Ollert M.** Patient-centered digital biomarkers for allergic respiratory diseases and asthma: The ARIA-EAACI approach - ARIA-EAACI Task Force Report. *Allergy.* 2023; 78(7): 1758-76. Review. IF: 12.6; D1
- **Bousquet J, Melén E, Haahela T, Koppelman GH, Togias A, Valenta R, Akdis CA, Czarlewski W, Rothenberg M, Valiulis A, Wickman M, Akdis M, Aguilár D, Bedbrook A, Bindsløv-Jensen C, Bosnic-Anticevich S, Boulet LP, Brightling CE, Brussino L, Burte E, Bustamante M, Canonica GW, Cecchi L, Celedon JC, Loureiro CC, Costa E, Cruz AA, Erhola M, Gemicioğlu B, Fokkens WJ, García-Aymerich J, Guerra S, Heinrich J, Ivancevich JC, Keil T, Klimek L, Kuna P, Kupczyk M, Kvedariene V, Larenas-Linnemann DE, Lemonnier N, Carlsen KCL, Louis R, Makela M, Makris M, Maurer M, Momas I, Morais-Almeida M, Mullol J, Naclerio RN, Nadeau K, Nadif R, Niedozytko M, Okamoto Y, Ollert M, Papadopoulos NG, Pasaalacqua G, Patella V, Pawankar R, Pham-Thi N, Pfaar O, Regateiro FS, Ring J, Rouadi PW, Samolinski B, Sastre J, Savouré M, Scichilone N, Shamji MH, Sheikh A, Siroux V, Sousa-Pinto B, Standler M, Sunyer J, Taborda-Barata L, Toppila-Salmi S, Torres MJ, Tsiligianni I, Valovirta E, Vandenplas O, Ventura MT, Weiss S, Yorgancioglu A, Zhang L, Latiff AHA, Aberer W, Agache I, Al-Ahmad M, Alobid I, Ansoategui IJ, Arshad SH, Asayag E, Barbara C, Baharudin A, Battur L, Bennoor KS, Berghea EC, Bergmann KC, Bernstein D, Bewick M, Blain H, Bonini M, Braido F, Buhl R, Bumbacea RS, Bush A, Calderon M, Calvo-Gil M, Camargos P, Caraballo L, Cardona V, Carr W, Carreiro-Martins P, Casale T, Sarabia AMC, Chandrasekharan R, Charpin D, Chen YZ, Cherez-Ojeda I, Chivato T, Chkhartishvili E, Christoff G, Chu DK, Cingi C, de Sousa JC, Corrigan C, Custovic A, D'Amato G, Del Giacco S, De Blay F, Devillier P, Didier A, Teixeira**



3.4 Large System Pathologies Area

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Research projects

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- **Caballero Molina MT.** Development and trans-cultural validation of an international specific questionnaire (IHAE-QOL) for assessment of health related quality of life in adult patients with hereditary angioedema due to c1 inhibitor deficiency (HAE) and quality of life study (DTV-IHAE-QOL). *Hereditary Angio-Edema In.* 2009-Ongoing. *Managment centre: FIBHULP*
- **Caballero Molina MT.** Estudio de las características clínicas y fisiopatológicas del angioedema sin habones (PI19/01434). ISCIII. 2020-2024. *Managment centre: FIBHULP*
- **Caballero Molina MT.** Impacto humanístico y económico del angioedema hereditario en España. Estudio Impactaeh. Shire International GmbH. 2021-Ongoing. *Managment centre: FIBHULP*
- **de las Vecillas Sánchez L.** Estudio de la inmunomodulación celular inducida en las desensibilizaciones a quimioterápicos tras reacciones inmediatas y tardías. Fundación de la Sociedad Española de Alergología e Inmunología Clínica. 2022-Ongoing. *Managment centre: FIBHULP*
- **Domínguez Ortega FJ.** Asesoramiento para el diseño del estudio clínico Ensayo clínico prospectivo multicéntrico aleatorizado de doble simulación controlado con placebo de búsqueda de la dosis más eficaz para el tratamiento de rinitis/rinoconjuntivitis por alergia frente al polen gramíneas. Immunotek. 2015-Ongoing. *Managment centre: FIBHULP*
- **Domínguez Ortega FJ.** Estudio de coste-efectividad de mepolizumab en pacientes con asma grave no controlada en condiciones de vida-real. Glaxosmithkline S. A. 2021-Ongoing. *Managment centre: FIBHULP*
- **Quirce Gancedo SE.** Integra: utilidad de los ratios en el diagnóstico alergológico: de la investigación a la práctica clínica. Thermo Fisher Diagnostics S.L.U. 2022-Ongoing. *Managment centre: FIBHULP*



- **Quirce Gancedo SE.** Relación entre asma y obesidad en la población española mayor o igual a 18 años. Novartis Farmaceutica S.A. 2009-Ongoing. *Managment centre: FIBHULP*
- **Quirce Gancedo SE.** Sesiones en investigación del diagnóstico molecular como herramienta de identificación de perfiles de respuesta en pacientes con enfermedad respiratoria alérgica y alergia a alimentos. Thermo Fisher Diagnostics S.L.U. 2017-Ongoing. *Managment centre: FIBHULP*
- **Rodríguez Pérez MR.** Caracterización alérgica y determinación de la relevancia clínica del polen de encina como alérgeno de interés en pacientes policlínicos y su relación con el desarrollo de síndrome de alergia oral con alimentos (PI22/O0221). ISCIII. 2023-2025. *Managment centre: FIBHULP*
- **Rodríguez Pérez MR.** Evaluación de la capacidad alérgica de productos alimentarios mediante test de activación de basófilos y sensibilización cutánea con alimentos. Angulas Aguinaga S. A. U. 2018-Ongoing. *Managment centre: FIBHULP*
- **Tomás Pérez M.** Efectividad de la inmunoterapia sublingual de ltp (slit melocoton) en pacientes con alergia a melocoton y otros vegetales por

sensibilización a ltp en condiciones de práctica clínica habitual. Alk-Abello S.A. 2020-Ongoing. *Managment centre: FIBHULP*

Cibers and Retics

- **CB06/07/1033 Caballero Molina MT.** Centro de Investigación en Red de Enfermedades Respiratorias. (CIBERER). ISCIII. (31/12/2023). FIBHULP

Clinical trials

- **Caballero Molina MT.** Ensayo de extensión abierto para evaluar la seguridad a largo plazo de kvd900, un inhibidor oral de la calcitriol plasmática, para el tratamiento a demanda de las crisis de angioedema en pacientes adolescentes y adultos con angioedema hereditario de tipo i o ii. *Type/Phase: III*
Sponsored by: Kalvista Pharmaceuticals, Ltd
Signed date: 12/06/2023
- **Caballero Molina MT.** Ensayo de fase 3, aleatorizado, doble ciego, controlado con placebo y con tres grupos cruzados, para evaluar la eficacia y la seguridad de dos niveles de dosis de kvd900, un inhibidor oral de la calcitriol plasmática, para el

tratamiento a demanda de las crisis de angioedema en pacientes adolescentes y adultos con angioedema hereditario de tipo i o ii.

Type/Phase: III
Sponsored by: Kalvista Pharmaceuticals, Ltd
Signed date: 08/05/2023

- **Caballero Molina MT.** Estudio de fase 1/2, abierto y de aumento escalonado de la dosis para determinar la seguridad, la tolerabilidad y la eficacia de bmn 331, un gen de transferencia de serping1 humano mediada por el vector del virus adenoasociado (aav), en pacientes con angi.

Type/Phase: I
Sponsored by: Biomarin Pharmaceutical, Inc
Signed date: 07/06/2023

- **Caballero Molina MT.** Estudio sin enmascaramiento a largo plazo para evaluar la seguridad y la eficacia de donidalorsén como tratamiento profiláctico del angioedema hereditario (aeh).

Type/Phase: III
Sponsored by: Ionis Pharmaceuticals Inc
Signed date: 31/10/2023

- **Domínguez Ortega FJ.** Estudio observacional, retrospectivo, multicéntrico, para recoger datos en vida real de la seguridad y efectividad de la inmunoterapia con alérgenos administrada en los últimos 5 años a pacientes con asma grave.

Type/Phase: EPA-SP
Sponsored by: Fundación De La Sociedad Española De Alergología E Inmunología Clínica (Seac)
Signed date: 13/01/2023

- **Phillips Anglés E.** Estudio en fase III para evaluar la seguridad y farmacocinética de la profilaxis con berotralstat en niños de 2 a <12 años con angioedema hereditario.

Type/Phase: III
Sponsored by: Biocryst Pharmaceuticals Inc
Signed date: 14/12/2023

- **Tomás Pérez M.** Estudio de extensión de fase 3 en régimen abierto, multicéntrico e internacional para evaluar la seguridad a largo plazo de cc-93538 en sujetos adultos y adolescentes con esofagitis eosinofílica.

3.4 Large System Pathologies Area

Type/Phase: III
Sponsored by: Celgene International li -SarI
Signed date: 06/09/2023

- **Tomás Pérez M.** Estudio observacional prospectivo para evaluar la seguridad de "modigoid®" y "modigoid plus®" en pacientes mono o polialérgicos con rinitis/rinoconjuntivitis alérgica, con o sin asma asociada..

Type/Phase: EPA-SP
Sponsored by: Roxall Medicina España, S.A(Bial Industrial Farmaceutica, S.A.)
Signed date: 415/02/2023

Patents and trademarks

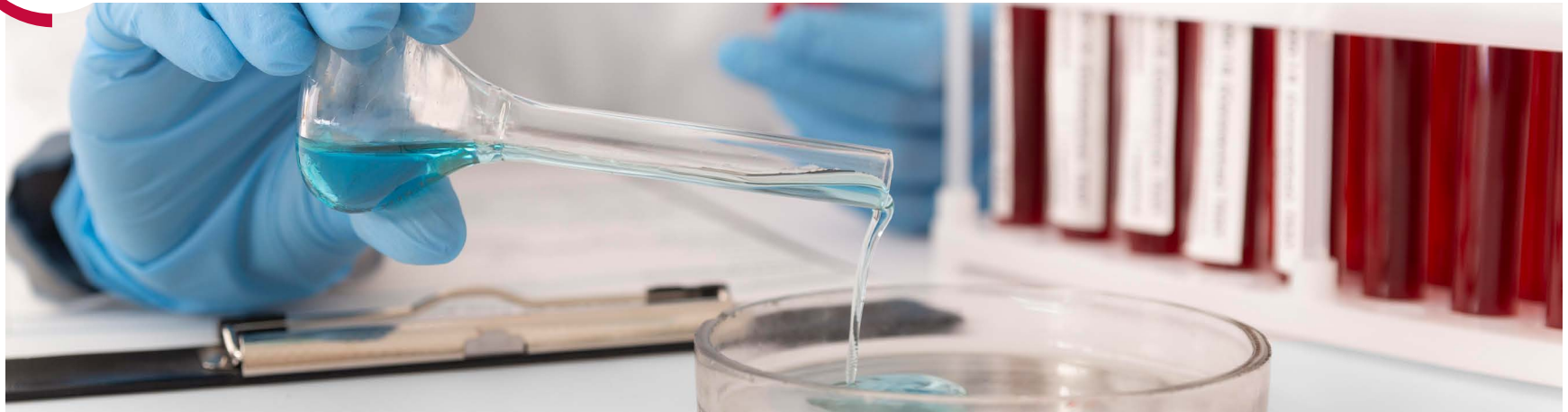
- **Valenta R, Constantin C, Quirce Gancedo, SE, inventors; Phadia AB, assignee.** Novel wheat allergens. PCT/SE2008/051377, EP2225266, US2010305049, AU2008330230, CA2707190, CN101932597, JP2011505134, RU2010126590; 2007 November 30.
- **Caballero Molina MT, Prior Gómez N, Remor Bitencourt EA, authors, FIBHULP, assignee.** Brand name: HAE-QoL HEREDITARY ANGIOEDEMA QUALITY OF LIFE. CM 13.083.068; 2014 July 15.

HAE-QoL
 HEREDITARY ANGIOEDEMA QUALITY OF LIFE

- **Sánchez Herreros R, Martínez Fernández J, Castro Morera A, Gasset Vega M, Rodríguez Pérez RM, Pedrosa Delgado M, Quirce Gancedo S, inventors; FIBHULP, CSIC, assignees.** Food allergen extracts and methods of producing and using the same. EP16382413.9 (Publication Number pending); 2016 September 06.
- **del Pozo Abejón V, Sastre Domínguez J, Rodrigo-Muñoz JM, Sastre Turrión B, Quirce Gancedo S, Cañas Mañas JA, inventors; FISFJD, Centro de Investigación Biomédica en Red (CIBER), FIBHULP, Fundación Conchita Rábago de Jiménez Díaz, assignees.** In vitro method for identifying severity levels in bronchial asthma patients. P201730739; 2017 May 29.



3.4.7 Patient Blood Management Group



Publications:34 | Q1:13

COMPOSITION

Manuel Quintana Díaz.

Facultativo Especialista de Área en Medicina Intensiva. Hospital Universitario La Paz. Profesor Asociado Facultad de Medicina. Universidad Autónoma de Madrid

- **María José Alcaide Martín.** Facultativo Especialista de Área en Análisis Clínicos. Tutora de residentes de Análisis Clínicos. Hospital Universitario La Paz
- **Eva María Andrés Esteban.** Epidemióloga. Hospital Universitario La Paz
- **Aúrea Díez Tascón.** Facultativo Especialista de Radiodiagnóstico. Hospital Universitario La Paz
- **Sara Fabra Cadenas.** Facultativo Especialista de Área en Medicina Familiar y Comunitaria. Hospital Universitario La Paz
- **Pilar Fernández Calle.** Facultativo Especialista de Área en Análisis Clínicos. Coordinadora de Calidad de Análisis Clínicos. Hospital Universitario La Paz

- **José Antonio García Erce.** Facultativo Especialista de Área en Hematología. Hospital San Jorge de Huesca
- **Raúl Juárez Vela.** Profesor Titular de Universidad. Universidad de La Rioja
- **Milagros Martí de Gracia.** Jefe de Sección de Radiología de Urgencias. Hospital Universitario La Paz
- **Ana María Martínez Virto.** Facultativo Especialista de Área en Medicina Familiar y Comunitaria. Coordinadora Adjunta de Urgencias. Hospital Universitario La Paz
- **Paloma Oliver Sáez.** Facultativo Especialista de Área en Análisis Clínicos. Tutora de residentes de Análisis Clínicos. Hospital Universitario La Paz
- **María Inmaculada Pinilla Fernández.** Facultativo Especialista de Área en Radiodiagnóstico. Hospital Universitario La Paz
- **María Angélica Rivera Núñez.** Facultativo Especialista de Área en Medicina Interna. Hospital Universitario La Paz
- **Marcelino Sánchez Casado.** Facultativo Especialista de Área en Medicina Intensiva. Hospital Virgen de la Salud

STRATEGIC OBJETIVES

- Stratifying risk in the critically ill patient
- Stratify pulmonary thromboembolism risk
- Try to diagnose the potentially ill polytraumatized patient at the emergency room Enhance the use of blood products
- Critically ill patient coagulopathy
- Early diagnose of anemia at the emergency room
- Intravenous iron usage
- Anticoagulation Reserval
- Patient Blood Mangement Implementation

RESEARCH LINES

- Critical Bleeding
- Anticoagulation reversal
- Fragility
- COVID19
- Interrelation in Cardiovascular Diseases and Cares



3.4 Large System Pathologies Area

RESEARCH ACTIVITY

Doctoral theses

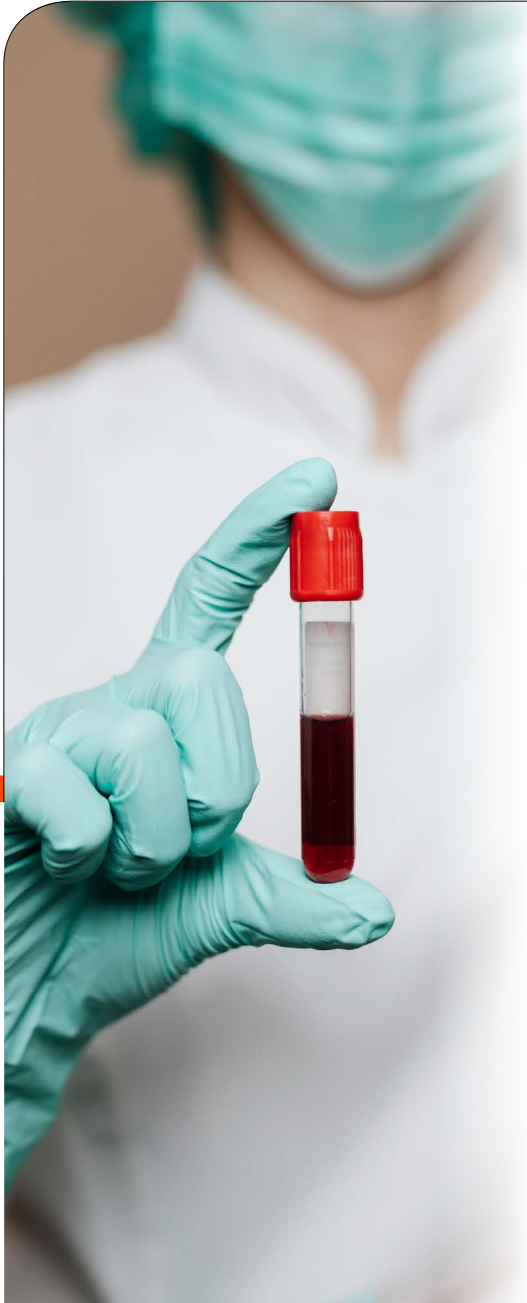
- **Juárez Vela R.** Gestión de la sangre del paciente crítico en las Unidades de Medicina Intensiva de España[dissertation]. *Madrid: UAM: 2023(45562).* Director: Quintana Díaz M. No

Publications

- **Barea-Mendoza JA, Chico-Fernández M, Serviá-Goixart L, Quintana-Díaz M, García-Sáez I, Ballesteros-Sanz MA, Iglesias-Santiago A, Molina-Díaz I, González-Robledo J, Fernández-Cuervo A, Pérez-Bárcena J, Llopart-Pou JA.** Associated risk factors and impact in clinical outcomes of multiorgan failure in patients with TBI. *Neurocrit Care.* 2023; 39(2): 411-8. Article. IF: 3.1; Q2
- **Barea-Mendoza JA, Llopart-Pou JA, Pérez-Bárcena J, Quintana-Díaz M, Serviá-Goixart L, Guerrero-López F, González-Robledo J, Molina-Díaz I, Arguiano JS, Chico-Fernández M.** External validation of the Glasgow Coma Scale-Pupils in patients with severe head injury. *Emergencias.* 2023; 35(1): 39-43. Article. IF: 5.4; D1
- **Campillo CR, de Pedro MS, Iturzaeta JM, Qasem AL, Alcaide MJ, Fernández-Punero B, Rioja RG.** Design of an algorithm for the detection of intravenous fluid contamination in clinical laboratory samples. *Clin Chem Lab Med.* 2023; 61(11): 2002-9. Article. IF: 3.8; Q1
- **Castro-Olmo FJ, Morales-Fernández P, Alcaide-Martín MJ, Fernández-Punero B, Quintana-Díaz M, Aceña-Gil V.** Is minimising waste volume for drawing blood samples in critically ill patients feasible? *Enferm Intensiva.* 2023; 34(1): 19-26. Article. IF: 1.1; Q3
- **Cervantes KRL, Mora E, Morales SC, Álvarez CH, Neira PM, Nanwani KLN, Lázaro AS, Obregón JAS, Díaz MQ.** A Clinical prediction rule for thrombosis in critically ill covid-19 patients: step 1 results of the Thromcco Study. *J Clin Med.* 2023; 12(4): 1253. Article. IF: 3.0; Q1
- **del Pozo-Herce P, Martínez-Sabater A, Chover-Sierra E, Gea-Caballero V, Satústegui-Dordá PJ, Saus-Ortega C, Tejada-Garrido CI, Sánchez-Barba M, Pérez J, Juárez-Vela R, Santolalla-Arnedo I, Baca-García E.** Application of the delphi method for content validity analysis of a questionnaire to determine the risk factors of the chemsex. *Healthcare (Basel).* 2023; 11(21): 2905. Article. IF: 2.4; Q2
- **Fehler P, Zielinska M, Uchmanowicz B, Juárez-Vela R, Lewandowski L, Zielinski S, Czapla M.** Do body mass index and nutritional risk score 2002 influence the in-hospital mortality of patients following cardiac arrest? *Nutrients.* 2023; 15(2): 436. Article. IF: 4.8; Q1
- **Galán LAM, Recine MAH, Caballero AR, Teruel SY, Martínez JRG, Egea-Guerrero JJ, Quintana-Díaz M.** Ultrasound diagnosis of Terson syndrome as an indicator of extreme severity in neurocritical care patients. *Neurologia.* 2023; 38(3): 181-7. Article. IF: 2.9; Q2
- **Garrote-Cámara ME, Juárez-Vela R, Rodríguez-Muñoz PM, Pérez J, Sánchez-González JL, Rubinat-Arnaldo E, Navas-Echazarreta N, Sufrate-Sorzano T, Santolalla-Arnedo I.** NANDA nursing diagnoses associated with the occurrence of psychomotor agitation in patients with severe mental disorder: a cross-sectional study. *BMC Nurs.* 2023; 22(1): 292. Article. IF: 3.1; D1
- **Gea-Caballero V, de Viñaspre-Hernández RR, Saus-Ortega C, Celda-Belinchón L, Santolalla-Arnedo I, Marques-Sule E, Juárez-Vela R.** Gender equity in the scientific nursing journals indexed in Journal Citation Reports: A cross-sectional study. *Front Public Health.* 2023; 11: 1119117. Article. IF: 3.0; Q2
- **Granada-López JM, Ramón-Arбуés E, Echániz-Serrano E, Juárez-Vela R, Cobos-Rincón A, Satústegui-Dordá PJ, Navas-Echazarreta N, Santolalla-Arnedo I, Nash M.** Mental health knowledge and classroom experiences of school teachers in Aragon, Spain. *Front Public Health.* 2023; 11: 1171994. Article. IF: 3.0; Q2
- **Jiménez-Granero P, Rayo-Madrid JI, Infante-de-la-Torre JR, Serrano-Vicente J, Martínez-Esteve A, Baena-García A, Utrera-Costero A, Juárez-Vela R.** Completion of the informed consent in radioguided surgery by the general surgery and nuclear medicine services of a radioguided surgery unit. *Rev Esp Med Nucl Ima.* 2023; 42(4): 249-54. Article. IF: 1.6; Q3
- **Juárez-Vela R, Quintana-Díaz M, Rodríguez-Calvo A, Santos-Sánchez JA, Gero-Escapa M, Gallego-Curto E, Satústegui-Dordá PJ, Sánchez-González JL, Jericó C, de Viñaspre-Hernández RR, Gil-Fernández G, García-Erce JA.** Profile and characteristics of the adequacy of blood transfusions in Trauma Intensive Care. A cross sectional multicenter study. *Front Public Health.* 2023; 11: 1133191. Article. IF: 3.0; Q2
- **Karniej P, Pérez J, Juárez-Vela R, Santolalla-Arnedo I, Gea-Caballero V, del Pozo-Herce P, Dissen A, Czapla M.** Orthorexia nervosa in gay men-the result of a spanish-polish eating disorders study. *BMC Public Health.* 2023; 23(1): 58. Article. IF: 3.5; Q1
- **Larraga-García B, López LC, Monforte-Escobar F, Mínguez RQ, Quintana-Díaz M, Gutiérrez A.** Design and development of an objective evaluation system for a web-based simulator for trauma management. *Appl Clin Inform.* 2023; 14(4): 714-24. Article. IF: 2.1; Q4
- **Larraga-García B, Monforte-Escobar F, Mínguez RQ, Quintana-Díaz M, Gutiérrez A.** Modified Needleman-Wunsch algorithm for trauma management performance evaluation. *Int J Med Inform.* 2023; 177: 105153. Article. IF: 3.7; Q1
- **López-García JC, González-Sanz A, Sutil-Rodríguez E, Saus-Ortega C, de Viñaspre-Hernández RR, Juárez-Vela R, Gea-Caballero V, Sánchez-González JL, Tejada-Garrido CI, Cobos-Rincón A, Criado-Gutiérrez JM, Sancho-Sánchez C.** Analysis of the attitudes towards sexuality in people with intellectual disabilities: a cross-sectional study. *Nurs Rep.* 2023; 13(4): 1624-34. Article. IF: 2.4; Q1
- **López-Peñalver RS, Cañas-Cañas R, Casaña-Mohedo J, Benavent-Cervera JV, Fernández-Garrido J, Juárez-Vela R, Pellín-Carcelén A, Gea-Caballero V, Andreu-Fernández V.** Predictive potential of SARS-CoV-2 RNA concentration in wastewater to assess the dynamics of COVID-19 clinical outcomes and infections. *Sci Total Environ.* 2023; 886: 163935. Article. IF: 8.2; D1
- **Montoya-Hurtado O, Gómez-Jaramillo N, Bermúdez-Jaimes G, Correa-Ortiz L, Cañón S, Juárez-Vela R, Santolalla-Arnedo I, Criado-Pérez L, Pérez J, Sancho-Sánchez MC, Criado-Gutiérrez J.** Psychometric properties of the multidimensional assessment of interoceptive awareness (maia) questionnaire in colombian university students. *J Clin Med.* 2023; 12(8): 2937. Article. IF: 3.0; Q1
- **Montoya-Hurtado OL, Gómez-Jaramillo N, Criado-Gutiérrez JM, Pérez J, Sancho-Sánchez C, Sánchez-Barba M, Tejada-Garrido CI, Criado-Pérez L, Sánchez-González JL, Santolalla-Arnedo I, del Pozo-Herce P, Juárez-Vela R.** Exploring the link between interoceptive body awareness and suicidal orientation in university students: a cross-sectional study. *Behav Sci (Basel).* 2023; 13(11): 945. Article. IF: 2.5; Q2
- **Nanwani-Nanwani KL, Escapa MG, Lázaro AS, Díaz MQ.** The Patient Blood Management Coordinator, shall we position ourselves? *Med Intensiva.* 2023; 47(11): 676-77. Letter. IF: 2.7; Q2
- **Navas-Echazarreta N, Juárez-Vela R, Subirón-Valera AB, Rodríguez-Roca B, Antón-Solanas I, Fernández-Rodrigo MT, de Viñaspre-Hernández RR, Sabater AM, Echániz-Serrano E, Saus-Ortega C, Santolalla-Arnedo I, Satústegui-Dordá PJ.** Nomophobia in university students during COVID-19 outbreak: a cross-sectional study. *Front Public Health.* 2023; 11: 1242092. Article. IF: 3.0; Q2
- **Navolokina A, Smereka J, Böttiger BW, Pruc M, Juárez-Vela R, Rahnama-Hezavah M, Rafiqe Z, Peacock FW, Safiejko K, Szarpak L.** The impact of COVID-19 on pediatric cardiac arrest outcomes: a systematic review and meta-analysis. *Int J Env Res Pub He.* 2023; 20(2): 1104. Review. Not indexed
- **Quintana-Díaz M, Anania P, Juárez-Vela R, Echániz-Serrano E, Tejada-Garrido CI, Sánchez-Conde P, Nanwani-Nanwani K, Serrano-Lázaro A, Marcos-Neira P, Gero-Escapa M, García-Criado J, Godoy DA.** COAGULATION: a mnemonic device for treating coagulation disorders following traumatic brain injury-a narrative-based method in the intensive care unit.



3.4 Large System Pathologies Area



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- **Quintana-Díaz M, Páramo JA.** Critical bleeding-associated to DOACs administration. Med Intensiva. 2023; 47(12): 733-5. Editorial Material. IF: 2.7; Q2
- **Raasveld SJ, de Bruin S, Reuland MC, Van den Oord C, Schenk J, Aubron C, Bakker J, Ceconi M, Feldheiser A, Meier J, Müller MCA, Scheeren TWL, Mcquilten Z, Flint A, Hamid T, Piagnerelli M, Maheci TT, Benes J, Russell L, Aguirre-Bermeo H, Triantafyllopoulou K, Chantziara V, Gurjar M, Myatra SN, Pota V, Elhadi M, Gawda R, Mourisco M, Lance M, Neskovic V, Podbregar M, Llau JV, Quintana-Díaz M, Cronhjort M, Pfortmueller CA, Yapici N, Nielsen ND, Shah AK, de Grooth HJ, Vlaar APJ, InPUT Study Grp.** Red blood cell transfusion in the intensive care unit. JAMA-J Am Med Assoc. 2023; 330(19): 1852-61. Article. IF: 63.1; D1
- **Ramón-Arbués E, Granada-López JM, Antón-Solanas I, Cobos-Rincón A, Rodríguez-Calvo A, Gea-Caballero V, Tejada-Garrido CI, Juárez-Vela R, Echániz-Serrano E.** Factors related with nursing students' health literacy: a cross sectional study. Front Public Health. 2023; 11: 1053016. Article. IF: 3.0; Q2
- **Rivera-Díaz R, Epelde F, Heras-Hitos JA, Virto AMM, Marín AJD, Sanz MRS, Carrascosa JM.** Generalized pustular psoriasis: practical recommendations for Spanish primary care and emergency physicians. Postgrad Med. 2023; 135(8): 766-74. Review. IF: 2.6; Q1
- **Rivera-Picón C, Benavente-Cuesta MH, Quevedo-Aguado MP, Juárez-Vela R, Martínez-Tofe J, Sánchez-González JL, Rodríguez-Muñoz PM.** Influence of state of health and personality factors of resilience and coping in healthy subjects and those with diabetes. Front Public Health. 2023; 11: 1074613. Article. IF: 3.0; Q2
- **Rojas-García A, Moreno-Blanco D, Otero-Arteseros M, Rubio-Bolívar EJ, Peinado H, Elorza-Fernández D, Gómez EJ, Quintana-Díaz M, Sánchez-González P.** SIMUNEO: Control and monitoring system for lung ultrasound exam-

ination and treatment of neonatal pneumothorax and thoracic effusion. Sensors-Basel. 2023; 23(13): 5966. Article. IF: 3.4; Q2

- **Rypicz L, Rozensztrauch A, Fedorowicz O, Włodarczyk A, Zatonka K, Juárez-Vela R, Witzczak I.** Polish adaptation of the alarm fatigue assessment questionnaire as an element of improving patient safety. Int J Env Res Pub He. 2023; 20(3): 1734. Article. Not indexed
- **Sánchez-Bacaicoa C, Santano-Mogena E, Rico-Martín S, Rey-Sánchez P, Juárez-Vela R, Muñoz-Torrero JFS, López-Espuela F, Calderón-García JF.** Association between asymptomatic hyperuricemia with adiposity indices: a cross-sectional study in a spanish population. Nutrients. 2023; 15(22): 4798. Article. IF: 4.8; Q1
- **Sufrate-Sorzano T, Pérez J, Juárez-Vela R, Garrote-Cámara ME, de Viñaspre RR, Molina-Luque F, Santolalla-Arnedo I.** Umbrella review of nursing interventions NIC for the treatment and prevention of suicidal behavior. Int J Nurs Knowl. 2023; 34(3): 204-15. Review. IF: 1.4; Q3
- **Vélez SO, Canalejas LS, Guiote JMC, Tascón AD, de Gracia MM.** Cervical spine trauma. Radiologia. 2023; 65: S21-31. Article. IF: 1.1; Q3

Research projects

- **Martínez Virto AM.** Epidemiología del angioedema en los servicios de urgencias. Shire International GmbH. 2020-Ongoing. *Management centre: FIBHULP*
- **Oliver Sáez P.** Estudio de gasometría en el lugar de asistencia. Beneficio para el paciente. Asociación Española de Farmacéuticos Analistas. 2012-Ongoing. *Management centre: FIBHULP*
- **Quintana Díaz M.** Estudio de la coagulopatía y de los perfiles de inflamación sistémica asociados a la hemorragia subaracnoidea aneurismática. FIBHULP. 2020-Ongoing. *Management centre: FIBHULP*
- **Quintana Díaz M.** Estudio de monitorización de heparinas de bajo peso molecular como profilaxis en un Servicio de Urgencias. Bayer Hispania S. L. 2011-Ongoing. *Management centre: FIBHULP*

- **Quintana Díaz M.** Identificación de factores de gravedad en el paciente con traumatismo potencialmente grave. FIBHULP. 2013-Ongoing. *Management centre: FIBHULP*
- **Quintana Díaz M.** Manejo inicial del paciente con hemorragia crítica traumática en urgencias y emergencias. Varios. 2021-Ongoing. *Management centre: FIBHULP*
- **Quintana Díaz M.** Tratamientos de depuración extracorporea en pacientes críticos. de la investigación a la práctica clínica. Nikkiso America Inc. 2016-Ongoing. *Management centre: FIBHULP*
- **Quintana Díaz M.** Traumatismo y transfusión ¿una asociación necesaria?. Fundación Mutua Madrileña. 2019-Ongoing. *Management centre: FIBHULP*
- **Quintana Díaz M.** Trombosis en el paciente crítico por COVID-19. Estudio Tromcco. Laboratorios Farmacéuticos Rovi S.A. 2022-Ongoing. *Management centre: FIBHULP*

Patents and trademarks

- **Díaz García E, Laxman Nanwani K, Quintana Díaz M, García Río F, Cubillos-Zapata C, inventors; FIBHULP, CIBER, assignees.** Biomarcadores para el pronóstico de pacientes que han sufrido una hemorragia subaracnoidea aneurismática (SAH). P202130180; 2021 March 3



3.4.8 Health Care Nurses Research Group



Publications: 1

COMPOSITION

Esther Rey Cuevas.

Directora de Enfermería. Hospital Universitario La Paz

- **Laura Alonso Recio.** Profesora Contratada. Universidad de Educación a Distancia
- **Jesús Castro Toro.** Supervisor de Área Funcional. Hospital Universitario La Paz
- **Víctor Manuel Cornejo del Río.** Supervisor de Unidad Quirúrgica. Hospital Carlos III- Hospital Universitario La Paz
- **María Ricardina Delgado Sandoval.** Enfermera en Servicio de Consultas Externas. Hospital Universitario La Paz
- **María Luisa Díaz Martínez.** Profesora Contratada. Universidad Autónoma de Madrid

- **María Durán Agüí.** Enfermera en Servicio de Medicina Interna. Hospital Universitario La Paz
- **Salomé Herrero Cereceda.** Enfermera Unidad Quirúrgica. Hospital Cantoblanco-Hospital Universitario La Paz
- **Pedro Piqueras Rodríguez.** Supervisor de Enfermería en Unidad de Neonatología. Hospital Universitario La Paz
- **Ana Ramos Cruz.** Supervisor de Enfermería en Reanimación Maternidad. Hospital Universitario La Paz. Profesora Asociada de Grado de Enfermería. Centro Universitario de Ciencias de la Salud San Rafael-Nebrija
- **María del Carmen Sellán Soto.** Profesora Contratada. Universidad Autónoma de Madrid
- **Gema Tapia Serrano.** Enfermera de Cuidados Intensivos Pediátricos. Hospital Universitario La Paz

STRATEGIC OBJETIVES

- Care is an indispensable activity for survival, since humanity exists. Care has been relevant as a primary function to promote and develop all those activities that make people live.
- This research group aims to collaborate on growing clinical evidence on health care. The real gap between what generates scientific knowledge and the decisions that are made in the day to day is ethically unacceptable. Between 30 and 40% of patients do not receive care consistent with the results of the research and around 20-25% of care may be unnecessary or potentially harmful. Evidence-Based Practice (PBE) or Evidence is based on the fact that greater knowledge and use of research results in clinical practice will contribute to improving the health of the population. Today, it is well known that the implementation of the best scientific evidence available in the clinical practice improves quality of care and clinical outcomes.
- In addition, decision-makers based on available evidence tend to be more satisfied with their role and focus on improving the quality of care given to patients.
- Finally, it should be noted that using evidence in daily practice can achieve health goals at a minimum cost.
- Cost-effectiveness studies have been conducted in which evidence-based care is linked to a reduction in health costs compared to traditional care.
- At the same time, society is facing new economic, political, demographic, social and cultural challenges that require health services capable of meeting the growing health needs of the population.
- It is necessary to investigate in clinical practice the most advanced care in order to achieve the full development of care and ensure the achievement of the best results in terms of overall health and quality of life of patients, Effectiveness of interventions, greater cohesion of health care teams, and of course, all contribute to the sustainability of the health system and user satisfaction.

RESEARCH LINES

- Vital Processes and complex care
- Technological innovation and its application in health care
- Management of care and results of professional practice

RESEARCH ACTIVITY

Publications

- **Navarrete-Zampana MD, Fernández-Baillo N, Pizones J, Sánchez-Márquez JM, Sellán-Soto MC.** The post-surgical transition in adolescents who have idiopathic scoliosis. A qualitative study. *Enferm Clin.* 2023; 33(5): 361-9. Article. IF: 0.7; Q4

Research projects

- **Castro Toro J.** Efectividad de la aplicación móvil -Vivir con EPOC- para mejorar la adherencia al tratamiento y la calidad de vida en pacientes con enfermedades pulmonar obstructiva crónica. Fundación Vodafone España. 2018-Ongoing. Management centre: FIBHULP
- **Delgado Sandoval M.** Evaluación de la calidad de vida en personas con diabetes mellitus y sistema de monitorización de glucosa Flash. Sin financiación. 2022-Ongoing. Management centre: FIBHULP
- **Piqueras Rodríguez P.** Catéter permanente versus inyecciones en el confort del paciente pediátrico durante la administración de heparina de bajo peso molecular: ensayo clínico cruzado. Pedro Piqueras Rodríguez. 2021-Ongoing. Management centre: FIBHULP



3.4.9 Emergency and Critical Pathology Group



Publications:4 | Q1:4

COMPOSITION

Alejandro Martín Quirós.

Unidad de Aislamiento de Alto Nivel. Hospital Universitario La Paz

- **Gillermína Bejarano Redondo.** Médico Adjunto en Urgencias. Hospital Universitario La Paz
- **Lubna Dani Ben Abdel-lah.** Facultativo Especialista de Área en Urgencias. Hospital Universitario La Paz
- **María Elena Calvín García.** Facultativo Especialista de Área en Urgencias. Hospital Universitario La Paz
- **Julio Cobo Mora.** Jefe de la Unidad de Urgencias. Hospital Universitario La Paz
- **María de los Ángeles García Martín.** Facultativo Especialista de Área especialista en Farmacia Hospitalaria. Hospital Universitario La Paz

- **Olga González Peña.** Facultativo Especialista de Área en Medicina Familiar y Comunitaria. Hospital Universitario La Paz
- **Manuel Jesús González Viñolis.** Facultativo Especialista de Área en Urgencias. Hospital Universitario La Paz
- **Macarena Lerín Baratas.** Facultativo Especialista de Área en Urgencias. Hospital Universitario La Paz
- **María Lorena López Corcuera.** Facultativo Especialista de Área en Medicina Interna. Hospital Universitario La Paz
- **Mikel Rico Briñas.** Facultativo Especialista de Área en Urgencias. Hospital Universitario La Paz
- **Paloma Isabel Romero Gallego-Acho.** Facultativo Especialista de Área en Medicina Interna. Hospital Universitario La Paz
- **María José Simón Merlo.** Facultativo Especialista de Área en Radiología. Hospital Universitario La Paz

STRATEGIC OBJETIVES

- Our group will investigate new strategies to address very different pathologies that are presented in our emergency department, national referent in different fields of diagnosis and treatment. This heterogeneous group of specialists, will approach 6 main lines of research, which aim to contribute to the better definition of clinical, diagnostic and treatment strategies.
- We collaborate with other research groups, to study clinical and prognostic usefulness tests in cardiology, to develop new strategies for the treatment and diagnosis of infectious diseases, and to investigate new antibiotics with the pneumology group.
- We develop a new and pioneering line of imagingdiagnostic, with the line of emergency ultrasound, being national referents in research in this field, in which we have the active support of private enterprise.
- We will investigate the possibility of supporting us in new technologies that help the clinician in the decision making in the field of the treatment of the diabetes, impelling global initiatives both at the hospital and the population level.
- Finally, we will develop a line of toxicological research, focusing both on the early recognition of the intoxicated patient, as well as their adequate treatment, in collaboration with the clinical toxicology unit (CTU), with the aim of becoming a national reference center in the Management of the intoxicated patient, as well as in the development of protocols of attention to multiple victims of biological attack.



RESEARCH LINES

- Integral management of the treatment and follow-up of the diabetic patient.
- Emergency ultrasound.
- Sepsis
- SARS-CoV-2 and COVID19 acute management
- Care of infectious diseases in the emergency room.
- Optimization of the management of the acute intoxicated patient and use of chemical substances for terrorist purposes.
- Attention to cardiovascular pathology of emergencies.
- Attention to respiratory pathology.

RESEARCH ACTIVITY

Publications

- Gonzaga A, Andréu E, Hernández-Blasco LM, Meseguer R, Al-Akioui-Sanz K, Soria-Juan B, Sanjuán-Giménez JC, Ferreras C, Tejedó JR, López-Lluch G, Goterris R, Maciá L, Sempere-Ortells JM, Hmadcha A, Borobia A, Vicario JL, Bonora A, Aguilar-Gallardo C, Poveda JL, Arbona C, Alenda C, Tarín F, Marco FM, Merino E, Jaime F, Ferreres J, Figueira JC, Cañada-Illana C, Querol S, Guerreiro M, Eguizabal C, Martín-Quirós A, Robles-Marhuenda A, Pérez-Martínez A, Solano C, Soria B. Rationale for combined therapies in severe-to-critical COVID-19 patients. *Front Immunol.* 2023; 14: 1232472. Review. IF: 5.7; Q1
- Lozano-Rodríguez R, Avendaño-Ortiz J, Montalbán-Hernández K, Ruiz-Rodríguez JC, Ferrer R, Martín-Quirós A, Maroun-Eid C, González-López JJ, Fàbrega A, Terrón-Arcos V, Gutiérrez-Fernández M, Alonso-López E, Cubillos-Zapata C, Fernández-Velasco M, de Diego RP, Pelegrín P, García-Palenciano C, Cueto EJ, del Fresno C, López-Collazo E. The

prognostic impact of SIGLECS-induced impairment of CD8+ T cell activation in sepsis. *Ebiomedicine.* 2023; 97: 104841. Article. IF: 9.7; D1

- Lozano-Rodríguez R, Avendaño-Ortiz J, Terrón V, Montalbán-Hernández K, Casalvilla-Dueñas J, Bergón-Gutiérrez M, Mata-Martínez P, Martín-Quirós A, García-Garrido MA, del Balzo-Castillo A, Peinado M, Gómez L, Llorente-Fernández I, Martín-Miguel G, Herrero-Benito C, López-Morejón L, Vela-Olmo C, Cubillos-Zapata C, López-Collazo E, del Fresno C. mRNA-1273 boost after BNT162b2 vaccination generates comparable SARS-CoV-2-specific functional responses in naive and COVID-19-recovered individuals. *Front Immunol.* 2023; 14: 1136029. Article. IF: 5.7; Q1
- Pascale R, Toschi A, Aslan AT, Massaro G, Maccaro A, Fabbriatore D, Dell'Aquila A, Ripa M, Isik ME, Kazmaz YU, Iacopino S, Camici M, Perna F, Akinosoglou K, Karruli A, Papadimitriou-Olivgeris M, Kayaaslan B, Bilir YA, Özcan EE, Turan OE, Isik MC, Pérez-Rodríguez MT, Yagüe BL, Quirós AM, Yilmaz M, Petersdorf S, De Potter T, Durante-Mangoni E, Akova M, Curnis A, Gibertoni D, Diemberger I, Scudeller L, Viale P, Giannella M. Risk factors for Gram-negative bacterial infection of cardiovascular implantable electronic devices: multicentre observational study (CarDINE Study). *Int J Antimicrob Ag.* 2023; 61(3): 106734. Article. IF: 4.9; Q1

Research projects

- Martín Quirós A. Impacto del retraso en el inicio de la antibioterapia e identificación de biomarcadores pronósticos en la evolución de pacientes con sepsis a shock séptico (PI20/01589). ISCIII. 2021-2023. *Managment centre: FIBHULP*

Clinical trials

- Martín Quirós A. Estudio de fase III, aleatorizado, doble ciego y controlado con placebo para evaluar la eficacia y la seguridad de bemnifosbu-

vir en pacientes ambulatorios de alto riesgo con covid-19.

Type/Phase: III

Sponsored by: Atea Pharmaceuticals, Inc

Signed date: 04/07/2023

- Martín Quirós A. Estudio retrospectivo y descriptivo para describir la co-medificación basal que reciben los pacientes hospitalizados por covid-19 respiratorio en España. estudio cocos.

Type/Phase: EPA-OD

Sponsored by: Merck Sharp And Dohme De España, S.A.

Signed date: 24/03/2023





3.4.10 Hospital Pharmacy Group

Publications: 15 | **Q1:** 1

COMPOSITION

Alicia Herrero Ambrosio.

Jefa de Servicio de Farmacia Hospitalaria. Hospital Universitario La Paz. Profesora Asociada. Universidad Complutense de Madrid

- **Susana Andrés Morera.** Facultativo Especialista de Área en Farmacia Hospitalaria. Hospital Universitario La Paz
- **Cristina Bilbao Gómez-Martíno.** Facultativo Especialista de Área en Farmacia Hospitalaria. Hospital Universitario La Paz

- **Nuria Blázquez Ramos.** Farmacéutico Especialista en Farmacia Hospitalaria. FIBHULP
- **Cristina Cárdenas Serralde.** Farmacéutico . FIBHULP
- **María Gema Casado Abad.** Facultativo Especialista de Área en Farmacia Hospitalaria. Hospital Universitario La Paz
- **María del Río Durango.** Farmacéutico . FIBHULP
- **Luis González del Valle.** Jefe de Sección de Farmacia Hospitalaria. Hospital Universitario La Paz
- **María Ángeles González Fernández.** Facultativo Especialista de Área en Farmacia Hospitalaria. Hospital Universitario La Paz
- **Inmaculada Jiménez Nacher.** Facultativo Especialista de Área en Farmacia Hospitalaria. Hospital Universitario La Paz

- **Catalina Lara Cátedra.** Facultativo Especialista de Área en Farmacia Hospitalaria. Hospital Universitario La Paz
- **Marta Moro Agud.** Subdirectora Médico de Servicios Centrales. Hospital Universitario La Paz
- **Tamara Pérez Robles.** Facultativo Especialista de Área en Farmacia Hospitalaria. Hospital Universitario La Paz
- **Elena María Rodríguez Martín.** Facultativo Especialista de Área en Farmacia Hospitalaria. Hospital Universitario La Paz
- **José Antonio Romero Garrido.** Facultativo Especialista de Área en Farmacia Hospitalaria. Hospital Universitario La Paz. Personal Docente e Investigador. Universidad Complutense De Madrid
- **Rosario Fátima Ros Catellar.** Facultativo Especialista de Área en Farmacia Hospitalaria. Hospital Universitario La Paz
- **Margarita Ruano Encinar.** Facultativo Especialista de Área en Farmacia Hospitalaria. Hospital Universitario La Paz
- **Luis Sánchez-Rubio Fernández.** Facultativo Especialista de Área en Farmacia Hospitalaria. Hospital Universitario La Paz
- **Carmen Sobrino Jiménez.** Facultativo Especialista de Área en Farmacia Hospitalaria. Hospital Universitario La Paz
- **María Luisa Testillano Tarrero.** Facultativo Especialista de Área en Farmacia Hospitalaria. Hospital Universitario La Paz
- **Elena Villamañán Bueno.** Facultativo Especialista de Área en Farmacia Hospitalaria. Hospital Universitario La Paz

STRATEGIC OBJETIVES

- The Hospital Pharmacy group aims to investigate on pharmacotherapy focused on both, researches on treatments and innovation technology related to the medication use process in order to optimize clinical practice.

RESEARCH LINES

1. Evaluation of Drugs - Real World Outcomes, especially those associated with high economic impact or with limited clinical evidence. In this regard, our target is to investigate on the following fields:
 - Coagulopathies
 - Oncology
 - Biologic therapies
 - Infectious diseases
 - Rare diseases
 - Gene therapy
 - Molecular biology of the innate immune system
2. Investigation on strategies for early detection and prevention of medication errors either in patients with critical illness and patients with complex chronic conditions
3. Analysis of the impact on medication adherence and health outcomes of innovation in new technologies applied to the medication use process:
 - Telepharmacy programs including or not medications home delivery. Evaluation of their impact on medication adherence and health outcomes in different pathologies such as migraine, multiple sclerosis, prostate cancer and asthma.
 - Development and evaluation of digital health tools applied to congenital coagulopathies and its impact in terms of adherence and treatment cost-effectiveness improvement
 - Research on the effect of predictive analytics and big data on clinical decision making and pharmaceutical outcomes optimization
 - Identification of signalling pathways connecting nicotinic alpha7 receptors and negative regulators of TLR-mediated inflammation in human macrophages
4. Development of new drugs: Advanced therapies





RESEARCH ACTIVITY

Doctoral theses

- **Eyasu Belete M.** Práctica de automedicación con antibióticos en pacientes adultos, con sospecha de infección del tracto urinario (ITU), de Addis Abeba (Etiopía)[dissertation]. Madrid: UCM: 2023(21/02/2023). *Director: Romero Garrido JA, Martín-Aragón Álvarez S, Benedí González J. International Mention*

Publications

- **Blanco-Aparicio M, Almonacid C, Calvín Lamas M, Delgado J, Gandolfo-Cano M, López-Carrasco V, Vega JM, Díaz-Pérez D, Villamañán Elena.** Telemedicine and severe asthma in our environment: Views on the experience of professionals and suggestions to make it a reality. *Open Respir Arch.* 2023; 5(3): 100239. Review. Not indexed

- **Blázquez-Ramos N, Romero-Garrido JA, del Valle LG, Collada-Sánchez VL, Álvarez-Román MT, Jiménez-Yuste V, Martín-Salces M, de la Corte-Rodríguez H, Herrero-Ambrosio A, Benedí-González J, Rodríguez-Merchán EC.** Development of a telematic pharmaceutical care app (Haemoassist) for multidisciplinary follow-up of patients with congenital coagulopathies. *Expert Rev Hematol.* 2023; 16(3): 213-26. Article. IF: 2.3; Q2
- **Cisneros-Serrano C, Rial MJ, Gómez-Bastero-Fernández A, Igea JM, Martínez-Meca A, Fernández-Lisón LC, López-Carrasco V, Villamañán-Bueno E, Plá-Martí MJ, Chiner E.** Spanish multidisciplinary consensus on the characteristics of severe asthma patients on biologic treatment who are candidates for at-home administration. *Rev Clin Esp.* 2023; 223(3): 154-64. Article. IF: 2.3; Q2
- **Herranz-Pinto P, Alonso-Pacheco ML, Feltes-Ochoa R, Mayor-Ibarguren A, Servera-Negre**

- G, Busto-Leis JM, González-Fernández MA, Herrero-Ambrosio A.** Real-world performance of a new strategy for off-label use of guselkumab in moderate to severe psoriasis: super-responder patients as the epitome of efficacy and optimisation. *Clin Drug Invest.* 2023; 43(7): 517-27. Article. IF: 2.9; Q2
- **Laorden D, Domínguez-Ortega J, Carpio C, Barranco P, Villamañán E, Romero D, Quirce S, Álvarez-Sala R.** Long COVID outcomes in an asthmatic cohort and its implications for asthma control. *Resp Med.* 2023; 207: 107092. Article. IF: 3.5; Q2
- **Laorden D, Zamarrón E, Romero D, Domínguez-Ortega J, Villamañán E, Losantos I, Gayá F, Quirce S, Álvarez-Sala R.** Evaluation of FEOS score and super-responder criteria in a real-life cohort treated with anti-IL5/IL5R. *Resp Med.* 2023; 211: 107216. Article. IF: 3.5; Q2
- **Lara-Cátedra C, López-Cabezas C, García-López I, Elviro-Lloréns M, Letélliez-Fernández**

- J, de Rosales-Cabreraf AMM, Alonso-Herberos JM, SalaVilajosana N.** Map of use of parenteral analgesic admixtures in Spain. MEDPAIN project. *Farm Hosp.* 2023; 47(4): 161-7. Article. IF: 1.0; Q4
- **Mariscal-Aguilar P, Gómez-Carrera L, Carpio C, Zamarrón E, Bonilla G, Fernández-Velilla M, Torres I, Esteban I, Regojo R, Díaz-Almirón M, Gayá F, Villamañán E, Prados C, Álvarez-Sala R.** Relationship between air pollution exposure and the progression of idiopathic pulmonary fibrosis in Madrid: Chronic respiratory failure, hospitalizations, and mortality. A retrospective study. *Front Public Health.* 2023; 11: 1135162. Article. IF: 3.0; Q2
- **Montoro-Ronsano JB, Poveda-Andrés JL, Romero-Garrido JA, García-Barcenilla S, González-Álvarez I, Núñez-Vázquez R, Rambla-Pérez M, Soto-Ortega I.** Consensus recommendations for the improvement of inter- and in-



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- tra-centre care coordination in the management of hemophilia. *Farm Hosp.* 2023; 47(3): T100-5. Article. IF: 1; Q4
- **Narváez-Fernández EJ, Entrala A, Nin-Valencia A, Mir-Ihara P, Losantos-García I, Domínguez-Ortega J, González-Fernández MA, Quirce S, Hernández-Cano N, Cabañas R, Caballero T.** Long-term omalizumab in elderly patients with chronic urticaria: is it a safe therapy? *Int Arch Allergy Imm.* 2023; 184(10): 1003-9. Article. IF: 2.5; Q3
 - **Pose K, Laorden D, Hernández N, Villamañán E, Quirce S, Domínguez-Ortega J.** Efficacy of dupilumab for severe atopic dermatitis co-occurring with asthma in a real-world setting. *J Invest Allerg Clin.* 2023; 33(3): 217-9. Editorial Material. IF: 6.1; Q1
 - **Sánchez VLC, Bueno EV, Morales MA, Encinar MR, Jiménez CS, Catedra CL, Pérez EA, Ambrosio AH.** Green hospital pharmacy: A sustainable approach to the medication use process in a tertiary hospital. *Farm Hosp.* 2023; 47(5): 196-200. Article. IF: 1.0; Q4
 - **Sánchez VLC, Criado JA, Martín VM, Auñón PZ, Arranz EE, Iburguren AM, Jiménez IN, Ambrosio AH.** Subacute cutaneous lupus erythematosus following ribociclib therapy for metastatic breast cancer. *J Oncol Pharm Pract.* 2023; 29(7): 1793-6. Article. IF: 1.0; Q4
 - **Villamañán E, Uzquianoa EFD, García E, Sobrino C, del Pozo A, Carpio C, Herrero B, Armadab E, Álvarez-Salab R, Castroa A.** Women's leadership in clinical research: A retrospective observational study over two decades in Spain. *Rev Clin Esp.* 2023; 223(1): 1-9. Article. IF: 2.3; Q2
 - **Zamarrón E, Carpio C, Villamañán E, Álvarez-Sala R, Borobia AM, Gómez-Carrera L, Buño A, Prados C.** Impact of systemic corticosteroids on hospital length of stay among patients with COVID-19. *Farm Hosp.* 2023; 47(2): 55-63. Article. IF: 1.0; Q4

Research projects

- **Herrero Ambrosio A.** Desarrollo de un sistema de gestión de medicamentos en investigación. Sanofi Aventis S.A. 2008-Ongoing. *Management centre: FIBHULP*
- **Herrero Ambrosio A.** Evaluación de la notificación de alergias a fármacos en pacientes hospitalizados. Utilidad de la prescripción electrónica en la prevención de errores de medicación. Amgen S.A. 2012-Ongoing. *Management centre: FIBHULP*
- **Herrero Ambrosio A.** Implantación del módulo epase en la elaboración de antineoplásicos (PI-1609). Amgen S.A. 2013-Ongoing. *Management centre: FIBHULP*
- **Romero Garrido JA.** Estudio de adherencia al tratamiento de los pacientes en profilaxis con factores de la coagulación y su relación con los episodios de sangrado (PI-2356). Amgen S.A. 2014-Ongoing. *Management centre: FIBHULP*
- **Herrero Ambrosio A.** Informatización y optimización de procesos en la unidad de ensayos clínicos del Servicio de Farmacia. Vifor Pharma España S.L. 2015-Ongoing. *Management centre: FIBHULP*
- **Romero Garrido JA.** Estudio de adherencia al tratamiento sustitutivo con factores de la coagulación en pacientes diagnosticados de hemofilia grave en regimen de demanda y profilaxis y su relación con episodios de sangrado. Pfizer S.L.U. 2016-Ongoing. *Management centre: FIBHULP*
- **Herrero Ambrosio A.** Actualización y promoción de la actividad investigadora en el Servicio de Farmacia del Hospital Universitario La Paz. Vifor Pharma España S.L. 2016-Ongoing. *Management centre: FIBHULP*
- **Herrero Ambrosio A.** Estudio de evaluación del servicio de telefarmacia y entrega no presencial de medicación desde la farmacia hospitalaria a partir de la pandemia covid-19. Amgen S.A. 2020-Ongoing. *Management centre: FIBHULP*
- **Villamañán Bueno E.** Evaluación de las objeciones alegadas por un comité ético de investigación clínica a los consentimientos informados de los estudios clínicos. Amgen S.A. 2016-Ongoing. *Management centre: FIBHULP*
- **Moro Agud M.** Evaluación de la implantación de una plataforma de gestión del conocimiento para la comunicación, formación y docencia en el Hospital Universitario La Paz. Pfizer S.L.U. 2020-Ongoing. *Management centre: FIBHULP*
- **Villamañán Bueno E.** Búsqueda de marcadores genéticos en el tratamiento de la fibrosis pulmonar idiopática con pirfenidona y nintedanib. Fundación Española de Farmacia Hospitalaria (FEFH). 2020-Ongoing. *Management centre: FIBHULP*
- **Romero Garrido JA.** Fármacos que marcan un antes y un después: Resultados e implicaciones económicas de la incorporación de emicizumab al tratamiento de la hemofilia. Fundación Española de Farmacia Hospitalaria (FEFH). 2021-Ongoing. *Management centre: FIBHULP*
- **Villamañán Bueno E.** Gestión del impacto medioambiental de los inhaladores desde la farmacia hospitalaria (Proyecto GIMAFH) (PI-5744). Fundación Española de Farmacia Hospitalaria (FEFH). 2023-Ongoing. *Management centre: FIBHULP*
- **Villamañán Bueno E.** Análisis de resultados en salud y de la satisfacción de los pacientes del programa paciente experto en enfermedades pulmonares intersticiales difusas y su tratamiento*expertepid (PI-6033). Fundación Universidad Autónoma de Madrid. 2023-Ongoing. *Management centre: FIBHULP*
- **Villamañán Bueno E.** Aplicación móvil (App) PulmoTox para la mejora de la seguridad de la farmacoterapia de pacientes respiratorios. Fundación Universidad Autónoma de Madrid. 2023-Ongoing. *Management centre: FIBHULP*
- **Sobrino Jiménez C.** Reto medicación sin daño. Bayer Hispania S.L. 2023-Ongoing. *Management centre: FIBHULP*

- **Sobrino Jiménez C.** Proyecto Less Chron Validación. Sociedad Española de Farmacia Hospitalaria. 2023-Ongoing. *Management centre: SEFH*
- **Lara Cátedra C.** Proyecto MEDSPAIN: Revisión sistemática de la estabilidad físico-química de las mezclas analgésicas vía parenteral más utilizadas. Sociedad Española de Farmacia Hospitalaria. 2023-Ongoing. *Management centre: SEFH*

Clinical trials

- **González Fernández MA.** Estudio observacional para evaluar la adherencia a tremfya® (guselkumab) en la práctica clínica en pacientes con psoriasis moderada a grave.
Type/Phase: EPA-SP
Sponsored by: Janssen-Cilag España S.A.
Signed date: 11/04/2023
- **Casado Abad G.** Análisis de utilización de células madre esenquimales para el tratamiento de complicaciones post-alotrasplante de progenitores hematopoyéticos en hospitales españoles.
Type/Phase: EPA-OD
Sponsored by: Fundación Española De Farmacia Hospitalaria
Signed date: 20/01/2023

Patents and trademarks

- **Herrero Ambrosio A, Ramírez García E, Ojeda Feo JJ, Pérez Rodríguez J, Asensio Martín MJ, González Sánchez ML, Moro Agud M, Lorente Romeo M, López Nieto M, Gómez Ri- oja R, authors; FIBHULP, assignee.** Trademark name: SINOIRES; CM 13.080.056; 2014 July 14





3.4.11 Translational Hepatology Group

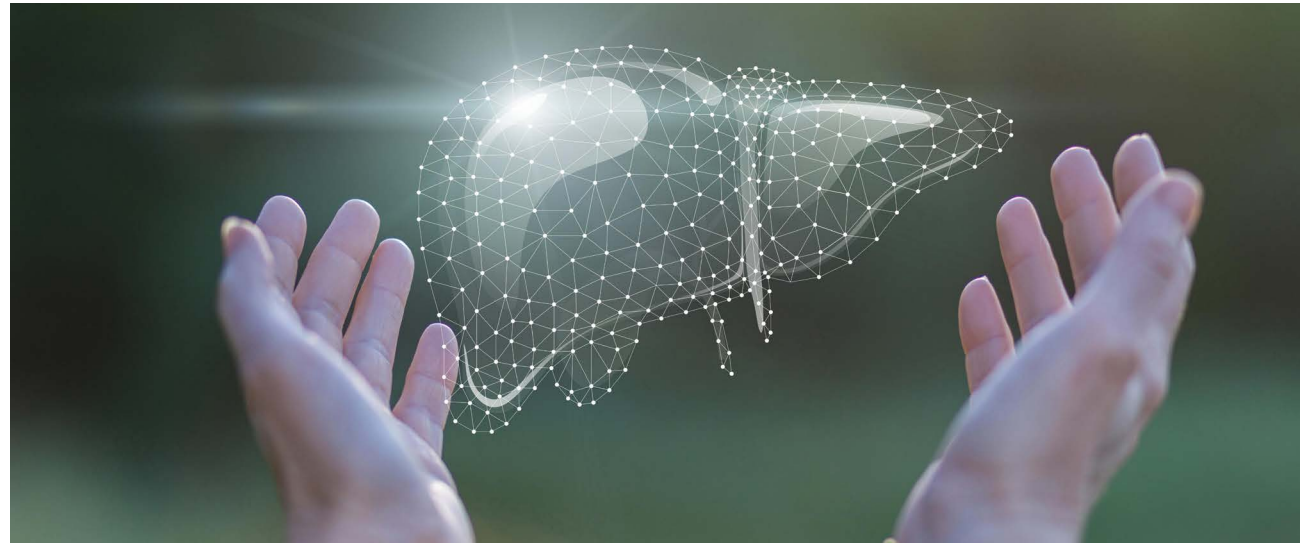
Publications: 13 | Q1:6

COMPOSITION

Francisco Javier García-Samaniego Rey.

Jefe de Sección en Hepatología. Hospital Universitario La Paz. Profesor Titular. Universidad Complutense De Madrid

- **Marina Cambor Murube.** Investigadora Predoctoral. Universidad Autónoma de Madrid
- **Antonio Madejón Seiz.** Investigador Postdoctoral. CIBERehd
- **Antonio Olveira Martín.** Facultativo Especialista de Área en Hepatología. Hospital Universitario La Paz
- **Miriam Romero Portales.** Facultativo Especialista de Área en Gastroenterología. Hospital Universitario La Paz



STRATEGIC OBJECTIVES

- The research group conducted by Dr. García-Samaniego has extensive experience in the study of liver diseases, focusing its research activity, in both, clinical and basic aspects. In recent years the group has developed its activity preferentially in the study of viral hepatitis. The expertise areas of the research group are the study of infections caused by the hepatitis viruses [hepatitis viruses B (HBV), C (HCV) and delta (HDV)] and the chronic liver disease related to HBV, HCV and HDV at a time in which highly efficient antiviral systems against HBV, and especially against HCV has been developed.
- In addition to complete the research lines, the global strategy of the group will be focused in maintaining the high level of collaboration, both with CIBERehd research groups and with external groups, as well as to increase of the cooperation ways with private enterprise.

RESEARCH LINES

- Main research lines:
 1. Study of the epidemiological situation and optimization of the cascade of care for patients with infection by the hepatitis delta virus (HDV). Project in collaboration with the Hospital Clinic of Barcelona and Infanta Leonor of Madrid, and funded by the HDV DESCRIBE program sponsored by Gilead Scientific, S.A.
 2. Development of HCV micro-elimination strategies through the optimization and implementation of HCV detection and quantification systems at diagnostic points.
 3. Analysis of the role of epigenetic modifications induced by infection by hepatotropic viruses in the evolution of liver disease and the development of liver cancer, before and after antiviral treatment. Project performed in collaboration with the Department of Biochemistry of the Faculty of Medicine of the UAM and the Virology laboratory of the Molecular Biology Center "Severo Ochoa".
 4. Study of liver fibrosis progression factors in patients with metabolic hepatic steatosis.
- Alternative lines of work:
 1. Study of the role of the intestinal microbiota as a prognostic factor for adverse effects in biological cancer therapy. Project developed in collaboration with the Department of Biochemistry of the Faculty of Medicine of the UAM.
 2. Study of the influence of pre-existing liver disease on the evolution of COVID.



3.4 Large System Pathologies Area

RESEARCH ACTIVITY

Doctoral theses

- **Gil García AI.** Análisis genético y funcional del antígeno de superficie del virus de la hepatitis B aislado de pacientes antígeno e negativo en la zona gris de tratamiento.[dissertation]. *Madrid: UAM: 2023(25/05/2023).* Director: *García-Samaniego J, Madejón Seiz A.*

Publications

- **Carrascosa JM, Vilarrasa E, Belinchón I, Herranz P, Crespo J, Guimerá F, Oliveira A.** Common approach to metabolic-associated fatty liver disease in patients with psoriasis: consensus-based recommendations from a multidisciplinary group of experts. *Actas Dermosifiliogr.* 2023; 114(5): T392-T401. Article. IF: 3.8; Q1
- **Crespo J, Cabezas J, Aguilera A, Albillos A, Buti M, Calleja JL, Montes JC, Martín MC, Diago M, Rodríguez CMF, Vázquez IF, Forn X, García F, García-Samaniego J, de Aguilar MHG, Jorquera F, Lazarus JV, Lens S, Martró E, García JMM, López MJ, Pineda JA, Rodríguez M, Romero-Gómez M, Antolín GS, Desfilis MAS, Turnes J.** Opportunistic diagnosis based on age and hepatitis C virus clearance: an essential step to improve the overall health of the liver. *Rev Esp Enferm Dig.* 2023; 115(3): 128-32. Article. IF: 2.7; Q2
- **Crespo J, Cabezas J, Aguilera A, Berenguer M, Buti M, Forn X, García F, García-Samaniego J, Hernández-Guerra M, Jorquera F, Lazarus JV, Lens S, Martró E, Pineda JA, Prieto M, Rodríguez-Frías F, Rodríguez M, Serra MA, Turnes J, Domínguez-Hernández R, Casado MA, Calleja JL.** Recommendations for the integral diagnosis of chronic viral hepatitis in a single analytical extraction. *Gastroent Hepat.* 2023; 46(2): 150-62. Article. IF: 2.2; Q3
- **García-Crespo C, Francisco-Recuero I, Gallego I, Cambor-Murube M, Soria ME, López-López A, de Avila AI, Madejón A, García-Samaniego J, Domingo E, Sánchez-Pacheco A, Perales C.** Hepatitis C virus fitness can influence the extent

of infection-mediated epigenetic modifications in the host cells. *Front Cell Infect Mi.* 2023; 13: 1057082. Article. IF: 4.6; Q2

- **Mariño Z, Berenguer M, Peña-Quintana L, Oliveira A, Miralpeix A, Sastre I, Reyes-Domínguez A, Castillo P, García-Solà C, Bono A, Romero M, Pérez-Sádaba FJ, Aceituno S, Anguera A.** Health-Related Quality of Life in Patients Living with Wilson Disease in Spain: A Cross-Sectional Observational Study. *J Clin Med.* 2023; 12(14): 4823. Article. IF: 3.0; Q1
- **Martínez-Camprejón J, Riveiro-Barciela M, Muñoz-Gómez R, Londoño MC, Roget M, Serra MA, Escudero-García D, Purchades L, Rodríguez M, Losa-García JE, Gutiérrez ML, Carmona I, García-Samaniego J, Morano L, Martín-Granizo I, Montero-Alonso M, Prieto M, Delgado M, Ramos N, Azancot MA, Rodríguez-Frías F, Buti M.** Long-term follow-up of HCV-infected patients with end-stage chronic kidney disease after sustained virological response with direct-acting antiviral therapy. *Gastroent Hepat.* 2023; 46(8): 594-602. Article. IF: 2.2; Q3
- **Mateos-Muñoz B, Buti M, Vázquez IF, Conde MH, Bernal-Monterde V, Díaz-Fontenla F, Morillas RM, García-Buey L, Badía E, Miquel M, Amador-Navarrete A, Rodríguez-Tajes S, Ramos-Merino L, Madejón A, García-Retortillo M, Arenas JI, Cabezas J, Santiago JMG, Fernández-Rodríguez C, Cordero P, Diago M, Mancebo A, Pardo A, Rodríguez M, Hoyas E, Moreno JJ, Turnes J, Simón MA, Marcos-Fosch C, Calleja JL, Bañares R, Lens S, García-Samaniego J, Crespo J, Romero-Gómez M, Gea F, de Santiago ER, Moreno S, Albillos A.** Tenofovir disoproxil fumarate reduces the severity of covid-19 in patients with chronic hepatitis b. *Digest Dis Sci.* 2023; 68(6): 2731-7. Article. IF: 2.5; Q2
- **Mehta G, Riva A, Ballester MP, Uson E, Pujadas M, Carvalho-Gomes A, Sahuco I, Bono A, D'Amico F, Viganò R, Diago E, Lanseros BT, Inglese E, Vázquez DM, Sharma R, Tsou HLP, Harris N, Broekhoven A, Kikkert M, Morales SPT, Myeni SK, Riveiro-Barciela M, Palom A, Zeni N, Brocca A, Cusigh A, Cmet S, Escudero-García D, Stocco M, Natola IA, Ieluzzi D, Paon V, Sangiovanni A, Farina E, di Benedetto C, Sánchez-Torrijos Y, Lucena-Varela A, Román E, Sánchez E, Sánchez-Aldehuelo R, López-Cardona J, Canas-Pérez I, Eastgate C, Jeyanesan D, Morocho AE, Di Cola S, Lapenna L, Zaccherini G, Bongiovanni D, Zanaga P, Sayaf K, Hossain S, Crespo J, Robles-Díaz M, Madejón A, Degroote H, Fernández J, Korenjak M, Verhelst X, García-Samaniego J, Andrade RJ, Iruzubieta P, Wright G, Caraceni P, Merli M, Patel VC, Gander A, Albillos A, Soriano G, Donato MF, Sacerdoti D, Toniutto P, Buti M, Duvoux C, Grossi PA, Berg T, Polak WG, Puoti M, Bosch-Comas A, Belli L, Burra P, Russo FP, Coenraad M, Calleja JL, Perricone G, Berenguer M, Claria J, Moreau R, Arroyo V, Angeli P, Sánchez C, Ampuero J, Piano S, Chokshi S, Jalan R.** Serological response and breakthrough infection after COVID-19 vaccination in patients with cirrhosis and post-liver transplant. *Hepatol Commun.* 2023; 7(11): e0273. Article. IF: 5.6; Q1
- **Oliveira A, Augustin S, Benlloch S, Ampuero J, Suárez-Pérez JA, Armesto S, Vilarrasa E, Belinchón-Romero I, Herranz P, Crespo J, Guimerá F, Gómez-Labrador L, Martín V, Carrascosa JM.** The Essential Role of IL-17 as the pathogenetic link between psoriasis and metabolic-associated fatty liver disease. *Life (Basel).* 2023; 13(2): 419. Review. IF: 3.2; Q1
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- AA, Altraif IH, Asselah T, Ben-Ari Z, Berg T, Biondi MJ, Blach S, Braga WSM, Brandao-Mello CE, Brunetto MR, Cabezas J, Cheinquer H, Chen PJ, Cheon ME, Chuang WL, Coffin CS, Coppola N, Craxi A, Crespo J, De Ledinghen V, Duberger AS, Etzion O, Ferraz MLG, Ferreira PRA, Forn X, Foster GR, Gaeta GB, Gamkrelidze I, García-Samaniego J, Gheorghe LS, Gholam PM, Gish RG, Glenn J, Hercun J, Hsu YC, Hu CC, Huang JF, Janjua N, Jia JD, Kåberg M, Kaita KDE, Kamal H, Kao JH, Kondili LA, Lagging M, Lázaro P, Lazarus JV, Lee MH, Lim YS, Marotta PJ, Navas MC, Naveira MCM, Orrego M, Osiowy C, Pan CO, Pessoa MG, Raimondo G, Ramji A, Razavi-Shearer DM, Razavi-Shearer K, Ríos-Hincapié CY, Rodríguez M, Rosenberg WMC, Roulot DM, Ryder SD, Safadi R, Sanai FM, Santantonio TA, Sarrazin C, Shouval D, Tacke F, Tergast TL, Villalobos-Salcedo JM, Voeller AS, Yang H, Yu ML, Zuckerman E.** Hepatitis D double reflex testing of all hepatitis B carriers in low-HBV- and high-HBV/HDV-prevalence countries. *J Hepatol.* 2023; 79(2): 576-80. Article. IF: 26.8; D1
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3.4 Large System Pathologies Area

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Research projects

- **García-Samaniego Rey J.** Búsqueda activa de pacientes con hepatitis crónica viral (VHC YVHD) no diagnosticada, en población general, desde los Centros de salud de la Comunidad de Madrid. *Gilead Sciences*. 2022-2023. *Management centre: FIBHULP*
- **García-Samaniego Rey J.** Epidemiological status of HDV infection in two big urban areas in Spain. Optimization of the cascade of care. *Gilead Sciences (HDVDESCRIBE Program)*. 2022-2023. *Management centre: CIBER*
- **García-Samaniego Rey J.** Estudio epidemiológico y molecular de la infección por VHD en una gran área urbana de España. Optimización de la cascada de atención (PI22/00849). *ISCIII*. 2023-2025. *Management centre: ISCIII*

Cibers and Retics

- **CB06/04/0083 García-Samaniego Rey J.** Networked Biomedical Research Center for Hepatic and Digestive diseases. (CIBEREHD). *ISCIII*. (31/12/2023). *FIBHULP*

Clinical trials

- **Oliveira Martín A.** A randomized double-blind placebo-controlled phase 3 study to evaluate the effect of resmetrirom on liver-related outcomes in patients with well-compensated (child-pugh a) non-alcoholic steatohepatitis (nash) cirrhosis (maestro-nash outcomes).
Type/Phase: III
Sponsored by: Gilead Sciences Inc
Signed date: 24/10/2023
- **García-Samaniego Rey J.** Estudio fase III, multicéntrico, aleatorizado y doble ciego para evaluar la eficacia y seguridad de la administración de bepirovirsén en pacientes con hepatitis b crónica y en tratamiento con análogos de nucleós(t)idos (bwell 2).
Type/Phase: III
Sponsored by: Glaxosmithkline Research And Development Limited
Signed date: 13/01/2023
- **García-Samaniego Rey J.** Estudio fase II, simple ciego, aleatorizado, controlado e internacional para evaluar la seguridad, reactogenicidad, eficacia y respuesta inmune tras el tratamiento secuencial con un oligonucleótido antisentido (aso) para la hepatitis b crónica (hbc) seguido de inmunoterapia dirigida contra la hepatitis b crónica (hbcit) en pacientes con hbc en tratamiento con análogos de nucleós(t)idos (an).
Type/Phase: II
Sponsored by: Glaxosmithkline S.A
Signed date: 09/01/2023
- **Oliveira Martín A.** Estudio de fase 2b, multicéntrico, aleatorizado, doble ciego y controlado con placebo para evaluar la eficacia y la seguridad de la efinopegdutida (mk-6024) en adultos con esteatohepatitis no alcohólica precirrótica.
Type/Phase: IIb
Sponsored by: Merck Sharp & Dohme LLC
Signed date: 06/06/2023
- **Oliveira Martín A.** Estudio fase IIA, aleatorizado, doble ciego, controlado con placebo para evaluar la seguridad, tolerabilidad y farmacodinámica de azd4831 en pacientes con esteatohepatitis no alcohólica (ehna) no cirrótica con fibrosis.

Type/Phase: IIa

Sponsored by: Astrazeneca Farmaceutica Spain S.A
Signed date: 29/05/2023

- **García-Samaniego Rey J.** A registry study of treatment with bulevirtide in participants with chronic hepatitis d infection.

Type/Phase:

Sponsored by: Gilead Sciences Inc
Signed date: 13/09/2023

- **Oliveira Martín A.** Estudio clínico aleatorizado, doble ciego, controlado con placebo, multicéntrico, ininterrumpido, adaptativo, de seguridad y búsqueda de dosis en fase iii de la transferencia génica mediada por vaa con ux701 para el tratamiento de la enfermedad de wilson.

Type/Phase: I

Sponsored by: Ultragenyx Pharmaceutical, Inc
Signed date: 08/10/2023

- **García-Samaniego Rey J.** Estudio fase III, multicéntrico, aleatorizado y doble ciego para evaluar la eficacia y seguridad de la administración de bepirovirsén en pacientes con hepatitis b crónica y en tratamiento con análogos de nucleós(t)idos (bwell 2).

Type/Phase: III

Sponsored by: Glaxosmithkline Research And Development Limited
Signed date: 25/08/2023

Patents and trademarks

- **Castán P, Gil-García AI, Madejón A, Sainz-Martínez E, Montoya JJ, Ouahid Younes, inventors; MIRNAX BIOSENS S.L., assignee.** Bivalent reverse primers Application number (EPO): 20382336.4-1118. 2020 April 24.
- **Madejón A; inventor; Agile Life Sciences LTD, assignee.** Kit and methods Application number: GB202010372.A. 2020 July 6.



3.5 Cancer and Human Molecular Genetics Area

Documents: 235 | Originals: 195 | D1: 51 | Q1: 122

Area coordinator: Javier de Castro Carpeño

coordinadorcancer@idipaz.es

RESEARCH GROUPS

3.5.1 INGEMM - Instituto de Genética Médica y Molecular (Institute of Medical and Molecular Genetics) - *Pablo Lapunzina Badía*

3.5.2 Translational Oncology - *Jaime Feliú Battle*

3.5.3 Experimental Therapies and Biomarkers in Cancer - *Olga Vera Puente/Javier de Castro Carpeño*

3.5.4 Oto-Neurosurgery Research - *Luis Lassaletta Atienza*

3.5.5 Cancer Molecular Pathology and Therapeutic Targets - *David Hardisson Hernández*

3.5.6 Mechanisms of Tumour Progression - *José Manuel González Sancho*

3.5.7 Research and Diagnosis of Inherited Metabolic Diseases - *María Belén Pérez González*

3.5.8 Dyslipidemias of Genetic Origin and Metabolic Diseases - *Sonia Rodríguez Novoa*

3.5.9 Human Genetic Variability - *Ana Fernández Santander*



Strategic Objectives	Development forecast for the coming years:	Actions
Cancer and Medical Genetics area is made up of 10 groups and its objective is to deepen its knowledge in all aspects related to neoplastic disease, including the biology of the tumour, identification of therapeutic targets, development of new treatments, analysis of the efficacy of available treatments, identification of biomarkers and carrying out studies aimed at prevention and early diagnosis. In relation to human and molecular genetics, the aim is to identify genetic alterations related to human diseases in order to make an early diagnosis and prevent the development of pathologies.	Research in the area of cancer and genetics is expanding, both in terms of basic and translational research and in terms of clinical research. It is foreseeable that collaboration between groups in the area will continue to increase but also the collaboration with external organisations.	Facilitate the application request for European projects through the IdiPAZ Internalization Platform
	In order to facilitate its development, it will be necessary for the Institution to provide sufficient space and adequate common infrastructures	Support researchers to continue being a reference in the international area.
	It is foreseeable that this expansion will lead to the possibility of applying for European projects and leading consortiums, where once again the support of the Foundation will be essential for their application and management	Promote at international level the different research groups of the area, identifying possible synergies between groups and centers, new partners and funding sources, as well as to forge strategic alliances.

HIGH IMPACT PUBLICATIONS

Pujade-Lauraine E, Selle F, Scambia G, Asselain B, Marme F, Lindemann K, Colombo N, Madryl R, Glasspool R, Vergote I, Korach J, Lheureux S, Dubot C, Oaknin A, Zamagni C, Heitz F, Gladieff L, Rubio-Pérez MJ, Scollo P, Blakeley C, Shaw B, Ray-Coquard, **Redondo A**. Maintenance olaparib rechallenge in patients with platinum-sensitive relapsed ovarian cancer previously treated with a PARP inhibitor (OReO/ ENGOT-ov38): a phase IIIb trial. *Ann Oncol*. 2023; 34(12): 1152-64. Article. IF: 56.7; D1.

Trilla-Fuertes L, Gámez-Pozo A, Nogué M, Busquier I, Arias F, López-Campos F, Fernández-Montes A, Ruiz A, Velázquez C, Martín-Bravo C, Pérez-Ruiz E, Asensio E, Hernández-Yagüe X, Rodrigues A, Ghanem I, López-Vacas R, Hafez A, Arias P, Dapia I, Solís M, Dittmann A, Ramos R, Llorens C, Maurel J, Campos-Barros A, Vara JAF, **Feliú J**. Utility of CYP2D6 copy number variants as prognostic biomarker in localized anal squamous cell carcinoma. *Cancer-Am Cancer Soc*. 2023; 129(16): 2581-92. Article. IF: 6.1; Q1

Musokhranova U, Grau C, Vergara C, Rodríguez-Pascual L, Xiol C, Castells AA, Alcantara S, Rodríguez-Pombo P, Pizcueta P, Martinell M, García-Cazorla A, **Oyarzábal A**. Mitochondrial modulation with leriglitazone as a potential treatment for Rett syndrome. *J Transl Med*. 2023; 21(1): 756. Article. IF: 6.1; Q1

García-Mato A, Cervantes B, Rodríguez-de la Rosa LR, **Varela-Nieto I**. IGF-1 Controls metabolic homeostasis and survival in HEI-OC1 auditory cells through AKT and mTOR signaling. *Antioxidants*. 2023; 12(2): 233. Article. IF: 6; Q1

González-Guerrero C, Borsò M, Alikhani P, Alcaina Y, Salas-Lucia F, Liao XH, García-Giménez J, Bertolini A, Martín D, Moratilla A, Mora R, Buño-Soto A, Mani AR, Bernal J, Saba A, de Miguel MP, Refetoff S, Zucchi R, **Moreno JC**. Iodotyrosines Are Biomarkers for Preclinical Stages of Iodine-Deficient Hypothyroidism in Dehal1-Knockout Mice. *Thyroid*. 2023; 33(6): 752-61. Article. IF: 5.8; Q1

Scientific Events by Cancer and Human Molecular Genetics

- **16/02/2023**. Session - Sistemas notificación de incidencias: S-NOIRES
- **23/02/2023**. Session - Detección de mosaicismo en displasias esqueléticas
- **02/03/2023**. Session - miR-124 as a liquid biopsy prognostic biomarker in small extracellular vesicles from NSCLC patients
- **09/03/2023**. Session - Síndrome de DICER1, un paradigma del doble-hit genético
- **10/03/2023**. Scientific Seminar - Utilización de iPSCs como modelo de enfermedad, aproximación a terapia y mejora diagnóstica
- **16/03/2023**. Session - Empleo de paneles customizados de NGS en cáncer pediátrico
- **23/03/2023**. Session - Espectro clínico y genético del hipopituitarismo congénito: una enfermedad compleja
- **30/03/2023**. Session - La protección de datos en investigación
- **13/04/2023**. Session - TPNI: cuánto más... ¿es siempre mejor?
- **20/04/2023**. Session - Mejoras del análisis bioinformático en un contexto asistencial de genética
- **27/04/2023**. Session - Actualización del Proyecto Impact Genómica en la C.M.
- **04/05/2023**. Session - Predisposición a la Leucemia Aguda Linfoblástica pediátrica causada por mutaciones en el gen PAX5
- **25/05/2023**. Session - Genética Molecular en Trastornos del Neurodesarrollo
- **18/05/2023**. Session - Incidencias y su resolución en el ámbito de la Calidad
- **15/06/2023**. Session - Utilidad de las vesículas extracelulares como biomarcador y tratamiento en el ictus. Investigación traslacional
- **08/06/2023**. Session - Genética Molecular en Trastornos del Neurodesarrollo
- **22/06/2023**. Session - Caracterización clínica y molecular de una cohorte de pacientes con síndrome Dup15q'
- **29/06/2023**. Session - Hipotiroidismo Gestacional y Autismo en el Ratón KO Dehal1'
- **05/07/2023**. Session - Functional characterization of Gastric Cancer and its therapeutic implications'
- **21/09/2023**. Session - Descripción de un ClinRO para el Síndrome de Wolf-Hirschhorn en una gran cohorte de pacientes
- **14/09/2023**. Session - Generación de córnea biomimética con células madre mesenquimales de tejido adiposo'
- **21/09/2023**. Session - Medioambiente y Salud en La Paz: Huella de Carbono, energía, agua, residuos y su impacto en la salud'
- **05/10/2023**. Session - Caracterización funcional de variantes de significado incierto en IHH en pacientes con talla baja y braquidactilia
- **18/10/2023**. Simposio Internacional Unity La Paz
- **26/10/2023**. Session - Epigenetic biomarkers involved in the response to chemotherapy in solid tumors
- **02/11/2023**. Session - Identificación y caracterización de variantes clínicas más allá del exoma en errores congénitos del metabolismo utilizando aproximaciones multiómicas
- **13/11/2023**. Actualización en leucemia aguda linfoblástica en el Hospital Universitario La Paz (III edición)
- **13/11/2023**. Session - Laboratorio de Biología Molecular: ADN ¿qué nos tienes que contar?
- **30/11/2023**. Session - Biomarcadores farmacogenéticos en cáncer: Farmacogenética de fluoropirimidinas
- **23/11/2023**. Session - Nuevos retos en el diagnóstico y seguimiento de la LLA pediátrica
- **14/12/2023**. Session - Cribado Neonatal
- **21/12/2023**. Session - Habilidades No Técnicas en el entorno sanitario



3.5.1 INGEMM - Instituto de Genética Médica y Molecular (Institute of Medical and Molecular Genetics) Group



Publications:41 | Q1:13

COMPOSITION

Pablo Daniel Lapunzina Badía.

Facultativo Especialista de Área en Genética.
 Hospital Universitario La Paz

- **Cinthia Amiñoso Carbonero.** Técnico de Laboratorio. Hospital Universitario La Paz
- **Pedro Arias Lajara.** Técnico de Laboratorio. Hospital Universitario La Paz
- **Sara Benito Sanz.** Investigadora Postdoctoral. Hospital Universitario La Paz
- **Ángel Campos Barros.** Investigador Senior (Contrato Miguel Servet- I2). Jefe de Laboratorio. FIBHULP
- **Ángela del Pozo Mate.** Técnico Informático. Hospital Universitario La Paz
- **Begoña Ezquieta Zubicaray.** Bioquímico Adjunto. Hospital Universitario La Paz
- **Luis Fernández García-Moya.** Biólogo. Hospital Universitario La Paz
- **Blanca Nieves Fernández Martínez.** Técnico de Laboratorio. Hospital Universitario La Paz
- **María Victoria Fernández Montaña.** Técnico de Laboratorio. Hospital Universitario La Paz
- **Amparo García Cardenal.** Técnico de Laboratorio. Hospital Universitario La Paz
- **Fe Amalia García Santiago.** Bióloga. Hospital Universitario La Paz
- **Sixto García-Miñaur Rica.** Genetista. Hospital Universitario La Paz
- **Isabel Gómez Nieto.** Técnico de Laboratorio. Hospital Universitario La Paz
- **Karen Elise Heath.** Investigadora Senior (Contrato Ramón y Cajal- I3). Jefe de Laboratorio. FIBHULP
- **Teresa López Timénez.** Técnico de Laboratorio. Hospital Universitario La Paz
- **Alicia Llorente Alonso.** Técnico de Laboratorio. Hospital Universitario La Paz
- **María Elena Mansilla Aparicio.** Genetista. Hospital Universitario La Paz
- **Pilar Martínez González.** Bióloga. Hospital Universitario La Paz
- **Víctor Manuel Martínez González.** Investigador Postdoctoral. Hospital Universitario La Paz
- **María Cruz Martínez Martínez.** Técnico de Laboratorio. Hospital Universitario La Paz
- **José Carlos Moreno Navarro.** Facultativo Especialista de Área en Genética. Hospital Universitario La Paz
- **María Ángeles Mori Álvarez.** Bioquímico Adjunto. Hospital Universitario La Paz
- **Julián Nevado Blanco.** Biólogo. Hospital Universitario La Paz
- **María Palomares Bralo.** Bióloga. Hospital Universitario La Paz
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- **Víctor Luis Ruiz Pérez.** Investigador Científico de OPIs. Jefe de laboratorio. IIB "Alberto Sols"
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- **Mario Solís López.** Bioinformático. Hospital Universitario La Paz
- **Elena Vallespín García.** Jefa de Grupo de la Sección de Ofalmogenética Molecular. Hospital Universitario La Paz



STRATEGIC OBJETIVES

- This is a clinical and basic research team that conducts several lines of research into early diagnosis, disease mechanisms and new therapeutic strategies for genetic diseases, developmental disorders and congenital defects.
- It is a heterogeneous group consisting of physicians, pharmacists, molecular biologists, bioinformaticians, technicians and administrative officers.

RESEARCH LINES

- Subtelomeric rearrangements in patients with idiopathic mental retardation.
- Genetic and functional analysis of the SHOX and SHOX2 genes in human growth.
- Overgrowth syndromes. Clinical and molecular analysis.
- Genetic determinants of syndromic and non-syndromic proportional short stature
- Genetic determinants of dysglycaemia: hypoglycaemia, diabetes mellitus and hyperinsulinism
- Genetic determinants of congenital hypopituitarism
- SNPs arrays in pharmacogenetics, HIV patients and genetic associations.
- CGH arrays and genomic rearrangements in patients with congenital malformations, intellectual disability and tumores.
- Molecular genetics of hypertrophic cardiomyopathy.
- Functional analysis of CLCN1 mutations in congenital myotonia.
- Molecular study of endothelial dysfunction in diabetes and ageing.
- Molecular characterization of the 22q11.2 región by MLPA, microsatélites and FISH.
- Pharmacogenetics and pharmacogenomics.
- Autosomal recessive osteogénesis imperfecta.
- Genomic tools for diagnosis: oligos and SNP arrays.
- Macrocephaly-capillary malformations and syndromes with macrocephaly.
- Next generation sequencing as a new tool in the diagnosis of genetic diseases.
- Classification and Ontologies of Diseases
- Primary Pulmonary hypertension
- Análisis genómico global en el Síndrome de invdup(15) [idic(15) syndrome]
- Molecular characterization of inv dup del (8p) by Karyotype, SNP arrays and FISH

RESEARCH ACTIVITY

Doctoral theses

- **Díaz González F.** Caracterización funcional de variantes en los genes PRKG2 e IHH: Implicación en la etiología de nuevas displasias y fenotipos esqueléticos.[dissertation]. *Madrid: UAM: 2023(06/11/2023). Director: Heath KE.*

Publications

- **Alemany-Navarro M, Diz-de Almeida S, Cruz R, Riancho JA, Rojas-Martínez A, Lapunzina P, Flores C, Carracedo A.** Psychiatric polygenic risk as a predictor of COVID-19 risk and severity: insight into the genetic overlap between schizophrenia and COVID-19. *Transl Psychiat.* 2023; 13(1): 189. Article. IF: 5.8; D1
- **Arruti N, Rodríguez-Solana P, Nieves-Moreno M, Guerrero-Carretero M, del Pozo A, Montaña VEF, Santos-Simarro F, Rikeros-Orozco E, Delgado-Mora L, Vallespín E, Noval S.** OPA1 Dominant optic atrophy: diagnostic approach in the pediatric population. *Curr Issues Mol Biol.* 2023; 45(1): 465-78. Article. IF: 2.8; Q3
- **Barbeito P, Martín-Morales R, Palencia-Campos A, Cerrolaza J, Rivas-Santos C, Gallego-Colastra L, Caparros-Martín JA, Martín-Bravo C, Martín-Hurtado A, Sánchez-Bellver L, Marfany G, Ruiz-Pérez VL, García-Gonzalo FR.** EVC-EVC2 complex stability and ciliary targeting are regulated by modification with ubiquitin and SUMO. *Front Cell Dev Biol.* 2023; 11: 1190258. Article. IF: 4.6; Q2
- **Bel-Fenellós C, Biencinto-López C, Sáenz-Rico B, Hernández A, Sandoval-Talamantes AK, Tenorio-Castaño J, Lapunzina P, Nevado J.** Cognitive-behavioral profile in pediatric patients with syndrome 5p-; genotype-phenotype correlations. *Genes (Basel).* 2023; 14(8): 1628. Article. IF: 2.8; Q2

- **Blagowidow N, Nowakowska B, Schindewolf E, Grati FR, Putotto C, Breckpot J, Swillen A, Crowley TB, Loo JCY, Lairson LA, Oskarsdóttir S, Boot E, García-Miñaur S, Digilio MC, Marino B, Coleman B, Moldenhauer JS, Bassett AS, McDonald-McGinn DM.** Prenatal screening and diagnostic considerations for 22q11.2 microdeletions. *Genes (Basel).* 2023; 14(1): 160. Article. IF: 2.8; Q2
- **Burdeus-Olavarrieta M, Nevado J, van Weering-Scholten S, Parker S, Swillen A.** Consensus recommendations on communication, language and speech in Phelan-McDermid syndrome. *Eur J Med Genet.* 2023; 66(5): 104745. Article. IF: 1.6; Q3
- **Castro-Santos P, Rojas-Martínez A, Riancho JA, Lapunzina P, Flores C, Carracedo A, Díaz-Peña R.** HLA-A11:01 and HLA-C04:01 are associated with severe COVID-19. *Hla.* 2023; 102(6): 731-9. Article. IF: 5.9; Q2
- **Cruz-Utrilla A, Gallego-Zazo N, Pérez-Olivares C, Hernández-González I, Bedate P, Meñaca AM, Meseguer ML, Lapunzina P, Núñez MP, Parra NO, Valverde D, Tenorio-Castaño JA, Escribano-Subías P.** Usefulness of genetics for clinical reclassification and refinement of prognostic stratification in pulmonary arterial hypertension. *Rev Esp Cardiol (Engl Ed).* 2023; 76(6): 460-7. Article. IF: 7.2; Q1
- **del Pino M, Huckstadt V, Díaz-González F, Obregon MG, Heath KE, Fano V.** Clinical and radiological heterogeneity for the rare FGFR3 variant, p.Ser344Cys, description of a third patient. *Am J Med Genet A.* 2023; 191(8): 2240-4. Letter. IF: 1.7; Q3
- **del Rosario SR, Modamio-Hoybjor S, Heath KE, Bahillo-Curienes MP.** Short stature and scoliosis: Revealing signs of ultrarare skeletal dysplasia. *An Pediatr.* 2023; 99(5): 364-5. Editorial Material. IF: 1.5; Q2
- **Díaz-González F, Parrón-Pajares M, Lucas-Castro E, Modamio-Hoybjor S, Senthordi-Montané L, Seidel V, Prieto P, Tarraso-Urios G, Codina-Sola M,**

- Cueto-González AM, Ballesta-Martínez MJ, Santos-Simarro F, Sousa SB, Heath KE.** Evolution of clinical and radiological presentations of spondyloepimetaphyseal dysplasia, RPL13-related: Description of 11 further cases. *Clin Genet.* 2023; 104(1): 100-6. Article. IF: 2.9; Q2
- **Díaz-González F, Sacedo-Gutiérrez JM, Twigg SRF, Calpena E, Carceller-Benito FE, Parrón-Pajares M, Santos-Simarro F, Heath KE.** Case report: A third variant in the 5' UTR of TWIST1 creates a novel upstream translation initiation site in a child with Saethre-Chotzen syndrome. *Front Genet.* 2023; 13: 1089417. Article. IF: 2.8; Q2
- **Drust WA, Mussa A, Gazzin A, Lapunzina P, Tenorio-Castaño J, Nevado J, Pascual P, Arias P, Parra A, Getz KD, Kalish JM.** Adult experiences in Beckwith-Wiedemann syndrome. *Am J Med Genet C.* 2023; 193(2): 116-27. Article. IF: 2.8; Q2
- **Eichstaedt CA, Belge C, Chung WK, Graef S, Gruenig E, Montani D, Quarck R, Tenorio-Castaño JA, Soubrier F, Trembath RC, Morrell NW.** Genetic counselling and testing in pulmonary arterial hypertension: a consensus statement on behalf of the International Consortium for Genetic Studies in PAH. *Eur Respir J.* 2023; 61(2): 2201471. Article. IF: 16.6; D1
- **Esteban-Cantos A, Rodríguez-Centeno J, Silla JC, Barruz P, Sánchez-Cabo F, Saiz-Medrano G, Nevado J, Mena-Garay B, Jiménez-González M, de Miguel R, Bernardino JI, Montejano R, Cadinanos J, Marcelo C, Gutiérrez-García L, Martínez-Martín P, Wallet C, Raffi F, Rodes B, Arribas JR.** Effect of HIV infection and antiretroviral therapy initiation on genome-wide DNA methylation patterns. *Ebiomedicine.* 2023; 88: 104434. Article. IF: 9.7; D1
- **Fernández-Gutiérrez E, Fernández-Pérez P, Boto-De-Ios-Bueis A, García-Fernández L, Rodríguez-Solana P, Solís M, Vallespín E.** Posterior polymor-



phous corneal dystrophy in a patient with a novel zeb1 gene mutation. *Int J Mol Sci.* 2023; 24(1): 209. Article. IF: 4.9; Q1

- **Gallego-Zazo N, Miranda-Alcaraz L, Cruz-Utrilla A, Marín MJD, Álvarez-Fuente M, del Rey MDRV, Rodríguez IG, Becerra-Munoz VM, Moya-Bonora A, Parra NO, Parra A, Pascual P, Cazalla M, Silván C, Arias P, Valverde D, de Jesús-Pérez V, Lapunzina P, Escribano-Subías P, Tenorio-Castano J.** Seven additional patients with SOX17 related pulmonary arterial hypertension and review of the literature. *Genes (Basel).* 2023; 14(10): 1965. Review. IF: 2.8; Q2
- **Gómez BG, Andrés BC, Espinosa MG, Bonis AH, Perea CH, Campos-Barros A.** Diabetic ketoacidosis in an uncommon setting: Management and neuromonitoring in a neonate. *An Pediatr.* 2023; 99(1): 63-4. Letter. IF: 1.5; Q2
- **González-Atienza C, Sánchez-Cazorla E, Viloldo-Fernández N, del Hierro A, Boto A, Guerrero-Carretero M, Nieves-Moreno M, Arruti N, Rodríguez-Solana P, Mena R, Rodríguez-Jiménez C, Rosa-Pérez I, Acal JC, Blasco J, Naranjo-Castresana M, Ruz-Caracuel B, Montaña VEF, Patrón CO, Rubio-Martín ME, García-Fernández L, Rikeros-Orozco E, Gómez-Cano MD, Delgado-Mora L, Noval S, Vallespín E.** Whole-exome sequencing of 24 spanish families: candidate genes for non-syndromic pediatric keratoconus. *Genes (Basel).* 2023; 14(10): 1838. Article. IF: 2.8; Q2
- **González-Guerrero C, Borsò M, Alikhani P, Alcaina Y, Salas-Lucía F, Liao XH, García-Giménez J, Bertolini A, Martín D, Moratilla A, Mora R, Buño-Soto A, Mani AR, Bernal J, Saba A, de Miguel MP, Refetoff S, Zucchi R, Moreno JC.** Iodotyrosines are biomarkers for preclinical stages of iodine-deficient hypothyroidism in Dehal1-Knockout Mice. *Thyroid.* 2023; 33(6): 752-61. Article. IF: 5.8; Q1
- **Kanai M, Andrews SJ, Cordioli M, Stevens C, Neale BM, Daly M, Ganna A, Kanai M, Andrews SJ, Cordioli M, Pathak GA, Ganna A, Iwasaki A, Karjalainen J, Mehtonen J, Pathak GA, Andrews SJ, Kanai M, Cordioli M, Pirinen M, Stevens C, Chwialkowska K, Trankiem A, Balaconis MK, Veerapen K, Wolford BN, Ah-**

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Research projects

- **Campos Barros A.** Descifrando la complejidad genética del hipopituitarismo congénito (PI18/00402). ISCIII. 2019-2023. *Managment centre: FIBHULP*
- **Heath KE.** Análisis genético y funcional de las displasias esqueléticas (PID2020-116263RB-I00). Ministerio de Ciencia e Innovación. 2021-2023. *Managment centre: FIBHULP*
- **Heath KE.** Estudio comprensivo de la genética de las displasias esqueléticas: 1) caracterización de la regulación de shox en la placa de crecimiento humano, y 2) analisis genetico de las displasias esqueléticas mediante ACGH y NGS. Biomarin In-

- ternational Limited. 2012-Ongoing. *Managment centre: FIBHULP*
- **Lapunzina Badía PD.** ONTOPREC. Implementación de Ontologías, taxonomías y estandarización de las enfermedades crónicas en Medicina de Precisión. Uso de los escores de riesgo poligénicos (PRS) como casos de uso. (PMP21/00063). ISCIII. 2021-2023. *Managment centre: FIBHULP*
- **Lapunzina Badía PD.** An omnigenic view of genetic susceptibility to severe covid19. Fundació Marató TV3. 2021-Ongoing. *Managment centre: FIBHULP*
- **Lapunzina Badía PD.** Análisis genético y genómico en pacientes afectados por la enfermedad de Gorham-Stout y por anomalías generales. Lymphatic Malformation Institute. 2012-Ongoing. *Managment centre: FIBHULP*
- **Lapunzina Badía PD.** Análisis genómico global en el síndrome de invdup 15 syndrome: evaluación de la dosis genómica mediante microarrays personalizados de snps y estudio de genes candidatos del fenotipo. Fundación Inversión Duplicación del Cromosoma 15. 2017-Ongoing. *Managment centre: FIBHULP*
- **Lapunzina Badía PD.** Análisis genómico global en el síndrome de invdup del 8p: evaluación de la dosis genómica mediante microarrays personalizados de snps y estudio de genes candidatos del fenotipo. Asociación Síndrome Duplicada, Inversión, Deleción del Brazo Corto del Cromosoma 8. 2015-Ongoing. *Managment centre: FIBHULP*
- **Lapunzina Badía PD.** Analisis genómico y funcional de una variante patogénica en el gen khl11 en 6 miembros de una familia sin diagnóstico. Fundación Feder. 2022-Ongoing. *Managment centre: FIBHULP*
- **Lapunzina Badía PD.** Aplicación de técnicas genómicas (genoma completo y 4C-Seq para TDA) en pacientes con síndromes de sobrecrecimiento (PI20/01053). ISCIII. 2021-2023. *Managment centre: FIBHULP*
- **Lapunzina Badía PD.** Búsqueda de mutaciones en el gen cripak y otros modificadores en pacientes con hipertensión arterial pulmonar. (I). Fundación Contra La Hipertensión Pulmonar. 2018-Ongoing. *Managment centre: FIBHULP*

- **Lapunzina Badía PD.** Craniofacial microsomia> genetic causes and pathway discovery. Seattle Children-S Hospital Research Foundation. 2017-Ongoing. *Managment centre: FIBHULP*
- **Lapunzina Badía PD.** Estudio clínico molecular en pacientes con síndrome de sobrecrecimiento. Estudio de los genes nsd1, nisp1, hras, cdkn1c, glp3, y de las regiones cromosómicas 5q35, xq26 y 11p en pacientes con ssc. Efficce Servicios Para La Investigacion S.L. 2005-Ongoing. *Managment centre: FIBHULP*
- **Lapunzina Badía PD.** Estudio genético-molecular de genes candidatos en pacientes con hipertensión pulmonar idiopática. Actelion Pharmaceuticals España. 2011-Ongoing. *Managment centre: FIBHULP*
- **Lapunzina Badía PD.** Evaluación genómica en el síndrome de wolf-hirschhorn [síndrome 4p]: microarrays personalizados de snps y estudio de genes candidatos. Asociación Española del Síndrome de Wolf Hirschhorn. 2017-Ongoing. *Managment centre: FIBHULP*
- **Lapunzina Badía PD.** Evaluación psicométrica en pacientes con síndrome de phelan-m dermid "síndrome de microdeleción 22q13". Oryzon Genomics S.A. 2020-Ongoing. *Managment centre: FIBHULP*
- **Lapunzina Badía PD.** Inteligencia artificial y machine learning en enfermedades humanas. Fundación Ramón Areces. 2019-Ongoing. *Managment centre: FIBHULP*
- **Lapunzina Badía PD.** Screening of high-risk pediatric population using an epilepsy gene panel for early diagnosis of neuronal ceroid lipofuscinosis type 2 (cln2) disease. Biomarin International Limited. 2017-Ongoing. *Managment centre: FIBHULP*
- **Martínez González VM.** En búsqueda del diagnóstico genético en pacientes con espectro pros. Fundación La Caixa. 2019-Ongoing. *Managment centre: FIBHULP*
- **Moreno Navarro JC.** Biomarcadores de disrupción tiroidea gestacional y daño cerebral fetal en el ratón KO para DEHAL1 y en mujeres embarazadas y sus hijos (PI22/01375). ISCIII. 2023-2025. *Managment centre: FIBHULP*



- **Moreno Navarro JC.** Diseción genética de la narcolepsia y otras hipersomnias centrales. Francisco José García Sanpedro. 2019-Ongoing. *Managment centre: FIBHULP*
- **Moreno Navarro JC.** Síndrome de resistencia a las hormonas tiroideas. estudio genético-molecular en población española. José Carlos Moreno Navarro. 2013-Ongoing. *Managment centre: FIBHULP*
- **Navado Blanco J.** Aproximación genómica en el síndrome de phelanmc dermid [síndrome de microdelección 22q13]: microarrays personalizados de snps y evaluación de los genes candidatos. Asociación Síndrome Phelan-Mcdermid. 2017-Ongoing. *Managment centre: FIBHULP*
- **Navado Blanco J.** Evaluación genómica en el S. de Wolf-Hirschhorn; microarrays personalizados de SNPs y genes candidatos: Aproximación a las alteraciones dentales y a una epilepsia compleja (P118/01433). ISCIII. 2019-2023. *Managment centre: FIBHULP*
- **Navado Blanco J.** ÚNICAS. Implementación de una red pediátrica para la medicina personalizada en enfermedades raras pediátricas. Un proyecto piloto (PMP22/00008). ISCIII. 2023-2025. *Managment centre: FIBHULP*
- **Palomares Bralo M.** Implementación y evaluación de un protocolo de secuenciación rápida del exoma en pacientes pediátricos ingresados en unidades de críticos o de alta complejidad (P119/01681). ISCIII. 2020-2024. *Managment centre: FIBHULP*
- **Palomares Bralo M.** Paving the way for personalized medicine in neonatal and pediatric intensive care units (PI22/01743). ISCIII. 2023-2025. *Managment centre: FIBHULP*
- **Solera García J.** Estudio de micrnas en pacientes con glucogenosis tipo ii (enfermedad de pompe) como marcadores de diagnóstico, progresión de la enfermedad y respuesta al tratamiento. Fundación Genzyme. 2013-Ongoing. *Managment centre: FIBHULP*
- **Tenorio Castaño JA.** Moving toward to a -omic classification for pulmonary arterial hypertension (PI21/01593). ISCIII. 2022-2024. *Managment centre: FIBHULP*
- **Tenorio Castaño JA.** Pasión hp-genetica de la hipertensión pulmonar. Fundación Contra La Hip-

ertension Pulmonar. 2020-Ongoing. *Managment centre: FIBHULP*

- **Vallespín García E.** Desarrollo e implementación de un protocolo integral combinado con la búsqueda de nuevos genes de cataratas congénitas bilaterales (cc) no sindrómicas. Grupo Social Once. 2020-Ongoing. *Managment centre: FIBHULP*
- **Vallespín García E.** Miopía magna de inicio precoz (<10 años) con o sin nistagmo: estudio clínico y genético (P118/01234). ISCIII. 2019-2023. *Managment centre: FIBHULP*

Cibers and Retics

- **CB06/07/1005 Lapunzina Badía P.** CIBER Enfermedades Raras. (CIBERER). ISCIII. (31/12/2025). FIBHULP

Clinical trials

- **Lapunzina Badía PD.** Estudio de fase II, aleatorizado, doble ciego, controlado con placebo y de grupos paralelos para evaluar la seguridad, la eficacia y la farmacodinámica del tratamiento con basmisanil durante 52 semanas en niños con síndrome dup15q.
Type/Phase: II
Sponsored by: F.Hoffmann-La Roche Ltd;
Signed date: 04/05/2023

Patents and trademarks

- **Friedman S, Li D, Narla G, Martignetti J, Heath K, inventors; Mount Sinai School of Medicine, assignee; Kruppel-like factor 6 (klf6), a tumor suppressor protein, and diagnostics, therapeutics, and screening based on this protein.** PCT/US2001/025046, EP1332362, US2005181374, US2011059899, AU8479001, CA2419064; 2000 August 09.



- **INGEMM, author; FIBHULP, assignee.** Brand name: INGEMM INSTITUTO DE GENETICA MEDICA Y MOLECULAR DEL HOSPITAL UNIVERSITARIO LA PAZ; ESM 2.884.849, USM 77.891.143, CM

8.746.869; 2009 July 16, 2009 December 11, 2009 December 10.



- **INGEMM, author; FIBHULP, assignee.** Brand name: KaryoArray; USM 79.078.751, CM 8.512.907; 2010 January 07, 2009 August 27.



- **INGEMM, author; FIBHULP, assignee.** Brand name: OverGrowthArray; ESM 2.958.709-3, USM 85.334.932, CM 10.009.256; 2010 December 02, 2011 June 01, 2011 May 31.



- **INGEMM, author; FIBHULP, assignee.** Brand name: MetabolArray; ESM 2.958.711-5, USM 85.334.903, CM 10.009.348; 2010 December 02, 2011 June 01, 2011 May 31.



- **Palomares M, Lapunzina P, Navado J, Vallespín E, Vallcorba I, Melero J, authors; FIBHULP, Hospital Infanta Cristina (Badajoz) Fundesalud, assignees.** Brand name: OncoHematoArray; ESM 2.958.703-4, USM 85.334.842, CM 10.009.181; 2010 December 02, 2011 June 01, 2011 May 31.



- **INGEMM, author; FIBHULP, assignee.** Brand name: OncoArray; ESM 2.962.910, USM

85.363.107, CM 10.091.882; 2011 January 05, 2011 July 05, 2011 July 01.



- **Lapunzina P, Navado J, Solera J, Vallespín E, Martínez P, Martínez-González V, authors; FIBHULP, assignee.** Brand name: ONCOSeq; USM 85.457.843, CM 9.969.064; 2011 October 27, 2011 May 16.



- **Moreno JC, Moya CM, Vallespín E, Lapunzina P, Navado J, authors; FIBHULP, assignee.** Brand name: ThyroArray; USM 85.686.688, CM 10.904.951; 2012 July 25, 2012 May 23.



- **Lapunzina Badía P, Borobia Pérez AM, Carcas Sansuán AJ, Tenorio Castaño JA, Arias Lajara P, Lubomirov Jristov R, authors; FIBHULP, UAM, assignees.** Brand name: PharmArray; USM 86.004.412, CM 11.608.403; 2013 July 08, 2013 February 27.



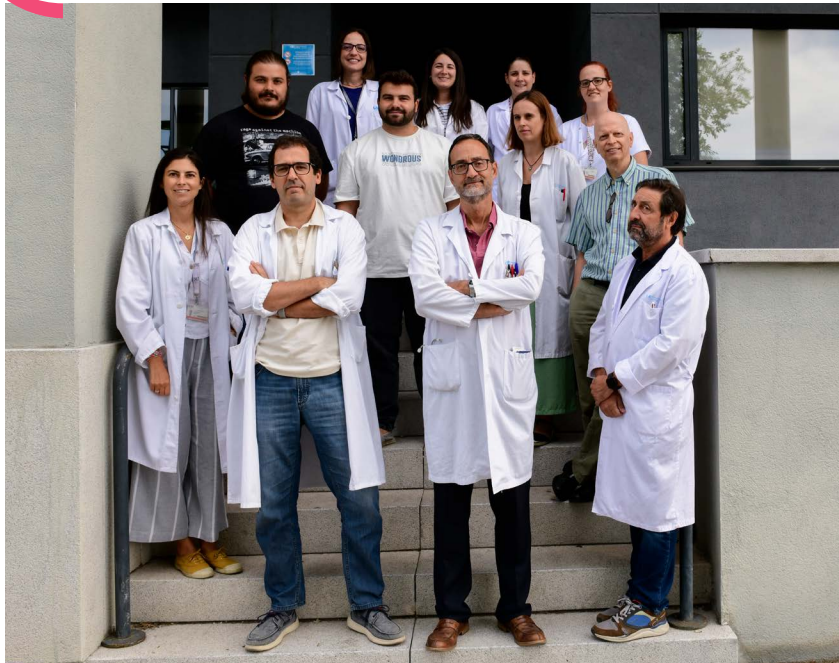
- **Lapunzina Badía PD, Borobia Pérez AM, Carcas Sansuán AJ, Tenorio Castaño JA, Arias Lajara P, Frias Iniesta J, Dapia García I, Muñoz M, authors; FIBHULP, UAM, assignees.** Brand name: ClinPharmarray., CM15489511; 2016 May 31, 2016 September 07.



- **Palomares Bralo M, Vallespín García E, del Pozo Mate A, Santos Simarro F, authors; FIBHULP, assignee.** Brand name: RD-Seq Sequencing Rare Diseases; CM 17.911.029; 2018 May 31.



3.5.2 Translational Oncology Group



Publications:50 | Q1:31

COMPOSITION

Jaime Feliú Batlle.

Jefe de Servicio de Oncología Médica. Hospital Universitario La Paz. Catedrático de Oncología. Universidad Autónoma de Madrid

- **Jorge Barriuso Feijóo.** Facultativo Especialista de Área en Oncología. Hospital Universitario La Paz
- **Borja Belandía Gómez.** Científico Titular. IIB "Alberto Sols"

- **Beatriz Castelo Fernández.** Facultativo Especialista de Área en Oncología. Hospital Universitario La Paz
- **Paloma Cejas Guerrero.** Investigadora Postdoctoral. Hospital Universitario La Paz
- **Roberto Crespo San Pedro.** Técnico Superior en Anatomía Patológica. Hospital Universitario La Paz
- **Ana Belén Custodio Carretero.** Facultativo Especialista de Área en Oncología. Hospital Universitario La Paz
- **Enrique Espinosa Arranz.** Jefe de Sección de Oncología Médica. Hospital Universitario La Paz. Profesor Titular de Oncología. Universidad Autónoma de Madrid

- **Juan Ángel Fresno Vara.** Investigador Senior (Contrato Miguel Servet - I2). Jefe de Laboratorio. FIBHULP
- **Alejandro Gallego Martínez.** Facultativo Especialista de Área en Oncología. Hospital Universitario La Paz
- **Ángelo Gámez Pozo.** Investigador Postdoctoral (Contrato Técnico de Apoyo). FIBHULP
- **Laura García Acebedo.** Médico Interno Residente. Coordinadora del Registro de Tumores. Hospital Universitario La Paz
- **Ismael Ghanem Cañete.** Facultativo Especialista de Área en Oncología. Hospital Universitario La Paz
- **Juan Carlos Lacal Sanjuán.** Profesor de Investigación. IIB "Alberto Sols"
- **Victoria María Heredia Soto.** Investigadora Postdoctoral. Hospital Universitario La Paz
- **Rocío López Vacas.** Técnico de Laboratorio (Contrato Técnico de Apoyo). FIBHULP
- **Virginia Martínez Marín.** Facultativo Especialista de Área en Oncología. Hospital Universitario La Paz
- **Ignacio Palmero Rodríguez.** Científico Titular. IIB "Alberto Sols"
- **Álvaro Pinto Marín.** Facultativo Especialista de Área en Oncología. Hospital Universitario La Paz
- **Andrés Redondo Sánchez.** Jefe de Sección de Oncología Médica. Hospital Universitario La Paz. Profesor Asociado. Universidad Autónoma de Madrid
- **Nuria Rodríguez Salas.** Facultativo Especialista de Área en Oncología. Hospital Universitario La Paz
- **Lucía Trilla Fuertes.** Investigadora Postdoctoral. FIBHULP
- **Pilar Zamora Auñón.** Facultativo Especialista de Área en Oncología. Hospital Universitario La Paz. Profesor Asociado. Universidad Autónoma de Madrid

STRATEGIC OBJETIVES

- The aim of cancer research is to improve understanding of all aspects of the disease, including deepening our understanding of the biology of the tumour, developing new treatments, analysing the efficacy of diagnostic tests and performing studies aimed at prevention and early diagnosis.
- The Translational Oncology group's objective is to conduct highly scientific applied research in such a way that basic research can be rapidly translated to clinical practice. In other words, cancer patients at La Paz University Hospital benefit almost immediately from the results of research conducted by their own physicians.
- Although important advances have been made in recent years in our understanding of the origin and evolution of cancer, their implementation in healthcare takes too much time. The Translational Oncology Unit (TOU) was established with the objective of facilitating the incorporation into clinical practice of new advances in molecular biology and the technology developed in this field.
- The main lines of study are based on digestive tumors, gynecologic tumors, urologic tumors, breast cancer and sarcomas. A series of fundamental objectives have been established for these neoplasms that can be summarised as early diagnosis, molecular classification for therapeutic goals and the search for individualised treatments. The majority of TOU projects have as their primary objective the search for predictors of susceptibility or resistance to anticancer agents and the search for prognostic factors related to the evolution of the tumour



RESEARCH LINES

- Identification of mechanisms of drug resistance in cancer.
- Identification of cancer biomarkers in tissues and liquid biopsy through genomic, proteomic and metabolomic approaches.
- Study of the mechanisms involved in carcinogenesis.
- Identification of new therapeutic targets in cancer.
- Efficacy and toxicity of antineoplastic therapies.
- Palliative care and supportive treatments in oncology.
- The main tumors on which we carry out our research are:
 - Breast cancer
 - Digestive tract cancers
 - Gynecological tumors
 - Sarcomas
 - Melanoma
 - Genitourinary tumors
 - Head and neck tumors

RESEARCH ACTIVITY

Doctoral theses

- **Miranda Poma J.** Validación de un modelo predictivo basado en la expresión de micrnas (BIO-MIR), para determinar el riesgo de recurrencia en pacientes con carcinoma renal de células claras en estadio temprano tratados con nefrectomía radical o parcial[dissertation]. *Madrid: UAM: 2023(12/09/2023). Director: Pinto Marín A, Gámez Pozo A.*

Publications

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- **Espinosa Arranz E.** Búsqueda de biomarcadores predictivos de respuesta a inmunoterapia en melanoma avanzado (2022455). Grupo Español Multidisciplinar de Melanoma. 2022-Ongoing. *Managment centre: FIBHULP*
- **Feliú Batlle J.** Clinical implications of microbiome analysis in colorectal cancer usin paraffin samples. EASI Genomics European Consortium. 2022-Ongoing. *Managment centre: EASI Genomics European Consortium*
- **Feliú Batlle J.** Estudio de biomarcadores pronósticos y predictivos en adenocarcinoma de páncreas. Varios. 2015-Ongoing. *Managment centre: FIBHULP*
- **Feliú Batlle J.** Estudio de factores predictivos de toxicidad grave (grado 3-4) en anciano. Fundación Pfizer. 2012-Ongoing. *Managment centre: FIBHULP*
- **Feliú Batlle J.** Foro iberoamericano de investigación oncologica. Lapharcon LLC. 2017-Ongoing. *Managment centre: FIBHULP*
- **Feliú Batlle J.** Identificación de una huella genética para el pronóstico en pacientes con cáncer de colon en estado II operados con intención curativa. Varios. 2013-Ongoing. *Managment centre: FIBHULP*
- **Feliú Batlle J.** Optimización del tratamiento adyuvante del cáncer de páncreas en función del subtipo molecular determinado por biomarcadores inmunohistoquímicos. Fundación SEOM. 2022-Ongoing. *Managment centre: FIBHULP*
- **Feliú Batlle J.** Promover la actividad investigadora en el servicio de oncología. Amgen S.A. 2010-Ongoing. *Managment centre: FIBHULP*
- **Feliú Batlle J.** Proyecto desarrollo de consulta de psicooncología en el Hospital Universitario La Paz. Merck S. L. 2012-Ongoing. *Managment centre: FIBHULP*
- **Feliú Batlle J.** Utilidad de la determinación del DNA circulante para monitorizar la respuesta al tratamiento neoadyuvante en los pacientes con cáncer de recto localmente avanzado. Fundación Seom. 2014-Ongoing. *Managment centre: FIBHULP*
- **Feliú Batlle J.** Validation of biomakers to predict response to anti-egfr therapy identified by shotgun proteomics. FIBHULP. 2018-Ongoing. *Managment centre: FIBHULP*
- **Fresno Vara JA.** Caracterización molecular del cáncer de mama mediante TaqMan Low Density Arrays: Aplicación al diagnóstico. FIBHULP. 2014-Ongoing. *Managment centre: FIBHULP*
- **Fresno Vara JA.** Contrato Miguel Servet Categoría A (CES11/020). ISCIII. 2012-2025. *Managment centre: FIBHULP*
- **Ghanem Cañete I.** Alteraciones genómicas en carcinoma escamoso de ano. Secuenciación del exoma completo. Roche Farma S. A. 2019-Ongoing. *Managment centre: FIBHULP*
- **Martínez Marín V.** Estudio perfil mutacional e inmunohistoquímico en GIST: búsqueda de factores pronósticos y predictivos. Pfizer S. L. U. 2013-Ongoing. *Managment centre: FIBHULP*
- **Pinto Marín A.** Evaluación del metaboloma sanguíneo como fuente de biomarcadores para el manejo del paciente con cáncer: el caso del cáncer de prostata metastásico. Varios. 2015-Ongoing. *Managment centre: FIBHULP*
- **Pinto Marín A.** Predictive factors for perioperative treatments in bladder carcinoma (EP-IC-XS-000310). EPIC-XS Proteomics Consotirum. 2021-Ongoing. *Managment centre: EPIC-XS Proteomics Consortium*
- **Pinto Marín A.** Validación del test con valor pronóstico BIO-MIRCC. Biomédica Molecular Medicine S. L. 2020-Ongoing. *Managment centre: FIBHULP*
- **Redondo Sánchez A.** Análisis de expresión de miRNAs relacionados con el proceso angiogénico en cáncer mama. Roche Farma S. A. 2014-Ongoing. *Managment centre: FIBHULP*
- **Redondo Sánchez A.** Cáncer de mama y angiogénesis: estudio de perfiles de expresión génica en muestras parafinadas. Roche Farma S. A. 2009-Ongoing. *Managment centre: FIBHULP*
- **Redondo Sánchez A.** Caracterización de la acción de trabectedina y análogos, lurbinectedina y análogos y PM60184 en modelos celulares en dos y tres dimensiones de carcinoma de ovario. Pharmamar S. A. 2016-Ongoing. *Managment centre: FIBHULP*
- **Redondo Sánchez A.** Caracterización in vitro del efecto antitumoral de eribulina (en monoterapia y en combinación con otros fármacos) en líneas celulares de liposarcoma y leiomiomasarcoma. EISAI Farmacéutica S. A. 2018-Ongoing. *Managment centre: FIBHULP*
- **Redondo Sánchez A.** Caracterización molecular y estudio de biomarcadores de inmunomodulación en el cáncer de endometrio. Subestudio: Estudio in vitro de modelos de cocultivo entre células tumorales de cáncer de ovario y fibroblastos. Grupo Español de Investigación Cáncer de Ovario. 2019-Ongoing. *Managment centre: FIBHULP*
- **Redondo Sánchez A.** Estudio in vitro de modelos en tres dimensiones de cáncer de ovario: interacción entre las celulas tumorales y celulas del microambiente tumoral. Roche Farma S. A. 2017-Ongoing. *Managment centre: FIBHULP*
- **Redondo Sánchez A.** Identificación de marcadores de HRD y predicción de la respuesta a inhibidores de parp en líneas celulares establecidas y organoides derivados de pacientes con cancer de ovario. Grupo Español de Investigación Cáncer de Ovario. 2021-. *Managment centre: FIBHULP*
- **Redondo Sánchez A.** Sesiones clinicas en investigación y actualización en oncología medica del Hospital Universitario La Paz. Astrazeneca Farmaceutica Spain S.A. 2021-Ongoing. *Managment centre: FIBHULP*
- **Rodríguez Salas N.** Cáncer colorrectal en población joven. Estudio farmacogenómico en organoides y efectos del microambiente tumoral (ICI20/00057). ISCIII. 2021-2024. *Managment centre: FIBHULP*
- **Zamora Auñón P.** Metabolómica y modelización del matebolismo celular del cáncer para la deteccion de enfermedad mínima residual en pacientes con cáncer de mama. Roche Farma S. A. 2018-Ongoing. *Managment centre: FIBHULP*
- **Zamora Auñón P.** Sesiones clinicas en investigación y actualización en oncología medica del Hospital Universitario La Paz. Astrazeneca Farmaceutica Spain S.A. 2010-Ongoing. *Managment centre: FIBHULP*

Cibers and Retics

- **Feliú Batlle J.** Networked Biomedical Research Center for Cancer. (CIBERonc). ISCII. (31/12/2023). FIBHULP



Clinical trials

- **Martínez Marin V.** B025430 (TDM4529g) Andrés redondo.
Type/Phase: II
Sponsored by: F.Hoffmann-La Roche Ltd
Signed date: 25/04/2023
- **Redondo Sánchez A.** Ensayo fase I/II aleatorizado de Ib-100 más doxorubicina vs. doxorubicina sola en primera línea de sarcomas de tejidos blandos avanzados.
Type/Phase: I
Sponsored by: Grupo Español De Investigación En Sarcomas
Signed date: 16/01/2023
- **Pinto Marín A.** Estudio de fase 3, aleatorizado y multicéntrico para evaluar la eficacia de tar-200 en combinación con cetrelimab en comparación con quimiorradioterapia concomitante en participantes con carcinoma urotelial de vejiga músculo-invasivo (cvmi) que no se vaya.
Type/Phase: III
Sponsored by: Janssen Cilag International Nv
Signed date: 10/05/2023
- **Rodríguez Salas N.** Estudio en fase III, abierto y aleatorizado de tucatinib en combinación con trastuzumab y mfolfox6 frente a mfolfox6 administrado con o sin cetuximab o bevacizumab como tratamiento de primera línea para pacientes con cáncer colorrectal metastásico her2+.
Type/Phase: III
Sponsored by: Seagen, Inc
Signed date: 28/02/2023
- **Rodríguez Salas N.** Correct-MRD I: primer estudio de validación clínica de cáncer colorrectal para predecir la recurrencia mediante un análisis de ADN tumoral circulante para detectar enfermedad residual mínima.
Type/Phase: Prpducto Sanitario
Sponsored by: Exact Sciences Corporation
Signed date: 15/12/2023
- **Custodio Carretero A.** Ensayo de fase 1b/3, global, aleatorizado, controlado y abierto, para comparar el tratamiento con RYZ 101 frente

al tratamiento habitual en sujetos con tumores neuroendocrinos gastroenteropancreáticos bien diferenciados que expresen receptores de somatostatina (sstr+), avanzados e inoperables, que hayan progresado tras un tratamiento anterior con un análogo de la somatostatina marcado con 177Lu (action-1).

Type/Phase: I
Sponsored by: Rayzebio, Inc
Signed date: 19/12/2023

- **Redondo Sánchez A.** A phase 3, randomized, double-blind, placebo-controlled, multicenter study of upifitamab rilsodotin (xmt-1536) as post-platinum maintenance therapy for participants with recurrent, platinum-sensitive ovarian cancer (up-next).
Type/Phase: III
Sponsored by: Mersana Therapeutics, Inc
Signed date: 21/04/2023
- **Martínez Marin V.** Ember-4: estudio de fase 3, aleatorizado, abierto, en el que se compara la administración adyuvante de imlunestrant versus terapia endocrina adyuvante estándar en pacientes que recibieron previamente de 2 a 5 años de terapia endocrina adyuvante para el cáncer de mama temprano ER+, HER2- con un mayor riesgo de recurrencia.
Type/Phase: III
Sponsored by: Lilly S.A
Signed date: 03/08/2023
- **Zamora Auñón P.** experiencia en el mundo real europeo de pacientes con cáncer de mama positivo para her2 avanzado/metastásico previamente tratado, que acceden a trastuzumab deruxtecán a través de un programa de acceso individual.
Type/Phase: EOm prospectivo
Sponsored by: Daiichi Sankyo Inc
Signed date: 27/02/2023
- **Castelo Fernández B.** Estudio en fase III, aleatorizado, doble ciego, controlado con placebo, de dos grupos, para evaluar la eficacia y la seguridad de xevinapant y radioterapia en comparación con placebo y radioterapia para demostrar la mejora de la supervivencia sin enfermedad en participantes con carcinoma de células escamosas de cabeza y cuello resecao, que presentan un riesgo alto de recidiva

y no son aptos para la administración de dosis altas de cisplatino.

Type/Phase: III
Sponsored by: Merck Kgaa
Signed date: 05/05/2023

- **Redondo Sánchez A.** Estudio en fase II abierto y aleatorizado de farletuzumab eteribulina (morab-202), un conjugado de anticuerpo y fármaco dirigido al receptor de folato alfa frente a la quimioterapia elegida por el investigador en mujeres con cáncer seroso de alto grado (sag) resistente al platino, de ovario peritoneal primario o de trompas de falopio.
Type/Phase: II
Sponsored by: Bristol-Myers Squibb International Corporation
Signed date: 02/02/2023
- **Martínez Marin V.** A phase 3, randomized, open-label, multicenter trial of arv-471 (pf-07850327) vs fulvestrant in participants with estrogen receptor-positive, her2-negative advanced breast cancer whose disease progressed after prior endocrine based treatment for advanced disease (veritac-2).
Type/Phase: III
Sponsored by: Pfizer Inc.
Signed date: 05/07/2023
- **Espinosa Arranz E.** Ensayo en fase III de fianlimab (anti-lag-3) y cemiplimab en comparación con pembrolizumab como terapia adyuvante en pacientes con melanoma de alto riesgo completamente extirpado.
Type/Phase: III
Sponsored by: Regeneron Pharmaceuticals, Inc
Signed date: 10/03/2023
- **Espinosa Arranz E.** Estudio de primera administración en humanos, abierto, fase 1/2 para evaluar la seguridad, farmacocinética, farmacodinámica y la actividad clínica de jnj-63723283, un anticuerpo monoclonal anti-pd1 en sujetos con cáncer avanzado.
Type/Phase: I
Sponsored by: Janssen Cilag International Nv
Signed date: 30/01/2023

- **Redondo Sánchez A.** Estudio retrospectivo, observacional, multicéntrico en vida real de dostarlimab en pacientes con cáncer de endometrio recurrente o metastásico con deficiencia del sistema mismatch repair o inestabilidad alta de microsatélites.
Type/Phase: EPA-OD
Sponsored by: Grupo Español De Investigación Cancer De Ovario
Signed date: 23/02/2023
- **Pinto Marín A.** Estudio de fase III aleatorizado y abierto de xI092 + nivolumab en comparación con sunitinib en participantes con carcinoma de células renales no claras metastásico o avanzado.
Type/Phase: III
Sponsored by: Exelixis Inc
Signed date: 23/05/2023
- **Rodríguez Salas N.** A phase 1/2, open-label, multi-center study of zn-c3 administered in combination with encorafenib and cetuximab in adults with metastatic colorectal cancer.
Type/Phase: I
Sponsored by: Pfizer, S.L.U
Signed date: 28/03/2023
- **Feliú Batlle J.** Estudio para la evaluación del grado de satisfacción cutánea de las cremas cosméticas para pieles sensibles pb-011 y pb-012 en pacientes oncológicos afectados de una polineuropatía palmoplantar secundaria al tratamiento con quimioterapia o agentes quimioterapéuticos fusionados a anticuerpos monoclonales (inmunocitostáticos).
Type/Phase: I
Sponsored by: Prospera Biotech, S.L
Signed date: 28/03/2023
- **Espinosa Arranz E.** Estudio de fase III de fianlimab (regn3767, anti-lag-3) + cemiplimab en comparación con pembrolizumab en pacientes con melanoma metastásico o localmente avanzado inoperable no tratado previamente.
Type/Phase: III
Sponsored by: Regeneron Pharmaceuticals, Inc
Signed date: 26/01/2023



- Castelo Fernández B.** Primer ensayo en humanos, abierto, de aumento escalonado de la dosis con cohortes de ampliación para evaluar la seguridad y la actividad antineoplásica de gen1042 en sujetos con tumores sólidos malignos.
Type/Phase: I
Sponsored by: Genmab A/S
Signed date: 04/04/2023
- Martínez Marin V.** Estudio fase ii de trastuzumab deruxtecan en el tratamiento en primera línea de pacientes con cáncer de mama localmente avanzado o metastásico (cmm) her2-positivo considerados resistentes a trastuzumab + pertuzumab + taxano debido a una recaída temprana. estudio transcender.
Type/Phase: II
Sponsored by: Fundacion Grupo Español De Investigación En Cancer De Mama Geicam
Signed date: 04/12/2023
- Redondo Sánchez A.** Estudio de fase 1b, primero en seres humanos, de aumento escalonado y ampliación de la dosis de xmt-1536 en pacientes con tumores sólidos con probabilidad de expresar napi2b.
Type/Phase: II
Sponsored by: Mersana Therapeutics, Inc
Signed date: 07/03/2023
- Pinto Marín A.** Estudio de fase I/II para determinar la seguridad, farmacocinética y actividad clínica preliminar de bt8009 en pacientes con neoplasias malignas avanzadas que expresan neectina-4.
Type/Phase: I
Sponsored by: Bicycltx, Ltd
Signed date: 09/10/2023
- Feliú Batlle J.** Primer estudio en humanos, fase 1 / 2a, multicentro, abierto para la evaluación de la seguridad, tolerabilidad, farmacocinética y eficacia de pbp1510 en pacientes con cáncer de páncreas avanzado/metastásico.
Type/Phase: I
Sponsored by: Prestige Biopharma Limited
Signed date: 15/02/2023
- Feliú Batlle J.** Estudio aleatorizado global, multicéntrico, doble ciego de fase iii de carboplatino paclitaxel con incmga00012 o placebo para participantes con carcinoma escamoso localmente recurrente o metastásico inoperable del canal anal no tratado previamente con quimioterapia sistémica (pod1um-303/interaact).
Type/Phase: III
Sponsored by: Incyte Corporation
Signed date: 23/03/2023
- Rodríguez Salas N.** Estudio de fase 3 abierto, aleatorizado, perioperatorio de dostarlimab en monoterapia frente al tratamiento estándar en pacientes con cáncer de colon resecable con pérdida del mecanismo de reparación de apareamiento de bases (dmmr)/inestabilidad de microsatélites alta (msi-h), t4n0 o estadio III, no tratado.
Type/Phase: III
Sponsored by: Glaxosmithkline Research And Development Limited
Signed date: 27/06/2023
- Feliú Batlle J.** Predicción de riesgo de cardiotoxicidad en las unidades de cardiooncología. valor de la genética y diferentes biomarcadores. El registro cardiotox.
Type/Phase: E0m prospectivo
Sponsored by: Feliú Batlle Jaime
Signed date: 28/06/2023
- Ghanem Cañete I.** ADN tumoral circulante como predictor de recaída en pacientes con cáncer de recto localmente avanzado tratados con terapia neoadyuvante total seguida de observación y espera o escisión total del mesorrecto basada en la evaluación clínica de la respuesta.
Type/Phase: No EPA
Sponsored by: Grupo Español Multidisciplinario En Cáncer Digestivo (Gemcad) Grupo Español Multidisciplinario Del Cáncer Digestivo
Signed date: 08/06/2023
- Zamora Auñón P.** Ensayo de fase iii, aleatorizado, doble ciego, controlado con placebo para probar eftilagimod alfa (lag-3 soluble) en pacientes con cáncer de mama.
Type/Phase: III
Sponsored by: Immuteq, S.A.S
Signed date: 05/07/2023
- Castelo Fernández B.** Estudio en fase III, aleatorizado, doble ciego y controlado con placebo de debio 1143 en combinación con quimioterapia con un derivado del platino y radioterapia de intensidad modulada con fraccionamiento convencional en pacientes con carcinoma escamoso de cabeza y cuello localmente avanzado apto para quimiorradioterapia definitiva (trilynx).
Type/Phase: III
Sponsored by: Merck Healthcare KgaA
Signed date: 19/04/2023
- Redondo Sánchez A.** Ensayo de fase III, multicéntrico, aleatorizado, controlado con placebo y con doble enmascaramiento sobre el tratamiento de mantenimiento con selinexor tras un tratamiento sistémico en pacientes con carcinoma endometrial avanzado o recurrente sin mutaciones en la proteína p53.
Type/Phase: III
Sponsored by: Karyopharm Therapeutics, Inc
Signed date: 19/06/2023
- Feliú Batlle J.** Estudio fase 2, abierto, de múltiples cohortes para evaluar la eficacia y la seguridad del sar408701 en pacientes con tumores sólidos avanzados positivos a ceacam5.
Type/Phase: II
Sponsored by: Sanofi Aventis S.A
Signed date: 23/03/2023
- Zamora Auñón P.** A multicentre, retrospective, and observational study using secondary data captured in the electronic health records of patients with early breast cancer who received a neoadjuvant and/or adjuvant treatment. Artemis.
Type/Phase: E0m no prospectivo
Sponsored by: Astrazeneca Uk Limited
Signed date: 18/12/2023
- Pinto Marín A.** a phase IV, post-authorization safety study to investigate the long-term safety of lutetium (177lu) vipivotide tetraxetan in adult participants with prostate cancer.
Type/Phase: IV
Sponsored by: Novartis Pharma Services Ag
Signed date: 24/10/2023
- Castelo Fernández B.** Estudio de fase II, aleatorizado, con doble enmascaramiento y controlado con placebo de cemiplimab en comparación con la combinación de cemiplimab más isa101b en el tratamiento de sujetos con cáncer orofaríngeo (cof) vph-16 positivo resistente al platino.
Type/Phase: II
Sponsored by: Isa Therapeutics B.V.
Signed date: 12/06/2023
- Redondo Sánchez A.** Randomized, multicenter, open-label, phase 3 study of mirvetuximab soravtansine in combination with bevacizumab versus bevacizumab alone as maintenance therapy for patients with fra-high recurrent platinum-sensitive epithelial ovarian, fallopian tube, or primary peritoneal cancers who have not progressed after second-line platinum-based chemotherapy plus bevacizumab (gloriosa).
Type/Phase: III
Sponsored by: Immunogen Inc
Signed date: 12/09/2023
- Castelo Fernández B.** Estudio multicéntrico, abierto, de fase I/II de eos884448 en combinación con el tratamiento estándar y/o terapias experimentales en participantes con tumores sólidos avanzados.
Type/Phase: I
Sponsored by: Iteos Belgium Sa
Signed date: 13/09/2023
- Pinto Marín A.** Estudio en fase III aleatorizado, abierto y multicéntrico para determinar la eficacia y la seguridad de durvalumab en combinación con tremelimumab y enfortumab vedotina o durvalumab en combinación con enfortumab vedotina para el tratamiento perioperatorio en pacientes no aptos para cisplatino que se someten a cistectomía radical para cáncer de vejiga músculo-invasivo (volga).
Type/Phase: III
Sponsored by: Astrazeneca Ab
Signed date: 22/05/2023



- Redondo Sánchez A.** Una comparación en fase iii aleatorizada y con doble enmascaramiento de un tratamiento a base de platino con tsr-042 y niraparib frente a la práctica habitual a base de platino como tratamiento de primera línea del cáncer ovárico epitelial no mucinoso en estadios III o IV.
Type/Phase: III
Sponsored by: Tesaro Inc.
Signed date: 09/06/2023
- Zamora Auñón P.** Ensayo fase III de trastuzumab deruxtecan (t-dxd) con osin pertuzumab versus taxanos, trastuzumab y pertuzumab en primera línea de cáncer de mama metastásico her2 positivo (destiny-breast09).
Type/Phase: III
Sponsored by: Astrazeneca Ab
Signed date: 01/06/2023
- Castelo Fernández B.** A dose-escalation and expansion study of the safety and efficacy of x1092 in combination with immuno-oncology agents in subjects with unresectable advanced or metastatic solid tumors.
Type/Phase: I
Sponsored by: Exelixis, Inc
Signed date: 16/10/2023
- Pinto Marín A.** Estudio de fase 3, aleatorizado, abierto, controlado, de cabozantinib (xl184) en combinación con atezolizumab frente a una segunda terapia hormonal novedosa (thn) en pacientes con cáncer de próstata metastásico y resistente a la castración.
Type/Phase: III
Sponsored by: Exelixis Inc
Signed date: 22/05/2023
- Castelo Fernández B.** Estudio de fase III, aleatorizado y abierto para evaluar pembrolizumab como tratamiento neoadyuvante y en combinación con la asistencia habitual como tratamiento adyuvante en el carcinoma epidermoide de cabeza y cuello locorregionalmente avanzado (cecc la), extirpable, en estadio III-IVA.
Type/Phase: III
Sponsored by: Merck Sharp & Dohme Llc
Signed date: 26/06/2023
- Redondo Sánchez A.** Randomized, controlled, open-label, phase iib/iii study of lubinectedin in combination with doxorubicin versus boxorubicin alone as first-line treatment in patients with metastatic leiomyosarcoma.
Type/Phase: III
Sponsored by: Pharmamar, S.A.
Signed date: 21/12/2023
- Espinosa Arranz E.** Estudio abierto, multicéntrico, de fase 1b/2 con e7386 en combinación con pembrolizumab en pacientes previamente tratados con tumores sólidos específicos.
Type/Phase: I
Sponsored by: Eisai Eurpe Limited
Signed date: 16/06/2023
- Pinto Marín A.** Psmaddition: estudio de fase III, prospectivo, aleatorizado, abierto e internacional en el que se compara 177lu-psma-617 en combinación con el tratamiento de referencia con el tratamiento de referencia en monoterapia en pacientes varones adultos con cáncer de próstata metastásico sensible a hormonas.
Type/Phase: III
Sponsored by: Novartis Farmaceutica, S.A.
Signed date: 27/06/2023
- Redondo Sánchez A.** Estudio de fase 3, aleatorizado, comparativo con tratamiento activo, abierto y multicéntrico para comparar la eficacia y la seguridad de mk-2870 en monoterapia frente al tratamiento elegido por el médico en participantes con cáncer de endometrio que han recibido previamente quimioterapia con un derivado del platino e inmunoterapia (engot-en23/gog3095).
Type/Phase: III
Sponsored by: Merck Sharp & Dohme Llc
Signed date: 18/12/2023
- Pinto Marín A.** Estudio de escalada y expansión de dosis para evaluar la seguridad y la farmacocinética de x1092 en monoterapia y tratamiento combinado en pacientes con tumores sólidos localmente avanzados o metastásicos inoperables.
Type/Phase: I
Sponsored by: Exelixis, Inc
Signed date: 08/08/2023
- Redondo Sánchez A.** Estudio aleatorizado, abierto, fase 3 de tisotumab vedotina frente a la quimioterapia elegida por el investigador en segunda o tercera línea en el cáncer de cuello uterino recidivante o metastásico.
Type/Phase: III
Sponsored by: Seagen, Inc
Signed date: 24/07/2023
- Redondo Sánchez A.** Ensayo clínico aleatorizado fase I/II de selinexor más gemcitabina en determinados sarcomas de partes blandas y osteosarcomas avanzados.
Type/Phase: I
Sponsored by: Asociación Europea Y Latinoamericana Selnet Investigación En Sarcomas
Signed date: 31/07/2023
- Redondo Sánchez A.** A phase 1, dose-finding study of debio 0123 as monotherapy in adult patients with advanced solid tumors, followed by an expansion part to assess safety and preliminary anti-tumor activity. Estudio de fase 1, de búsqueda de dosis de debio 0123 en monoterapia en pacientes adultos con tumores sólidos avanzados, seguido de una parte de ampliación para evaluar la seguridad y la actividad antitumoral preliminar.
Type/Phase: I
Sponsored by: Debiopharm, S.A. Debiopharm, S.A.
Signed date: 22/11/2023
- Rodríguez Salas N.** Estudio abierto, multicéntrico de fase I/II de la vacuna genética nous-209 para el tratamiento de tumores sólidos con inestabilidad de microsatélites.
Type/Phase: I
Sponsored by: Nouscom Srl
Signed date: 07/08/2023
- Castelo Fernández B.** Estudio observacional, internacional, retrospectivo de revisión de historias clínicas, para describir las características, patrones de tratamiento y resultados clínicos en los pacientes tratados con selpercatinib dentro de un programa de acceso temprano en España y Portugal (estudio selpiber).
Type/Phase: EOm no prospectivo
Sponsored by: Lilly, S.A.
Signed date: 18/10/2023
- Zamora Auñón P.** Estudio fase III de post-neoadyuvancia que evalúa sacituzumab govitecan, un anticuerpo conjugado, en pacientes con cáncer primario de mama HER2 negativo con alto riesgo de recaída tras el tratamiento neoadyuvante estándar - sascia.
Type/Phase: III
Sponsored by: Fundacion Grupo Español De Investigación En Cancer De Mama Geicam
Gbg Forschungs Gmbh
Signed date: 05/10/2023
- Custodio Carretero A.** Estudio en fase III abierto, aleatorizado, multicéntrico, de 2 grupos de trastuzumab deruxtecan en sujetos con adenocarcinoma gástrico o de la unión gastroesofágica (uge) positivo para her2, metastásico y/o no resecable que han progresado durante o después de una pauta que contenía trastuzumab (destiny-gastric04).
Type/Phase: III
Sponsored by: Daiichi Sankyo Inc
Signed date: 28/07/2023



- Pinto Marín A.** A randomized open-label phase 2/3 study of bt8009 as monotherapy or in combination in participants with locally advanced or metastatic urothelial cancer (duravelo-2).
Type/Phase: III
Sponsored by: Bicyclx, Ltd
Signed date: 22/12/2023
- Redondo Sánchez A.** Estudio plataforma, de fase ii, abierto y multicéntrico para evaluar la eficacia y la seguridad de tratamientos basados en biomarcadores en pacientes con tumores epiteliales de ovario raros persistentes o recurrentes.
Type/Phase: II
Sponsored by: F.Hoffmann-La Roche Ltd
Signed date: 09/10/2023
- Custodio Carretero A.** Anexo 1 5847 ds8201-a-u306 estudio en fase iii abierto, aleatorizado, multicéntrico, de 2 grupos de trastuzumab deruxtecán en sujetos con.
Type/Phase: III
Sponsored by:
Signed date: 20/10/2023
- Feliú Batlle J.** Primer estudio en humanos, fase 1 / 2a, multicentro, abierto para la evaluación de la seguridad, tolerabilidad, farmacocinética y eficacia de pbp1510 en pacientes con cáncer de páncreas avanzado/metastático.
Type/Phase: I
Sponsored by: Prestige Biopharma Limited
Signed date: 16/10/2023
- Feliú Batlle J.** Estudio abierto en fase ib/ii para evaluar la seguridad y la eficacia del mitazalimab en combinación con quimioterapia en pacientes con adenocarcinoma ductal pancreático.
Type/Phase: II
Sponsored by: Alligator Bioscience Ab
Signed date: 02/11/2023
- Castelo Fernández B.** Estudio de fase 2 de prueba de concepto, aleatorizado, doble ciego y controlado con placebo para evaluar la eficacia, seguridad y tolerabilidad y los efectos en los biomarcadores tumorales del inhibidor de nox1/4 setanaxib, administrado en combinación con el

inhibidor de pd-1 pembrolizumab, en pacientes con carcinoma escamoso de cabeza y cuello (cecc) recurrente o metastático.

Type/Phase: II
Sponsored by: Genkyotex Suisse Sa
Signed date: 18/12/2023

- Pinto Marín A.** Estudio de fase 3, aleatorizado y multicéntrico para evaluar la eficacia de tar-200 en combinación con cetrelimab en comparación con quimiorradioterapia concomitante en participantes con carcinoma urotelial de vejiga músculo-invasivo (cvmi) que no se vaya.

Type/Phase: III
Sponsored by: Janssen Cilag International Nv
Signed date: 28/11/2023

- Zamora Auñón P.** Estudio de fase III, multicéntrico, aleatorizado, abierto y controlado de trastuzumab deruxtecán (t-dxd) frente a trastuzumab emtansina (t-dm1) en pacientes con cáncer de mama primario her2 positivo de alto riesgo que presentan enfermedad invasiva residual en mama o en ganglios linfáticos axilares tras el tratamiento neoadyuvante.

Type/Phase: III
Sponsored by: Daiichi Sankyo Inc
Signed date: 27/11/2023

- Castelo Fernández B.** Estudio en fase II de alx148 en combinación con pembrolizumab en pacientes con carcinoma de células escamosas de cabeza y cuello avanzado (aspen-03).

Type/Phase: II
Sponsored by: Alx Oncology, Inc
Signed date: 18/09/2023

- Castelo Fernández B.** Estudio en fase III de alx148 en combinación con pembrolizumab y quimioterapia en pacientes con carcinoma de células escamosas de cabeza y cuello avanzado (aspen-04).

Type/Phase: II
Sponsored by: Alx Oncology, Inc
Signed date: 18/09/2023

- Rodríguez Salas N.** A randomized, multicentre, open-label controlled phase ii trial of foxy-5 as

neo-adjuvant therapy in subjects with wnt-5a low colon cancer.

Type/Phase: II
Sponsored by: Wnt Research Ab, Peter Morsing
Signed date: 02/11/2023

Patents and trademarks

- Cejas Guerrero P, Belda Iniesta C, Feliú Batlle J, González Barón M, de Castro Carpeño J, Casado Sáenz E, Sánchez Hernández JJ, inventors; FIBHULP, UAM, assignees.** Genomic fingerprint for the prognosis of the evolution of colorectal adenocarcinoma. P200703229, PCT/ES2008/000756, EP2236626; 2007 December 04.
- Cejas Guerrero P, Belda Iniesta C, Feliú Batlle J, de Castro Carpeño J, Moreno García V, Burgos Lizalde E, Casado Sáenz E, Sánchez Hernández JJ, inventors; FIBHULP, UAM, Empresa Pública Hospital del Norte, assignees.** Genomic fingerprint for predicting the clinical response to an antitumor therapy in colorectal cancer. P201130863, PCT/ES2012/070379; 2011 May 26.
- Espinosa Arranz E, Fresno Vara JA, Gámez Pozo A, Sánchez Navarro I, inventors; FIBHULP, assignee.** Method for tumor subclassification. P200803509, PCT/ES2009/070533; 2008 December 11.
- Redondo Sánchez A, Hardisson Hernaéz D, Barriuso Feijoo J, Mendiola Sabio M, inventors; FIBHULP, assignee.** Method to obtain useful data for the prediction of a patient's clinical response to an anticancer treatment. P200930400; 2009 July 01.
- Cejas Guerrero P, González Barón M, Casado Sáenz E, Sánchez Hernández JJ, Perona Abellón R, inventors; FIBHULP, UAM, CSIC, assignees.** Use of trefoil factor family 3 (TFF3) in the prognosis of patients diagnosed with colorectal cancer. P200703230, PCT/ES2008/000757, EP2236625; 2007 December 04.
- Moreno Rubio J, Cejas Guerrero P, Feliú Batlle J, Ramírez de Molina AI, Reglero Rada G, Vargas Alonso T, Molina Arranz S,**

González-Vallinas Garrachón M, inventors; FIBHULP, Fundación Imdea Alimentacion, assignees. Methods and kits for the prognosis of colorectal cancer. P201231918, PCT/ES2013/070864; 2012 December 10.

- Espinosa Arranz E, Fresno Vara JA, Gámez Pozo A, López Vacas R, Berges Soria J, inventors; FIBHULP, assignee.** Method for tumor subclassification. P201430887; 2014 June 09.
- Miranda Utrera N, Castellano D, Villacampa Aubá F, Fresno Vara JA, Gámez Pozo A, inventors; FIBH120, FIBHULP, assignees.** Prognostic method for determining the risk of relapse in renal cancer patients with a clear cell type of renal carcinoma, stages I and II, and kit for same. P201531360, PCT/EP2016/072723, EP16774644.5, US20180346990, CN108174608; 2015 September 23.
- Feliú Battle, J, Fernández Martos C, Fresno Vara JA, Ghanem Cañete I, Gámez Pozo A, Trilla Fuertes L, inventors; Biomedica Molecular Medicine SL (BMM), Grupo Español Multidisciplinar en Cáncer Digestivo (GEMCAD), assignees.** In vitro method for the prognosis of anal squamous cell carcinoma. EP19382982.7; 2019 November 11.
- Redondo Sánchez A, Hardisson Hernaéz D, Barriuso Feijoo J, Mendiola Sabio M, inventors; FIBHULP, assignee.** Method to obtain useful data for the prediction of a patient's pathological response to an anticancer treatment. P200930438; 2009 July 10.
- Fernández Martos C, Trilla Fuertes L, Fresno Vara JA, Gámez Pozo A, Ghanem Cañete I, Feliú Battle J, inventors; Biomedica Molecular Medicine SL, Grupo Español Multidisciplinar en Cáncer Digestivo (GEMCAD), assignee.** In vitro method for the prognosis of anal squamous cell carcinoma. EP19382982.7; 2019; 2019 November 11.



3.5.3 Experimental Therapies and Biomarkers in Cancer Group

Publications: 17 | Q1: 10

COMPOSITION

Olga Vera Puente

Investigadora Postdoctoral (Sara Borrell).
 FIBHULP

Javier de Castro Carpeño

Jefe de Sección de Oncología. Profesor Asociado. Hospital Universitario La Paz. Universidad Autónoma de Madrid

- **Ana Arauzo Cabrera.** Investigadora Predoctoral. FIBHULP
- **Miranda Burdiel Herencia.** Investigadora Predoctoral. Universidad Autónoma de Madrid
- **Patricia Cruz Castellanos.** Facultativo Especialista de Área en Oncología Médica. Hospital Universitario La Paz
- **Lucía de Dios Blázquez.** Bioinformática. FIBHULP
- **María Dolores Diestro Tejada.** Facultativo Especialista de Área en Ginecología y Obstetricia.

Unidad de Ginecología Oncológica. Hospital Universitario La Paz

- **María Isabel Esteban Rodríguez.** Facultativo Especialista de Área en Anatomía Patológica. Hospital Universitario La Paz
- **Álvaro García Guede.** Investigador Predoctoral. FIBHULP
- **Laura Gutiérrez Sainz.** Facultativo Especialista de Área en Oncología Médica. Hospital Universitario La Paz
- **Cristina Manguán García.** Técnico de Laboratorio. IIB "Alberto Sols"
- **Lucía Martín Fernández.** Investigadora Predoctoral. FIBHULP
- **Rocío Moreno Velasco.** Técnico de Laboratorio. FIBHULP
- **Olga Pernía Arias.** Investigadora Predoctoral. Universidad Autónoma de Madrid
- **Carlos Rodríguez Antolín.** Bioinformático. FIBHULP
- **Rocío Rosas Alonso.** Facultativo Especialista de Área en Bioquímica Clínica. Hospital Universitario La Paz



- **Julia Villamayor Sánchez.** Facultativo Especialista de Área en Oncología Médica. Hospital Universitario La Paz
- **Paloma Nerea Yubero Delgado.** Técnico Auxiliar en Enfermería. FIBHULP

STRATEGIC OBJECTIVES

• Genetic and epigenetic mechanisms play significant roles in tumor progression and the development of resistance to treatment. The dynamic nature of tumors and their ability to adapt and resist therapies pose critical challenges in clinical practice. In our research, we have employed diverse strategies to address these challenges. Firstly, we have focused on the identification of novel markers throughout the course of lung cancer, aiming to uncover crucial indicators of disease progression. Additionally, we have pursued various approaches to identify specific targets involved in drug response, striving to enhance treatment efficacy. Our investigations have transcended the realm of theory, extending into the realm of clinical practice through the meticulous analysis of human samples. It is through this granular examination that we have unraveled the alterations occurring at the individual patient level. Moreover, we have successfully pinpointed epigenetic changes in tumor suppressor genes that are strongly associated with drug resistance. Furthermore, we have made significant strides in understanding the role of epigenetic regulators in lung and melanoma, particularly in the context of oxidative stress. These findings shed light on novel avenues for therapeutic interventions and provide valuable insights into the complex interplay between genetic, epigenetic, and environmental factors in cancer progression and treatment resistance.

• Through the application of genomic, transcriptomic, and expression reactivation techniques, we have made significant strides in identifying a diverse array of biomarkers, including genes and microRNAs. These biomarkers hold immense potential for non-invasive cancer diagnosis, particularly in the context of non-small cell lung cancer (NSCLC). Our pioneering research has demonstrated the efficacy of liquid biopsy as a reliable method for detecting these biomarkers, providing a promising avenue for early detection and diagnosis of lung cancer. In addition, we have focused our attention on assessing chronic obstructive pulmonary disease (COPD) patients to establish the presence of early-stage lung cancer. By leveraging these advanced techniques, we have successfully unraveled the intricate transcriptomic alterations at miRNA level, occurring during the establishment of lung cancer in COPD patients. These groundbreaking findings not only hold great promise for improving the accuracy and efficiency of cancer diagnosis but also pave the way for personalized treatment approaches that can potentially enhance patient outcomes.



RESEARCH LINES

1. Identification of predictive epigenetic biomarkers in the appearance of resistance to treatment in solid tumors. Within the oncological markers, those for predictive use are the most necessary to help direct therapies since the vast majority of patients are diagnosed when the tumor needs to be treated. Platinum-derived compounds are the standard treatment for high-incidence tumors such as those of the lung, ovary, and rectum, so the fact of finding markers of response to their use would allow the selection of patients, optimizing treatment and associated healthcare costs.
 - 1.1. Lung cancer: In this line we have identified the methylation of the IGFBP3 gene promoter, whose epigenetic silencing is related to platinum resistance, extending its validation to cohorts of lung cancer patients likely to benefit from its use. In addition, the effectiveness of this biomarker is being tested in liquid biopsy as a non-invasive test. This line of research has given rise to three concatenated publications (Oncogene 2010 PMID: 20023704, Oncogene 2013 PMID: 22543588, Epigenetics 2014 PMID: 25482372) and a patent in the joint exploitation phase with a Spanish biotechnology company that has licensed said patent. This patent has passed a Pre-commercial Public Purchase in SERGAS and its validation in national phases has had the support of two concatenated RETOS projects.
 - 1.2. Brain Tumors: Regarding our line with brain tumors, we assess the methylation status of the MGMT gene in glioblastomas, as a care and research task since 2014 in our laboratory, developing advanced high-sensitivity technology for its detection in liquid biopsy. The data obtained to date in more than 200 patients in a prospective trial has given rise to a recent publication (Clinical epigenetics 2021 PMID: 33750464) and a second article in process, in addition to a European patent that has just passed PCT extension, and the award of two competitive public projects, one of them a DTS20 technological project for diagnosis and blood monitoring of patients with glioblastomas, and a PLEC project (RETOS) in collaboration with Val deHebron for fine-tuning diagnostic technologies and monitoring with tracers PET. In addition, these results have allowed the defense in 2021 of the doctoral thesis of Rocío Rosas, a member of our team, who has just started her independent line in January 2022 as a "Juan Rodés" researcher.
 - 1.3. Ovarian Cancer: We also have an open line in ovarian cancer, in which we have published a recent article (Clinical Epigenetics 2021 PMID: 34454589) and has allowed us to participate as work package leaders in a Transcan European project led by Italy, which has just successfully passed the first round of evaluation.
 - 1.4. Melanoma. In this emerging line, we are focusing on the characterization of the oncogenic role of MAFG in the response to immunotherapy in melanoma. Dr. Olga Vera, recently has incorporated to the group as a Sara Borrell postdoctoral researcher to lead this line. Previous studies of Olga have identified MAFG as a potential oncogene in melanoma and with potential therapeutic applications. The successful completion of our study will significantly advance our understanding of the role of MAFG in melanoma, determine new therapeutic targets and open new lines of research focused on dissecting the oncogenic role of MAFG.
2. Study of the molecular mechanisms underlying simultaneous resistance to platinum in cancer, through the epigenetic regulation of regulatory non-coding RNAs. In this line, changes in the expression of microRNAs and lncRNAs in platinum-sensitive and -resistant human NSCLC and ovarian cancer cell lines established in our research group are studied. We have identified 7 microRNAs whose expression appears to be under epigenetic regulation. One of them under the epigenetic regulation of its regulatory region (miRNA-7) as a potential predictive biomarker of response to platinum in ovarian cancer in terms of overall survival and time to progression. Product of the development of this line has been the publication of an article in the journal (Theranostics 2017 PMID: 29158814), as well as a patent that is in the PCT phase. Based on these findings, in 2016 we began a collaboration with the MOFFITT cancer center in Tampa (USA) to study Long Non-Coding RNAs (lnc-RNAs) and their possible regulation through DNA methylation in these cell lines. With this project we assess the changes in the expression of lncRNAs and their epigenetic regulation at the level of DNA methylation, characterizing two groups of lncRNAs differentially regulated in the development of resistance to cisplatin, and thus opening the way for the identification of new ones. As a result of the activity of this collaboration, highly innovative results were obtained in this field (Epigenetics PMID: 29436261 and Translational Research 2018, PMID: 30053382), and the research activity focused on the characterization of these novel biomarkers is maintained thanks to the funding supported for the PI21/00145 and Caixa Impulse projects.
3. Identification of new therapeutic targets. In recent years we have also identified the direct regulation of the MAFG gene through miR-7 in our experimental models. The function of MAFG is associated with detoxification in a situation of oxidative stress and our in vitro studies have shown its involvement in the appearance of cisplatin-resistant phenotypes. Our translational approach indicates that MAFG could be a diagnostic marker in patients with lung and ovarian cancer treated with platinum-based chemotherapy. To date, this line has provided four articles (Translational Research 2018, PMID: 30053382; Cell Biosci. 2019 PMID: 31406565; Arch Bronconeumol (Engl Ed). 2020.PMID: 31780284; Antioxidants (Basel).PMID: 32492865) and one European patent that has just been extended to national phases in the USA and Europe, which describes the clinical use of MAFG in patients with lung and ovarian cancer. We have currently addressed the study and use of MAFG as a therapeutic target through in vitro and in vivo assays after editing the MAFG gene using CRISPR/Cas9 technology, a project funded by the ISCIII (PI18/00050, P21/000145) in addition to extending and validating its use with the potential development of a kit for clinical use thanks to obtaining a RETOS project (RTC2019-007229-1) from the 2019 call and which is ongoing with the collaboration of H. Ramón y Cajal and the companies Aptus and Atrys.
4. Identification of biomarkers in exosomes such as liquid biopsy in patients with lung and ovarian cancer. With this line we intend, through a first basic approach, to characterize and compare the protein and microRNA content of exosomes from the secretome of paired sensitive and resistant lung cancer cell lines. In the translational study of the project, the candidates identified in the cell lines in circulating exosomes from samples of lung and ovarian cancer patients are being validated, which have given rise to different results. On the one hand, two candidate miRNAs with prognostic significance in this pathology, and on the other hand, a miRNA with possible universal value has been identified as endogenous capable of normalizing the value of the content of the exosomal miRNoma, both in healthy individuals and in individuals with different tumor types. These results have given rise to a European patent that is in national phases and the obtaining of a Caixa Impulse Validate project for the constitution of a Spin-off, in our institution focused on the development of a first RUO product for the normalization of exosomal content. In human blood samples, in addition to two manuscripts in preparation, as well as the defense of Julia Jiménez's thesis in July 2019.
5. Identification of pharmacogenetic biomarkers associated with efficacy and toxicity of cancer treatments. Led by Dr R Rosas.
 Pharmacogenetics is the field of knowledge that seeks to identify genetic variants to provide information that will allow a better understanding of drug response in terms of efficacy and toxicity, thus contributing to personalised precision medicine. Despite progress in the research and development of new cancer treatments, the efficacy and safety of these drugs vary widely between patients. In this context, this line of research aims to understand how genetic variations in individuals may influence the efficacy and toxicity



of cancer treatments. The use of pharmacogenetic biomarkers is a reality in routine clinical practice and has been shown to improve the efficacy and reduce the side effects of treatments, resulting in a better quality of life for patients and reduced costs for the national healthcare system. Our ultimate goal is to identify new pharmacogenetic biomarkers that will allow better selection of cancer treatments for each patient, thus promoting the medicine of the future with a personalised and individualised approach. This line currently has two projects awarded in public (PI22/00128) and private (José Luis Castaño-SEQC Foundation) competitive calls, led by Dr Rocío Rosas.

6. Identification of microRNA hypermethylation patterns associated with an increased risk of developing non-small cell lung cancer in patients with mild COPD and moderate to high tobacco consumption. In recent years, the potential role of epigenetic alterations in the development of lung cancer in COPD patients, mediated by changes in the activity of various microRNAs, small non-coding RNA molecules (19-25 nucleotides) with a regulatory function of gene expression, which induce the degradation of messenger RNA or inhibit its translation, has gained particular importance. It is therefore interesting to consider whether there may be hypermethylation profiles of different microRNAs that are associated with an increased risk of lung cancer in COPD patients, which would facilitate appropriate risk selection for screening programmes. This line currently has one project, which was awarded in a competitive public call (PI22/001764), under the co-direction of Olga Pernía Arias.
7. Fine-tuning of high performance techniques available to the National Health System (NHS). (NGS and Characterization of DNA methylation status). Implicit in the group's cross-cutting lines and in our commitment to support the implementation in the NHS of the technological advances derived from our research activity, we have fine-tuned the characterization of the methylation status at the PAZ genetics facilities of DNA through the use of these new aspects of NGS applied to the field of epigenetics, both from a global approach and limited to certain regions, to implement its possible care applicability in cancer patients through personalized panels in solid tumors including glioblastomas, through the use of Methyseq technology and the 850K EPIC-arrays. Likewise, in these years we have fine-tuned the use of commercial NGS panels in strict compliance with quality regulations to address the characterization of the genetic profile of tumors in patients with lung cancer. Thanks to the addition to our team such as Dra Rocío Rosas, Juan Rodés from 2022, we are starting the hospital implementation phase, in which we have already tested careers with various platforms from different commercial houses. Its fine-tuning would allow its use both for research activities and its future healthcare applicability, especially in the classification of brain tumors. This activity is financed by the Spanish Group of Transversal Oncology and Rare Orphan Tumors (Getthi), which has just financed the group with a competitive project for this purpose. Given the experience acquired by the group in the use of massive data, we have been able to participate in the EU ISIDORE project and have begun the study of predictive bioinformatic matrices of response to platinum treatment. We intend to combine the information available in public domain databases with relevant clinical information associated with our own experimental results (methylation and gene expression microarrays and microRNAs, bisulfite sequencing, RNAseq and miRNAseq) to generate a predictive matrix of response to treatment. With these analytical models, we intend to identify "global markers" that define a predictive profile for treatment with platinum in lung and ovarian cancer based on the transcriptome, microRNome, and/or methylome. **This research line is led by Carlos Rodríguez Antolín, Bioinformatic of the group.**

RESEARCH ACTIVITY

Publications

- **Alonso-Espías M, Alonso-García M, García-Pineda V, Gracia M, Siegrist J, Diestro MD, Hernández A, Zapardiel I.** Beyond bladder dysfunction: assessing the full impact of radical hysterectomy on cervical cancer patients. *Eur J Gynaecol Oncol.* 2023; 44(6): 60-6. Article. IF: 0.5; Q4
- **Burdiel M, Jiménez J, Rodríguez-Antolín C, García-Guede A, Pernía O, Sastre-Perona A, Rosas-Alonso R, Colmenarejo J, Rodríguez-Jiménez C, Diestro MD, Martínez-Marín V, Higuera O, Cruz P, Losantos-García I, Peinado H, Vera O, de Castro J, de Cáceres II.** MiR-151a: a robust endogenous control for normalizing small extracellular vesicle cargo in human cancer. *Biomark Res.* 2023; 11(1): 94. Letter. IF: 9.5; D1
- **de Castro J, Insa A, Collado-Borrell R, Escudero-Vilaplana V, Martínez A, Fernández E, Sullivan I, Arrabal N, Carcedo D, Manzanque A.** Economic burden of locoregional and metastatic relapses in resectable early-stage non-small cell lung cancer in Spain. *BMC Pulm Med.* 2023; 23(1): 69. Article. IF: 2.6; Q2
- **Escudero-Vilaplana V, Collado-Borrell R, De Castro J, Insa A, Martínez A, Fernández E, Sullivan I, Flores A, Arrabal N, Carcedo D, Manzanque A.** Cost-effectiveness of adjuvant atezolizumab versus best supportive care in the treatment of patients with resectable early-stage non-small cell lung cancer and overexpression of PD-L1. *J Med Econ.* 2023; 26(1): 445-53. Article. IF: 2.9; Q2
- **Gracia M, Rodríguez E, Diestro MD, Spagnolo E, García V, Siegrist J, Pérez Y, Zapardiel I, Hernández A.** Impact of the Covid-19 pandemic on the management of gynecologic cancer: a Spanish survey. Observational, multicenter study. *Bmc Womens Health.* 2023; 23(1): 488. Article. IF: 2.4; Q2
- **Guijarro-Eguinoa J, Arjona-Hernández S, Stewart S, Pernía O, Arias P, Losantos-García I, Rubio T, Burdiel M, Rodríguez-Antolín C, Cruz-Castellanos P, Higuera O, Borobia AM, Rodríguez-Novoa S, de Castro-Carpeño J, de Cáceres II, Rosas-Alonso R.** Prognostic impact of dihydropyrimidine dehydrogenase germline variants in unresectable non-small cell lung cancer patients treated with platinum-based chemotherapy. *Int J Mol Sci.* 2023; 24(12): 9843. Article. IF: 4.9; Q1
- **Ibáñez-Navarro M, Fernández A, Escudero A, Esteso G, Campos-Silva C, Navarro-Aguadero MA, Leivas A, Caracuel BR, Rodríguez-Antolín C, Ortiz A, Navarro-Zapata A, Mestre-Durán C, Izquierdo M, Balaguer-Pérez M, Ferreras C, Martínez-López J, Valés-Gómez M, Pérez-Martínez A, Fernández L.** NKG2D-CAR memory T cells target pediatric T-cell acute lymphoblastic leukemia in vitro and in vivo but fail to eliminate leukemia initiating cells. *Front Immunol.* 2023; 14: 1187665. Article. IF: 5.7; Q1
- **Isla D, Lozano MD, Paz-Ares L, Salas C, de Castro J, Conde E, Felip E, Gómez-Román J, Garrido P, Enguita AB.** New update to the guidelines on testing predictive biomarkers in non-small-cell lung cancer: a National Consensus of the Spanish Society of Pathology and the Spanish Society of Medical Oncology. *Clin Transl Oncol.* 2023; 25(5): 1252-67. Article. IF: 2.8; Q2
- **Isla D, Lozano M D, Paz-Ares L, Salas C, de Castro J, Conde E, Felip E, Gómez-Román J, Garrido P, Belén Enguita A.** New update to the guidelines on testing predictive biomarkers in non-small-cell lung cancer: a National Consensus of the Spanish Society of Pathology and the Spanish Society of Medical Oncology. *Rev Esp Patol.* 2023; 56(2): 97-112. Review. Not indexed
- **Marín-Candón A, García-García I, Arias P, Carcas AJ, Díaz-García L, Ochoa RF, Cano NH, Pinto PH, González MJ, López-Granados E, Martínez-Feito A, Mayor-Ibarguren A, Rosas-Alonso R, Seco-Meseguer E, Borobia AM.** Identifying biomarkers of treatment response to ciclosporin in atopic dermatitis through multio-



mic predictive modelling: DERMATOMICS study protocol. *BMJ Open*. 2023; 13(7): e072350. Article. IF: 2.4; Q1

- **Nadal E, Rodríguez-Abreu D, Simó M, Masutí B, Juan O, Huidobro G, López R, de Castro J, Estival A, Mosquera J, Sullivan I, Felip E, Blasco A, Guirado M, Pereira E, Vilarino N, Navarro V, Bruna J.** Phase II trial of atezolizumab combined with carboplatin and pemetrexed for patients with advanced nonsquamous non-small-cell lung cancer with untreated brain metastases (Atezo-Brain, GECP17/05). *J Clin Oncol*. 2023; 41(28): 4478-85. Article. IF: 42.1; D1
- **Provencio M, Nadal E, González-Larriba JL, Martínez-Martí A, Bernabé R, Bosch-Barrera J, Casal-Rubio J, Calvo V, Insa A, Ponce S, Reguart N, de Castro J, Mosquera J, Cobo M, Aguilar A, Vivanco GL, Camps C, López-Castro R, Morán T, Barneto I, Rodríguez-Abreu D, Serna-Blasco R, Benitez R, de la Rosa CA, Palmero R, Hernando-Trancho F, Martín-López J, Cruz-Bermúdez A, Massuti B, Romero A.** Perioperative nivolumab and chemotherapy in stage iii non-small-cell lung cancer. *New Engl J Med*. 2023; 389(6): 504-13. Article. IF: 96.2; D1
- **Quevedo IC, García IC, Gracia M, García-Pineda V, Alonso-Espias M, Siegrist J, Diestro MD, Hernández A, Zapardiel I.** Personalized sentinel node mapping in endometrial cancer by

the indocyanine green implementation as single tracer: a case control study. *J Pers Med*. 2023; 13(2): 170. Article. IF: 3.0; Q2

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Noval S, Mena R, Rodríguez-Jiménez C, Rodríguez-Solana P, González-Iglesias E, Guerrero-Carretero M, Mardero OD, Coca-Robinot J, Acal JC, Blasco J, Castañeda C, Maya JF, Del Pozo A, Gómez-Pozo MV, Montañó VEF, Díos-Blázquez LD, Rodríguez-Antolín C, Gómez-Cano MD, Delgado-Mora L, Vallespín E. Whole-exome sequencing of 21 families: candidate genes for early-onset high myopia. *Int J Mol Sci*. 2023; 24(21): 15676. Article. IF: 4.9; Q1

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Research projects

- **Burdiel Herencia M.** Contrato predoctoral (FI19/00061). ISCIII-MICINN. 2021-2023. *Management centre: FIBHULP*
- **Cruz Castellanos p.** App respira. Boehringer Ingelheim España, S.A. 2019-Ongoing. *Management centre: FIBHULP*
- **de Castro Carpeño J.** Avanzando en el tratamiento del cáncer de pulmón con terapia dirigida. un paso más: de la investigación a la práctica clínica. Pfizer S.L.U. 2022-Ongoing. *Management centre: FIBHULP*
- **de Castro Carpeño J.** Desarrollo de las tareas necesarias para la puesta en marcha del estudio clínico ml40221 título: estudio de práctica clínica en condiciones reales para evaluarla toma de decisiones en el tratamiento de segunda línea conforme a las normas asistenciales y basado en los perfiles de foundation medicine en pacientes con cáncer de pulmón no microcítico (cpnm) localmente avanzado o metastásico con histología de adenocarcinoma en España. Roche Farma S. A. 2018-Ongoing. *Management centre: FIBHULP*
- **de Castro Carpeño J.** Determinación mediante inmunohistoquímica de la expresión de PDL-1 en carcinoma de célula no pequeña de pulmón. Fun-

dación ECO. 2016-Ongoing. *Management centre: FIBHULP*

- **de Castro Carpeño J.** Eluxa 2: estudio de fase III, abierto, aleatorizado y controlado con producto activo, multicéntrico e internacional, para evaluar la eficacia de BI1482694 frente a un doblete de quimioterapia estandar que incluye platino en pacientes con cáncer de pulmón no microcítico localmente avanzado o metastásico, con la mutación T790 M, cuya enfermedad ha progresado con el tratamiento previo con un inhibidor de la tirosina cinasa del receptor del factor de crecimiento epidérmico (EGFR-TKI). Parexel International (Irl) limited. 2016-Ongoing. *Management centre: FIBHULP*
- **de Castro Carpeño J.** Estudio de la Plasticidad Tumoral Epigenética a través de la carcinogénesis y progresión del CPNM en biopsia líquida. SETuP (PI21/00145). ISCIII. 2022-2024. *Management centre: FIBHULP*
- **de Castro Carpeño J.** Evaluación del perfil de hipermetilación de microRNAs para la estimación de riesgo de cáncer de pulmón en pacientes con EPOC (PI22/01764). ISCIII. 2023-2025. *Management centre: FIBHULP*
- **de Castro Carpeño J.** Identificación de nuevos mecanismos genéticos y epigenéticos de resistencia a la inmunoterapia de primera línea en pacientes con cáncer de pulmón no microcítico metastásico (cpnm) con alta expresión pd-11. estudio keypredict. Fundación Mutua Madrileña. 2022-Ongoing. *Management centre: FIBHULP*
- **de Castro Carpeño J.** Plataforma del grupo de investigación de terapias experimentales y biomarcadores en cáncer (tebc). Helicon Medical S.L. 2021-Ongoing. *Management centre: FIBHULP*
- **de Castro Carpeño J.** Prestación de servicios para el desarrollo de las tareas necesarias en el estudio Estudio observacional de alemtinib en pacientes con CPNM ALK+ en el programa de acceso precoz en España. Roche Farma S. A. 2018-Ongoing. *Management centre: FIBHULP*
- **de Castro Carpeño J.** Resistencia a la inmunoterapia de primera línea en pacientes con cáncer de pulmón no microcítico metastásico con expresión de PD-L1 mayor o igual al 50%. Mutua Madrileña. 2022-ongoing. *Management centre: FIBHULP*

- **de Castro Carpeño J.** SurvAI: Plataforma web para la automatización de la anotación, clasificación e interpretación de variantes genéticas en cáncer a través de algoritmos basados en deep learning. Predicción de supervivencia y efecto de variantes de significado incierto (DTS22/00145). ISCIII. 2023-Ongoing. *Managment centre: FIBHULP*
- **Esteban Rodríguez MI.** Proyecto para la evaluación retrospectiva de muestras pareadas de biopsia y citología para la detección de reordenamientos de alk y expresión de pd-11 en cpcnp. Roche Farma S.A. 2017-Ongoing. *Managment centre: FIBHULP*
- **Esteban Rodríguez MI.** Proyecto para la evaluación retrospectiva de muestras pareadas de biopsia y citología para la detección de reordenamientos de alk y expresión de pd-11 en cpcnp. Roche Farma S.A. 2017-Ongoing. *Managment centre: FIBHULP*
- **Ibáñez de Cáceres MI.** Digittal PCR Systems (IFEQ22/00003). ISCIII. 2023-2024. *Managment centre: FIBHULP*
- **Ibáñez de Cáceres MI.** Estudio de los mecanismos moleculares y celulares responsables de la aparición de resistencia a quimioterapia mediados MOR MAFG y su implicación como nueva diana diagnóstica y terapéutica en cancer de pulmón no microcítico (PI18/00050). ISCIII. 2019-2023. *Managment centre: FIBHULP*
- **Ibáñez de Cáceres MI.** First bio-Tool for Exosomal normalization in Liquid biopsy and its clinical applicability for Lung cancer patients stratification. LUCADIA (CI20-00182). Caixa-Impulse Val-date. 2020-2023. *Managment centre: FIBHULP*
- **Ibáñez de Cáceres MI.** In-Vivo Imaging_IVIS (IFEQ22/00004). ISCIII. 2023-2024. *Managment centre: FIBHULP*
- **Ibáñez de Cáceres MI.** Prediapt: desarrollo de un sistema predictivo de respuesta al tratamiento con derivados del platino en cáncer de pulmón basado en aptámeros (RTC-2019-007229-1). MICIU. 2020-2023. *Managment centre: FIBHULP*
- **Ibáñez de Cáceres MI.** Primera bioherramienta para la normalización del contenido exosomal en biopsia líquida y su aplicabilidad clínica para

la estratificación y diagnóstico de pacientes con cáncer de pulmón. (Lucadia). FIBHULP. 2021-Ongoing. *Managment centre: FIBHULP*

- **Ibáñez de Cáceres MI.** Ultracentrifuga preparativa de alta eficacia y rendimiento (IFEQ22/00002). ISCIII. 2023-2024. *Managment centre: FIBHULP*
- **Ibáñez de Cáceres MI.** Validación del biomarcador epigenético MGMT en biopsia líquida como prueba no invasiva en pacientes con gliomas (DTS20/00029). ISCIII. 2021-2023. *Managment centre: FIBHULP*
- **Rodríguez Antolín C.** Aplicación del metiloma en el diagnóstico de tumores del sistema nervioso central de difícil clasificación a través de algoritmos de aprendizaje automático. Fundación de la Comunidad Valenciana Hospital Provincial de Castelló. 2022-Ongoing. *Managment centre: FIBHULP*
- **Rodríguez Antolín C.** Aplicacion del metiloma en el diagnostico del sistema nervioso central de difícil clasificaiación a través de algoritmos de aprendizaje automatico. Ghetti. 2022-Ongoing. *Managment centre: FIBHULP*
- **Rodríguez Antolín C.** Implementación diagnóstica del análisis de metilación dirigida en plataformas de secuenciación masiva de cáncer. Roche Farma S. A. 2019-Ongoing. *Managment centre: FIBHULP*
- **Rodríguez Antolín C.** Personal técnico bioinformático de apoyo a investigación (CA22/00002). ISCIII. 2023-Ongoing. *Managment centre: FIBHULP*
- **Rosas Alonso R.** Estudio de nuevas variantes asociadas a toxicidad por fluoropirimidinas. Fundación José Luis Castaño para el Desarrollo del Laboratorio Clínico. 2022-Ongoing. *Managment centre: FIBHULP*
- **Rosas Alonso R.** Farmacogenética de inhibidores tirosina-quinasa en cáncer de pulmón: medicina de precisión más allá de un solo gen (PI22/00128). ISCIII. 2023-2025. *Managment centre: FIBHULP*
- **Rosas Alonso R.** Identificación de biomarcadores farmacogenéticos asociados a eFicacia y toxicidad a tratamientos en pacientes con Artritis Reumatoide: estudio BIOFAR (PI-5318). Fun-



Cancer and Human Molecular Genetics Area

dación José Luis Castaño para el Desarrollo del Laboratorio Clínico. 2023-Ongoing. *Managment centre: FIBHULP*

- **Rosas Alonso R.** Identificación de biomarcadores farmacogenéticos asociados a eficacia y toxicidad a tratamientos en pacientes con artritis reumatoide: estudio BIOFAR (2022.26). Fundación José Luis Castaño para el Desarrollo del Laboratorio Clínico. 2023-Ongoing. *Managment centre: FIBHULP*
- **Vera Puente O.** Caracterización de las funciones inmunosupresoras de MAFG en melanoma y sus potenciales implicaciones para la terapia del cáncer (PI 5815). FIBHULP. 2024-Ongoing. *Managment centre: FIBHULP*
- **Vera Puente O.** Early molecular nanoDIAGnostics of brain tumors using Immune-PET (DIAG-BI) (PLEC2021-008034). MICIIN. 2021-2024. *Managment centre: FIBHULP*
- **Vera Puente O.** Evaluación y puesta a punto del biomarcador epigenético MGMT en biopsia líquida como prueba no invasiva de seguimiento, en pacientes con gliomas. Juan Cuesta Barrio. 2017-Ongoing. *Managment centre: FIBHULP*

Cibers and Retics

- **de Castro Carpeño J.** Dinamización e innovación de las capacidades industriales del SNS y su transferencia al sector productivo. ISCIII. (31/12/2023). FIBHULP
- **Ibáñez de Cáceres I.** European Infrastructure for Translational Medicine (EATRIS). EU. (31/12/2023). FIBHULP

Clinical trials

- **de Castro Carpeño J.** A phase 1 study to assess the effect of hepatic impairment on the pharmacokinetics of repotrectinib in advanced cancer patients.
Type/Phase: I
Sponsored by: Turning Point Therapeutics, Inc
Signed date: 21/06/2023
- **de Castro Carpeño J.** A phase iii, open-label, randomised, multicentre study of ceralasertib plus durvalumab versus docetaxel in patients with advanced or metastatic non-small cell lung cancer without actionable genomic alterations, and whose disease has progressed on or after prior anti-pd-(l)1 therapy and platinum-based chemotherapy: latify.



Type/Phase: III

Sponsored by: Astrazeneca Ab
Signed date: 12/01/2023

- **de Castro Carpeño J.** Estudio abierto seguido de un estudio aleatorizado, doble ciego, controlado con placebo, de grupos paralelos y un estudio de extensión para investigar la seguridad y eficacia de gb1211 (un inhibidor de la galectina-3) en combinación con atezolizumab en pacientes con cáncer de pulmón no microcítico (cpnm).

Type/Phase: I

Sponsored by: Galecto Biotech Ab
Signed date: 07/02/2023

- **de Castro Carpeño J.** Estudio de diseño abierto de 2 partes, multicentro y de fase 1b de datopotamab deruxtecan (dato-dxd) en combinación con inmunoterapia con o sin carboplatino en participantes con cáncer de pulmón de células no pequeñas metastásico o avanzado.

Type/Phase: I

Sponsored by: Astrazeneca Ab
Signed date: 31/05/2023

- **de Castro Carpeño J.** Estudio de fase I, con aumento escalonado de la dosis y ampliación de cohortes de tsr-022, un anticuerpo monoclonal anti-tim-3, en pacientes con tumores sólidos avanzados (amber).

Type/Phase: I

Sponsored by: Tesaro Inc.
Signed date: 18/04/2023

- **de Castro Carpeño J.** Estudio en fase II de tratamiento combinado con adagrasib en pacientes con carcinoma pulmonar no microcítico avanzado con mutación del gen kras g12c.

Type/Phase: II

Sponsored by: Mirati Therapeutics, Inc
Signed date: 21/06/2023

- **de Castro Carpeño J.** Ensayo clínico fase II de quimio-inmunoterapia neoadyuvante seguida de tratamiento adyuvante según el estado de resección para el tratamiento de pacientes con cáncer de pulmón no microcítico (cpnm) con diagnóstico de tumor de pancoast. un estudio exploratorio multicéntrico.

Type/Phase: II

Sponsored by: Fundación Gecep
Signed date: 06/02/2023

- **de Castro Carpeño J.** Estudio de fase 1/2a, multicéntrico y abierto para evaluar la seguridad, la tolerabilidad, la farmacocinética y los indicios preliminares de actividad antitumoral basados en terapias combinadas con jab-3312 en pacientes adultos con tumores sólidos avanzados.

Type/Phase: I

Sponsored by: Jacobio Pharmaceuticals Co, Ltd
Signed date: 21/04/2023

- **de Castro Carpeño J.** Estudio de fase III aleatorizado y doble ciego de bgba1217, un anticuerpo anti-tigit, en combinación con tislelizumab frente a pembrolizumab en pacientes con cáncer de pulmón no microcítico irreseccable o metastásico no tratado previamente, con expresión de pd-1 y localmente avanzado.

Type/Phase: III

Sponsored by: Beigene Usa, Inc
Signed date: 14/02/2023

- **de Castro Carpeño J.** A randomized, double-blind, multi-center, phase III study of ak112 or placebo combined with pemetrexed and carboplatin in patients with egfr-mutant locally advanced or metastatic non-squamous nslc who have failed egfr-tki treatment (harmoni).

Type/Phase: III

Sponsored by:
Signed date: 28/09/2023

- **de Castro Carpeño J.** Estudio en fase IB/IIA, abierto y multicéntrico para evaluar la eficacia, la seguridad, la tolerabilidad y la farmacocinética del inhibidor de atr m1774 en combinación con cemiplimab en participantes con cáncer de pulmón no microcítico no escamoso que ha progresado a pesar de haber recibido tratamiento anti-pd-(l)1 y tratamiento con un derivado del platino.

Type/Phase: I

Sponsored by: Merck Healthcare Kgaa
Signed date: 14/09/2023

- **de Castro Carpeño J.** Estudio abierto, en fase I/II, sobre t3p-y058-739, una cepa genéticamente

modificada de la bacteria yersinia enterocolitica, en pacientes con tumores sólidos avanzados.

Type/Phase: I

Sponsored by: T3 Pharmaceuticals Ag
Signed date: 12/06/2023

- **de Castro Carpeño J.** Rosy-d: estudio maestro de continuación en pacientes que hayan completado un estudio en oncología previo con durvalumab y que el investigador considere que van a beneficiarse clínicamente de continuar el tratamiento.

Type/Phase: III

Sponsored by: Astrazeneca Ab
Signed date: 25/04/2023

- **de Castro Carpeño J.** A phase 3, multicenter, randomized, open-label study evaluating efficacy of sotorasib platinum doublet combination versus pembrolizumab platinum doublet combination as a front-line therapy in subjects with stage iv or advanced stage iiib/c nonsquamous non-small cell lung cancers, negative for pd-1, and positive for kras p.g12c (codebreak 202).

Type/Phase: III

Sponsored by: Amgen, Inc
Signed date: 16/10/2023

- **de Castro Carpeño J.** Estudio de plataforma de fase 2, aleatorizado, abierto que utiliza el protocolo maestro para evaluar nuevas combinaciones con inmunoterapia en participantes con cáncer de pulmón no microcítico localmente avanzado/metastásico, seleccionados según la expresión del ligando de muerte programada 1, que no han recibido tratamiento previo.

Type/Phase: II

Sponsored by: Glaxosmithkline Research And Development Limited,
Signed date: 26/07/2023

- **de Castro Carpeño J.** Estudio en fase IB/IIA de la seguridad y la tolerabilidad de bemcentinib con pembrolizumab/carboplatino/pemetrexed en sujetos con cáncer de pulmón no microcítico (cpnm) no epidermoide avanzado o metastásico con/sin mutación de stk11 no tratado previamente.

Type/Phase: I

Sponsored by: Bergenbio Asa
Signed date: 20/10/2023

- **de Castro Carpeño J.** An open-label, phase 2b, global multicenter cohort trial to assess the safety and efficacy of zipalertinib in patients with locally advanced or metastatic non-small cell lung cancer with exon 20 insertion and uncommon/single or compound epidermal growth factor receptor mutations.

Type/Phase: IIb

Sponsored by: Taiho Oncology, Inc
Signed date: 07/11/2023

- **de Castro Carpeño J.** Ensayo abierto de un solo brazo para evaluar la actividad antitumoral, la seguridad y la farmacocinética de sar408701 utilizado en combinación con ramucirumab en pacientes con carcinoma pulmonar no microcítico no escamoso metastásico (cpnm nem) con tumores ceacam5 positivos, tratados previamente con quimioterapia a base de platino y con un inhibidor de puntos de control inmunitario.

Type/Phase: II

Sponsored by: Sanofi-Aventis Recherche & Development
Signed date: 30/05/2023

- **de Castro Carpeño J.** A phase 2, open-label, parallel cohort study of subcutaneous amivantamab in multiple regimens in patients with advanced or metastatic solid tumors including epidermal growth factor receptor mutated non-small cell lung cancer (paloma-2).

Type/Phase: II

Sponsored by: Janssen Cilag International Nv
Signed date: 04/10/2023

- **de Castro Carpeño J.** Estudio en paraguas de fase ib/ii, sin enmascaramiento, multicéntrico y aleatorizado para evaluar la eficacia y la seguridad de combinaciones de tratamientos basados en múltiples inmunoterapias en pacientes con carcinoma de pulmón no microcítico metastásico (morphus pulmonar).

Type/Phase: I

Sponsored by: Genentech Inc
Signed date: 18/10/2023



- **de Castro Carpeño J.** Estudio en fase II abierto, de un solo grupo y multicéntrico para evaluar la eficacia y la seguridad de taletrectinib en pacientes con cpm ros1 positivo avanzado o metastásico y otros tumores sólidos.

Type/Phase: II

Sponsored by: Anheart Therapeutics Inc

Signed date: 27/10/2023

- **de Castro Carpeño J.** Estudio en fase III, aleatorizado y abierto para evaluar zimberelimab y domvanlimab en combinación con quimioterapia frente a pembrolizumab con quimioterapia, como tratamiento de primera línea de pacientes con cáncer de pulmón no microcítico metastásico sin aberraciones tumorales genómicas del receptor del factor de crecimiento epidérmico ni de la quinasas del linfoma anaplásico.

Type/Phase: III

Sponsored by: Gilead Sciences Inc

Signed date: 29/11/2023

- **de Castro Carpeño J.** Observación del cáncer residual mediante evaluación por biopsia líquida (observation of residual cancer with liquid biopsy evaluation, oracle).

Type/Phase: No EPA

Sponsored by: Guardant Health, Inc.

Signed date: 29/11/2023

- **de Castro Carpeño J.** A phase 3, open-label, randomized study of lazertinib with subcutaneous amivantamab administered via manual injection compared with intravenous amivantamab or subcutaneous amivantamab administered via on body delivery system in patients with egfr-mutated advanced or metastatic non-small cell lung cancer after progression on osimertinib and chemotherapy (paloma-3).

Type/Phase: III

Sponsored by: Janssen Cilag International NV

Signed date: 14/12/2023

- **de Castro Carpeño J.** Comparación de la eficacia entre cobolimab + dostarlimab + docetaxel y dostarlimab + docetaxel y docetaxel en monoterapia en participantes con cáncer de pulmón no microcítico avanzado que hayan progresado al

tratamiento previo con anti-pd (l1) y quimioterapia (costar lung).

Type/Phase: II

Sponsored by: Glaxosmithkline Research And Development Limited Glaxosmithkline Research And Development Limited ,

Signed date: 15/12/2023

Patents and trademarks

- **Perona Abellón R, Sánchez Pérez I, Machado Pinilla R, Sastre Garzón L, Murguía Ibáñez JR, inventors; CSIC, UAM, Universidad Politécnica de Valencia, assignees.** Sequence of nucleotides and peptides GSE 24.2 of dyskerin, which can induce telomerase activity, method for obtaining same, therapeutic compositions and applications thereof. P200502511, PCT/ES2006/070152, EP1947175, US20090202503, US2015337022, AT469212, CA2625981, DK1947175, JP2009511036, JP5560398, PT1947175; 2005 October 14.
- **Perona Abellón R, Sastre Garzón L, Machado Pinilla R, Sánchez Pérez I, inventors; CSIC, UAM, assignees.** Use of inductor agents GSE24.2 for producing pharmaceutical compositions for treating illnesses relating to cellular senescence. P200703106, PCT/ES2008/070212, EP2216043, US2011300115, JP2011504483, CA2706467; 2007 November 23.
- **Cejas Guerrero P, González Barón M, Casado Sáenz E, Sánchez Hernández JJ, Perona Abellón R, inventors; FIBHULP, UAM, CSIC, assignees.** Use of trefoil factor family 3 (TFF3) in the prognosis of patients diagnosed with colorectal cancer. P200703230, PCT/ES2008/000757, EP2236625; 2007 December 04.
- **Cejas Guerrero P, Belda Iniesta C, Feliú Batlle J, González Barón M, de Castro Carpeño J, Casado Sáenz E, Sánchez Hernández JJ, inventors; FIBHULP, UAM, assignees.** Genomic fingerprint for the prognosis of the evolution of colorectal adenocarcinoma. P200703229, PCT/ES2008/000756, EP2236626; 2007 December 04.
- **Cejas Guerrero P, Belda Iniesta C, Feliú Batlle J, de Castro Carpeño J, Moreno García V,**

Burgos Lizalde E, Casado Sáenz E, Sánchez Hernández JJ, inventors; FIBHULP, UAM, Empresa Pública Hospital del Norte, assignees. Genomic fingerprint for predicting the clinical response to an antitumor therapy in colorectal cancer. P201130863, PCT/ES2012/070379; 2011 May 26.

- **Martínez Máñez R, Murguía Ibáñez JR, Perona Abellón R, Agostini A, Mondragón Martínez L, Moreno Torres M, Manguán García C, Marcos Martínez MD, Soto Camino J, Sancenón Galarza F, inventors; Universidad Politécnica de Valencia, CSIC, Centro de Investigación Biomédica en Red en Bioingeniería, Biomateriales y Nanomedicina (CIBER-BBN), Centro de Investigación Biomédica en Red de Enfermedades Raras (CIBERER), assignees.** Release of substances into senescent cells. P201231370, PCT/ES2013/070581, EP2893923, JP2015529216, US2015306037; 2012 September 04.
- **Ibáñez de Cáceres I, Belda Iniesta C, Pernía Arias O, Perona Abellón R, Cortés Sempere M; inventors.** FIBHULP, CSIC, UAM, Fundación Hospital de Madrid, assignees. Method for predicting the response to a treatment consisting of radiotherapy combined with cisplatin-based chemotherapy. P201330783, PCT/ES2014/070433, EP3006572, US20160122828; 2013 May 29.
- **Perona Abellón R, Sastre Garzón L, Pintaado Berninches L, Carrillo García J, Molina Pachón A, Irradiccio Silva L, Manguán García C, inventors; CSIC, UAM, Advanced Medical Projects, Centro de Investigación Biomédica en Red (CIBER), assignees.** Peptides derived from GSE 24.2 for treating diseases caused by oxidative stress and damage to DNA. P201331573, AU2014338820, CA2931429, EP3061815 PCT/ES2014/070803; 2013 October 25.
- **Ibáñez de Cáceres I, Pernía Arias O, de Castro Carpeño J, Vera Puente O, Jiménez Hernández J, Perona Abellón R, Rojo Todo F, inventors; FIBHULP, CSIC, UAM, Instituto de Investigación Sanitaria IJD, assignees.**

Determination of methylation and miRNA levels in response to a platinum-based antitumor compound. P201530997, PCT/ES2016/070516; 2015 July 09.

- **Ibáñez de Cáceres I, de Castro Carpeño J, Vera Puente O, Pernía Arias O, Rodríguez Antolín C, González Muñoz VM, Martín Palma ME, Salgado Figueroa AM, inventors; FIBHULP, FIBIOHRC, assignees.** MAFG as a potential therapeutic target to restore chemosensitivity in platinum-resistant cancer cells. EP17382610.8 (Publication Number pending), PCT/EP2018/068156; 2017 September 15.
- **Ibáñez de Cáceres I, de Castro Carpeño J, Jiménez Hernández J, Rodríguez Antolín C, Rodríguez Jiménez C, Rosas Alonso R, Cruz Castellanos P, Burdiel Herencia M, Pernía Arias O, Diestro Tejada MD, Esteban Rodríguez MI, inventors; FIBHULP, assignee.** miR-151A-3p as an universal endogenous control for exosome cargo normalization. EP19382252.5 (Publication Number pending); 2019 April 05.
- **Ibáñez de Cáceres I, de Castro Carpeño J, Rosas Alonso R, Pernía Arias O, Martínez Marín V, Esteban Rodríguez MI, inventors; FIBHULP, assignee.** Method for determining the percentage of methylation of the promoter of the gene O6-methylguanine-DNA methyltransferase (MGMT) in circulating exosomes. EP19382299.6 (Publication Number pending); 2019 April 16.
- **Ibáñez de Cáceres I, de Castro Carpeño J, Jiménez Hernández J, Rodríguez Antolín C, Vera Puente O, Rosas Alonso R, Pernía Arias O, Losantos García I, inventors; FIBHULP, assignee.** Method for determining the response to treatment of a patient affected by non-small cell lung carcinoma (NSCLC). EP19382614.6 (Publication Number pending); 2019 July 19.



3.5.4 Oto-neurosurgery Research Group

Publications:15 | Q1:3

COMPOSITION

Luis Lassaletta Atienza.

Jefe de Sección de Otorrinolaringología. Hospital Universitario La Paz

- **Carolina Alfonso Carrillo.** Facultativo Especialista de Área en Otorrinolaringología. Hospital Universitario La Paz
- **Miryam Calvino Fernández.** Investigador Adjunto Senior. Fundación Investigación Biomédica Hospital Universitario La Paz
- **Alejandro Castro Calvo.** Jefe de Sección de Otorrinolaringología. Hospital Universitario La Paz
- **Sandra Franco Caspueñas.** Investigadora Predoctoral. IIB "Alberto Sols"
- **Isabel García López.** Facultativo Especialista de Área en Otorrinolaringología. Hospital Universitario La Paz
- **Javier Gavilán Bouzas.** Jefe de Servicio de Otorrinolaringología. Hospital Universitario La Paz. Catedrático. Departamento de Cirugía. Facultad de Medicina. Universidad Autónoma de Madrid
- **Teresa González Otero.** Facultativo Especialista de Área en Cirugía Maxilofacial. Hospital Universitario La Paz

- **Coloma Grau Van Laak.** Médico Interno Residente en Otorrinolaringología. Hospital Universitario La Paz
- **Ana María Jiménez Lara.** Investigador Titular. IIBM "Sols-Morreale"
- **Marta Mancheño Losa.** Facultativo Especialista de Área en Otorrinolaringología. Hospital Universitario La Paz
- **José Manuel Morales Puebla.** Facultativo Especialista de Área en Otorrinolaringología. Hospital Universitario La Paz
- **Silvia Murillo Cuesta.** Investigadora Postdoctoral. IIBM Sols-Morreale & CIBERER
- **María Fernanda Pedrero Escalas.** Facultativo Especialista de Área en Otorrinolaringología. Hospital Universitario La Paz
- **Carmen Ruiz García.** Facultativo Especialista de Área en Otorrinolaringología. Hospital Universitario La Paz
- **Isabel Pilar Sánchez Cuadrado.** Facultativo Especialista de Área en Otorrinolaringología. Hospital Universitario La Paz
- **María Isabel Varela Nieto.** Profesor de Investigación. IIBM Sols-Morreale & CIBERER
- **Antonio Villalobo Polo.** Profesor de Investigación. IIB "Alberto Sols"



STRATEGIC OBJECTIVE

- The systematic use of magnetic resonance imaging (MRI) has dramatically increased the diagnosis of patients with vestibular schwannoma (VS). The majority of patients with VS complain of hypoacusis or tinnitus, and very few present more debilitating symptoms. Therefore, the approach with a patient with VS is complex because the treatment of the tumour is directed towards avoiding complications arising from its growth and not necessarily towards improving the patient's quality of life. Currently, there are no factors that allow us to predict the growth of vestibular schwannoma.
- Recent advances in the field of oncogenetics have allowed us to better understand the development of VS.
- The study of the correlation between clinical variables related to the biological behaviour of VS and its genetic and epigenetic disorders aims to find the factors that predict the behaviour of VS. This will help us

identify patients who need active treatment of the tumour and avoid the morbidity associated with the treatment in those who do not need it.

- The cochlear implant (CI) is currently the only solution for relieving the condition in patients with severe or profound hypoacusis who do not benefit from a prosthetic adaptation with a conventional hearing aid. It is estimated that there are currently 120,000 adults in Spain with profound sensorineural hypoacusis. In recent years, new hearing implants have been developed including osseointegrated implants and active middle ear implants. It's excellent and often spectacular results and its low rate of complications have transformed CI from an innovative technology in the experimental phase to a routine, safe and effective procedure, capable of returning deaf individuals to the hearing world and ending their isolation, increasing their quality of life. Over the past decade the relationship between hearing loss and



cognitive decline in the older population has become the subject of research. We also explore the relationships between the cognitive function and the audiometric performances in patients wearing a CI.

- Moderate to severe hypoacusis is one of the most prevalent medical problems. Ciliated sensory cells and neurons do not regenerate in mammals, which is the main cause of sensorineural hearing loss (SNHL). Mutations altering the levels of Insulin like growth factor type 1 (IGF-1) cause SNHL in humans and mice. IGF-1 is an essential factor in the postnatal development of mammals, and its level decreases with ageing. We are studying the participation of IGF-1 in the pathophysiology of SNHL, as well as the molecular signalling networks conferring specificity in the otic cellular response to IGF-1. We are studying the signals that regulate otic damage with the objective of identifying the key factors implicated in functional repair and regeneration of inner ear cells. In short, our work contributes to the study of auditory pathophysiology, with the ultimate objective of investigating the potential clinical usefulness of IGF-1 and downstream signalling in human sensorineural deafness.
- Bell's palsy is the most common diagnosis associated with facial nerve weakness or paralysis. However, not all patients with facial paresis / paralysis have Bell's palsy. Other common causes include treatment of vestibular schwannoma, head and neck tumors, iatrogenic injuries, Herpes zoster, or trauma. The approach to each of these conditions varies widely, The addition of adjunctive major or minor facial procedures in the context of a multidisciplinary Facial Paralysis Unit improves the final facial outcome.

RESEARCH LINES

- Tumors of the CNS: vestibular schwannoma, meningiomas, gliomas, and other: surgery, oncogenetics, quality of life, etc.
- Auditory implants: cochlear implants, middle ear implants, bone-conduction implants: surgical aspects, telephone use, quality of life, perception of music, cognitive decline, anatomy based fitting, etc.
- IGF-I deficiency: a rare syndromic human deafness.
- Neurobiology of hearing: molecular and cellular bases of hearing loss of different aetiology (genetic, noise exposure, malnutrition, and ototoxic drugs). Identification of transcriptional networks.
- Development of experimental models of deafness (genetic, noise exposure, malnutrition, ototoxic drugs and surgery associated trauma) for pre-clinical studies with potential therapeutic molecules, thus identifying possible therapeutic targets, potential markers for diagnosis and generation of vital guidelines.
- Head and Neck tumors and voice pathology.
- The role of cellular senescence in the development of the inner ear and the auditory pathology.
- Studies on three systems implicated in the development of tumor metastasis: the tyrosine kinase receptors EGFR/ErbB2; the non-receptor tyrosine kinase c-Src; and the adaptor protein Grb7.
- Facial paralysis: evaluation, diagnosis and surgery
- Thyroid cancer
- Vocal fold paresis and paralysis: evaluation, diagnosis and treatment options

RESEARCH ACTIVITY

Doctoral theses

- **García Mato A.** Mecanismos moleculares implicados en la regulación de la homeostasis coclear. Papel del IGF-1 y de la G6PD[disertation]. Madrid: UAM: 2023(01/06/2023). Director: Varela Nieto I, Rodríguez de la Rosa L
- **Triana Pascual MAE.** Calidad de la voz cantada en sopranos, influencia del texto y el acompañamiento musical[disertation]. Madrid: UAM: 2023(28/04/2023). Director: Gavilan Bouzas J, García López I.

Master Theses

- **Méndez Grande I.** Establecimiento de técnicas para la generación de esferoides a partir de células de schwannoma vestibular[disertation]. Madrid: Universidad CEU San Pablo: 2023(01/07/2023). Director: Miguel Cosgaya J.

Final Degree Theses

- **Caballero Lombaña J.** Caracterización de la respuesta de células de schwannoma vestibular a agentes senogénicos y senolíticos [disertation]. Madrid: UAM: 2023(30/06/2023). Director: Jiménez Lara AM
- **Pérez Ruiz I.** modelo de daño acústico por ruido blanco de banda ancha en rata[disertation]. Madrid: UCM: 2023(01/09/2023). Director: Cediell R, Murillo Cuesta S
- **Merlano Castellanos S.** Factores predictivos de la función del nervio facial tras la cirugía del schwannoma vestibular[disertation]. Madrid: UAM: 2023(13/06/2023). Director: Lassaletta Atienza L, Morales Puebla JM

Publications

- **Angulo JDZ, Labrador ML, Álvarez AES, Calvo AC, Prieto AFF, Heredero AF.** Carotid axis repair with autologous vein graft due to recurrent post-tonsillectomy bleeding in a child. *Angiología.* 2023; 75(4): 268-72. Article. IF: 0.1; Q4
- **Calvino M, Sánchez-Cuadrado I, Gavilán J, Lassaletta L.** Long-term non-users of transcutaneous

auditory implants: thirty years of experience at a single institution. *Int J Env Res Pub He.* 2023; 20(13): 6201. Article. Not indexed

- **Carlson ML, Lohse CM, Agazzi S, Babu SC, Barker FG, Barnett S, Bi WL, Biggs N, Boahene KD, Breen JT, Brown KD, Cayé-Thomasen P, Cosetti MK, Deep NL, Dey JK, Dornhoffer JR, Forner D, Gurgel RK, Hansen MR, Hunter JB, Kalamarides M, Kim IA, King AT, Kircher ML, Lassaletta L, Link MJ, Lloyd SKW, Lund-Johansen M, Marinelli JP, Matthies C, Mehta V, Moore EJ, Nassiri AM, Neff BA, Nelson RF, Olson JJ, Patel NS, Celda MP, Plitt AR, Price DL, Thomas Roland J, Sweeney AD, Tasche KK, Tatagiba M, Tveiten O, Van Gompel JJ, Vrabec JT, Wanna GB, Weisskopf PA.** Rationale for the development of a novel clinical grading scale for postoperative facial nerve function: results of a multidisciplinary international working group. *Otol Neurotol.* 2023; 44(10): E747-54. Article. IF: 1.9; Q3
- **de Lope C, García-Lucena R, Magariños M, León Y, Casa-Rodríguez N, Contreras N, Escudero-Iriarte C, Varela-Nieto I, Maire P, Palmero I.** Dysfunction of programmed embryo senescence is linked to genetic developmental defects. *Development.* 2023; 150(9): dev200903. Article. IF: 3.7; Q1
- **García-Mato A, Cervantes B, Rodríguez-de la Rosa LR, Varela-Nieto I.** IGF-1 Controls metabolic homeostasis and survival in hei-oc1 auditory cells through akt and mtor signaling. *Antioxidants.* 2023; 12(2): 233. Article. IF: 6.0; Q1
- **Lassaletta L, Calvino M, Sánchez-Cuadrado I, Skarzynski Piotr H, Cywka KB, Czajka N, Kutyba J, Tavora-Vieira D, Van de Heyning P, Mertens G, Staecker H, Humphrey B, Zernotti M, Zernotti M, Magele A, Ploder M, Zabeu JS.** QoL, Cls, QALYs, and Individualized rehabilitation: the clinical and practical benefits of regularly assessing the quality of life of adult cochlear implant recipients. *Int J Env Res Pub He.* 2023; 20(20): 6906. Article. Not indexed
- **Lassaletta L, Morales-Puebla JM, Molnar D, González-Otero T, Gavilán J.** Side-to-end intra-temporal hypoglossal-to-facial transfer. *Atlas Oral Maxillofac Surg Clin North Am.* 2023; 31(1): 9-17. Review. Not indexed



- **Morales-Puebla JM, Gómez-Camacho H, Gavilán J, Lassaletta L.** Otorhinolaryngology image as supplementary teaching material. *Rev Orl*. 2023; 14(4): 235-45. Article. IF: 0.1; Q4
- **Morales-Puebla JM, Lassaletta L, Sánchez-Cuadrado I, Calvino M, Gavilán J.** Is age a limiting factor for audiological results in active middle ear implants? *J Pers Med*. 2023; 13(12): 1650. Article. IF: 3.0; Q2
- **Sánchez-Cuadrado I, Mato-Patino T, Morales-Puebla JM, Peñarrocha J, Díez-Sebastián J, Gavilán J, Lassaletta L.** Validation of the Spanish version of the Sunnybrook facial grading system. *Eur Arch Oto-Rhino-L*. 2023; 280(2): 543-8. Article. IF: 1.9; Q2
- **Sprinzel GM, Magele A, Schoerg P, Hagen R, Rak K, Kurz A, van de Heyning P, Calvino M, Lassaletta L, Gavilán J.** A novel representation of audiological and subjective findings for acoustical, bone conduction and direct drive hearing solutions. *J Pers Med*. 2023; 13(3): 462. Article. IF: 3.0; Q2
- **Triana-Pascual MA, García-López I, Gavilán-Bouzas J.** Quality of the singing voice in sopranos. Influence of the text and the musical accompaniment in the opera singing. *Acta Otorrinolaringol Esp*. 2023; 74(3): 160-8. Article. IF: 0.9; Q3
- **Valderrama PB, Calvo AC, Riesco LR, Zapata RR, Ramírez PP.** Fibrous variant of Hashimoto's thyroiditis as a sign of IgG4-related disease, mimicking thyroid lymphoma: Case report. *Endocrinol Diabetes Nutr*. 2023; 70: 60-2. Letter. IF: 1.8; Q4
- **Villalobo A.** Regulation of ErbB receptors by the Ca²⁺ sensor protein calmodulin in cancer. *Biomedicines*. 2023; 11(3): 661. Review. IF: 3.9; Q2
- **Villalobo A.** Ca²⁺ signaling and Src functions in tumor cells. *Biomolecules*. 2023; 13(12): 1739. Review. IF: 4.8; Q1

Research projects

- **Castro Calvo A.** Caracterización multiómica del carcinoma escamoso de cabeza y cuello mediante biopsia gaseosa y líquida: aplicación diagnóstica, pronóstica y de seguimiento. HN-OMICS. (PI-5761). ISCIII. 2023-2025. *Management centre: IDIBAPS*
- **Castro Calvo A.** Estudio sobre la utilidad del tubo de derivación salivar ("by-pass") en la prevención de la fistula faringo-cutánea tras laringectomía total. (PI-5952). SEORL - CCC. 2022-2024. *Management centre: IDIBAPS*

- **Castro Calvo A.** Towards A better paradigm for head and neck Cancer Treatment applying artificial Intelligence: an international Cohort study of electronic health records. HNC-TACTIC. (PI-5150). Head and Neck Cancer International Group y Savana. 2022-Ongoing. *Management centre: FIBHULP*
- **García-López I.** Parálisis bilateral de las cuerdas vocales: epidemiología y posibilidades terapéuticas aplicadas (PI-3780). Med-El Elektromedizinische Geräte Gesellschaft M. B. H. 2019-Ongoing. *Management centre: FIBHULP*
- **Isabel Varela Nieto.** CAM Investigo (09-PIN1-00004.3/2022). CAM. 2022-2023. *Management centre: CSIC*
- **Isabel Varela Nieto.** Programa CAM ayudas para la contratación de ayudantes de investigación y técnicos de laboratorio (PEJ-2020-TU/BMD-17631). CAM. 2022-2023. *Management centre: CSIC*
- **Lassaletta Atienza L.** Análisis de las habilidades musicales y de la voz en niños y adultos con IC (PI21/0147). ISCIII. 2022-2024. *Management centre: FIBHULP*
- **Lassaletta Atienza L.** Leespq en niños con implante coclear en español (PI-4725). Med-El Elektromedizinische Gerate GmbH. 2021-Ongoing. *Management centre: FIBHULP*
- **Marco-Contelles JL.** MINA-CM Madrid Innovative Neurotech Alliance (P2022/BMD-7236). CAM. 2023-2026. *Management centre: UPM*
- **Murillo Cuesta S.** of Antisense RNA Therapeutics (DARTER) (CA 17103 Delivery). EU Framework Programme Horizon 2020. COST. 2023-2023. *Management centre: CSIC*
- **Rey Herranz JA.** Contrato Miguel Servet Categoría A (CES05/027). ISCIII. 2006-2025. *Management centre: FIBHULP*
- **Sánchez Cuadrado I.** Validación al español de la escala de valoración clínica eFACE y del sunnybrook facial grading system (PI20/01032). ISCIII. 2021-2024. *Management centre: FIBHULP*
- **Varela Nieto I, Murillo Cuesta S.** Addendum to the contract by and between Consorcio Centro de Investigación Biomédica en Red, M.P. (CIBER) and Spiral Therapeutics Inc (SPIRAL) on April 26 2017 for scientific research and development services in the field of hearing loss. Spiral Therapeutics. 2017-Ongoing. *Management centre: CIBERER*
- **Varela Nieto I, Murillo Cuesta S.** Bases genéticas y moleculares de la sordera neurosensorial y del daño

auditivo: exploración de nuevas dianas y estrategias terapéuticas (T-HEARPY) (PID2020-115274RB-I00). MCIN/AEI/10.13039/501100011033. 2021-2024. *Management centre: CSIC*

- **Varela Nieto I, Murillo Cuesta S.** Contract by and between Consorcio Centro de Investigación Biomédica en Red, M.P. (CIBER) and Spiral Therapeutics Inc (SPIRAL) on April 26 2017 for scientific research and development services in the field of hearing loss and addendums (CIBERER-SPIRAL THERAPEUTICS ERP17PE12). Spiral Therapeutics. 2017-2024. *Management centre: CIBERER*
- **Varela Nieto I, Murillo-Cuesta S.** Plataformas ISCIII de apoyo a la I+D+I en Biomedicina y Ciencias de la Salud (PT20/00118). ISCIII. 2020-2023. *Management centre: CSIC*
- **Varela Nieto I.** A sound proteome for a sound body: targeting proteolysis for proteome remodeling (ProteoCure). (CA20113). EU Framework Programme Horizon 2020. COST. 2021-2025. *Management centre: Centro de Investigación Príncipe Felipe, Valencia*
- **Varela Nieto I.** Ayuda para la realización de doctorado industrial para la Agencia Estatal Consejo Superior de Investigaciones Científicas y la empresa Alodia Farmaceutica S.L (IND2020/BMD-17454). Agencia Estatal CSIC. Alodia Farmaceutica S.L. 2020-2023. *Management centre: CSIC*
- **Varela Nieto I.** Ayuda para la realización de doctorado industrial para la Agencia Estatal Consejo Superior de Investigaciones Científicas y la empresa Alodia Farmaceutica S.L (IND2020/BMD-17454). Agencia Estatal CSIC. Alodia Farmaceutica S.L. 2020-2023. *Management centre: CSIC*
- **Varela Nieto I.** Bench to bedside transition for pharmacological regulation of NRF2 in noncommunicable diseases (BenBedPhar) (CA20121). EU Framework Programme Horizon 2020. COST. 2021-2024. *Management centre: Department of Biochemistry and Institute of Biomedical Research*
- **Varela Nieto I.** Conexión Nanomedicina del CSIC (NANOMED-CSIC). Agencia Estatal CSIC. 2021-2024. *Management centre: Instituto de Química Médica CSIC*

Cibers and Retics

- **Varela Nieto I.** Centro de Investigación en Red de Enfermedades Raras. (CiberER). ISCIII (31/12/2024). CSIC

Clinical trials

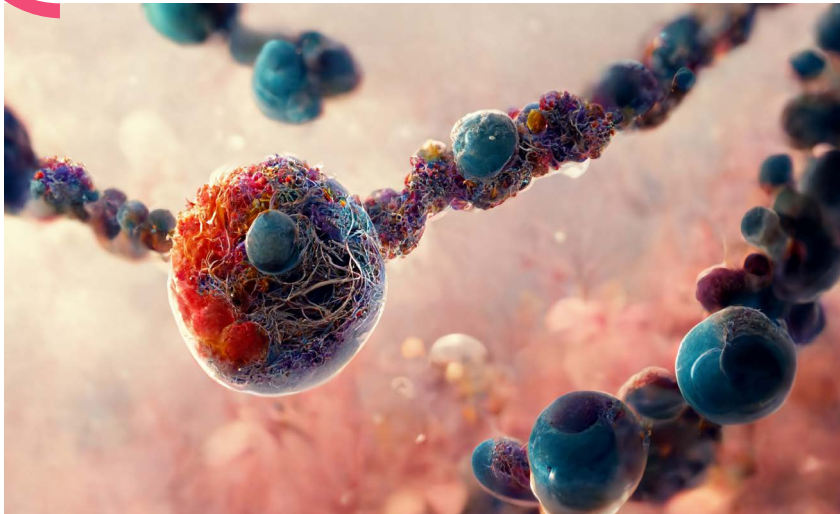
- **Castro Calvo A.** Hacia un mejor paradigma para el tratamiento del cáncer de cabeza y cuello aplicando inteligencia artificial: un estudio de cohorte internacional de historias clínicas electrónicas. *Type/Phase: No EPA*
Sponsored by: Savana Research, S.L
Signed date: 05/02/2023
- **Sánchez Cuadrado IP.** Estudio multicéntrico, de dos brazos, doble ciego, doblemente enmascarado, de grupos paralelos, controlado con placebo para la evaluación de la eficacia y la seguridad de la formulación de liberación prolongada de betahistina pr 48 mg una vez al día en comparación con la formulación de liberación convencional de betahistina ir 24 mg, enfermedad de meniere. *Type/Phase: III*
Sponsored by: Intas Pharmaceuticals, Ltd
Signed date: 30/05/2023

Patents and trademarks

- **Polak M, Roca-Ribas Serdá F, Gavilán Bouzas J, Lassaletta Atienza L, Miró Castillo N, Rodrigo Dacosta J, inventors; MED-EL Elektromedizinische Gerate GmbH, assignee.** Hearing treatment in patients with questionable cochlear nerve functionality. US2011275953, PCT/US2011/035312; 2010 May 05.
- **Cobo Parra P, Varela Nieto I, Murillo-Cuesta S, Navares Zaera R, Martínez Vega R, Cediél Algovia R, inventors; CSIC, UCM, assignees.** Anechoic acoustic chamber for evaluating the auditory function in laboratory animals. P201031720; 2010 November 23.
- **Cobo Parra P, Varela Nieto I, Murillo-Cuesta S, Cediél Algovia R, inventors; CSIC, UCM, assignees.** Method for designing a reverberating acoustic chamber for hearing test with animals. Procedimiento para diseñar una cámara acústica reverberante para ensayos auditivos con animales. P200802895, PCT/ES2009/070433; 2008 October 14.
- **Marco Contelles JL, Varela Nieto I, Murillo Cuesta S, Rodríguez de la Rosa L, Alcázar González A, inventors; CSIC, CIBERER, FIBIOHRC, assignees.** Quinolonylnitron derivatives for use in the prevention and/or treatment of hearing loss. EP22382706.4; 2023 July 22



3.5.5 Cancer Molecular Pathology and Therapeutic Targets Group



Publications:24 | Q1:7

COMPOSITION

David Hardisson Hernández.

Jefe de Servicio de Anatomía Patológica. Hospital Universitario La Paz. Catedrático. Facultad de Medicina. Universidad Autónoma de Madrid

- **Alberto Berjón García.** Médico Adjunto Especialista de Área en Anatomía Patológica. Hospital Universitario La Paz
- **Javier de Santiago García.** Jefe de Servicio de Ginecológica Oncológica. Hospital Universitario La Paz. Profesor Asociado. Facultad de Medicina. Universidad Autónoma de Madrid
- **Laura Guerra Pastrían.** Médico Adjunto Especialista de Área en Anatomía Patológica. Hospital Universitario La Paz

- **Jorge Martín Pérez.** Investigador Científico. IIB "Alberto Sols"
- **Marta Mendiola Sabio.** Investigadora Postdoctoral. Hospital Universitario La Paz
- **María Miguel Martín.** Técnico de Laboratorio. Hospital Universitario La Paz
- **Alberto Peláez García.** Investigador Postdoctoral. Hospital Universitario La Paz
- **Elia Pérez Fernández.** Investigadora Predoctoral. Hospital Universitario La Paz
- **José Juan Pozo Kreilinger.** Facultativo Especialista de Área en Anatomía Patológica. Hospital Universitario La Paz
- **José Ignacio Sánchez Méndez.** Jefe de Sección en Ginecología y Obstetricia. Hospital Universitario La Paz. Profesor Asociado. Facultad de Medicina. Universidad Autónoma de Madrid
- **Laura Yébenes Gregorio.** Médico Adjunto Especialista de Área en Anatomía Patológica. Hospital Universitario La Paz

STRATEGIC OBJETIVES

- The fundamental interest of our research group is centered in the study of molecular biomarkers that have a direct implication in the handling of the cancer patients with the last aim to identify and to validate therapeutic targets.
 - Ovarian cancer Research Line
- The ovarian carcinoma is the main cause of gynecological cancer mortality in the western societies. Nevertheless, the classic parameters are imperfect predictors for patients outcome, partly due to the complexity of the molecular genetic events that sublie these tumors and to the fact that they are not totally known. Research on this field could identify more precise markers to correctly stratify the patients according to their probability to recur and response to treatments.
- Angiogenesis, epithelial to mesenchymal transition and hypoxia are processes demonstrated to have an important role in the development of these tumors. The main objective of this line of investigation, therefore, is to identify discrete markers or gene expression profiles related to these events, with predictive and prognostic value for ovarian cancer patients.
 - Endometrial cancer Research Line
- Endometrial carcinoma is the fourth most common cancer in women in the developed world. Histomorphologic criteria are not strongly enough tools to distinguish more aggressive tumors. Based on molecular characterization, risk stratification systems could be useful for decision making.
- The main objective of this line of investigation, therefore, is to identify molecular markers with predictive and prognostic value for endometrial cancer patients.
 - Breast cancer Research Line
- C-Src is sobreexpressed and/or hyperactive in breast carcinoma biopsies and their implication in the tumorigenesis has been proved in murine models.
- Our studies on genetically modified human breast cancer cells and mice can establish the relevance of the function of scaffolding of SFKs in breast cancer. In addition, our work can lead to the development of new prognosis and therapeutic tools to improve the treatment of the breast cancer.
- Angiogenesis and breast cancer. Angiogenesis is a key process in tumor development. Our group has been working for years on the search of biomarkers related to this process. Specifically on breast cancer, it is important to identify patients that will benefit of evacizumab containing regimes.
 - Sarcomas Research Line
- Bone and Soft tissue sarcomas includes a group of heterogeneous pathologies that were traditionally treated in the same way. The clinical investigation has allowed the identification of sub-groups with different response to treatments. The objective of this line of work is to find biomarkers for the best stratification of the patients, as well as to get a better knowledge of the molecular mechanisms for the development of these tumors.
 - Neuroendocrine tumors Research Line.
- The neuroendocrine tumors (NET) include heterogeneous neoplasias, regarding morphologic and functionally features. They constitute a challenge for the medical management, mainly regarding diagnose and handling. Although we have improve the knowledge of molecular events related to their development in the last decade, we need to better known this tumors, in order to establish an early detection, that it improves the rates of survival.
 - In vitro 2- and 3D cell culture models for functional studies.
- The identification of potential markers in different pathologies might be complemented by functional studies, focused on the characterization of cancer and estromal cell features, important for tumor development that it improves the rates of survival.

RESEARCH LINES

- Ovarian and endometrial cancer
- Breast cancer
- Sarcomas
- Neuroendocrine tumors
- New in vitro models of disease

RESEARCH ACTIVITY

Doctoral Theses

- **López Ruiz ME.** Ultraestadificación molecular del ganglio centinela en carcinoma de endometrio mediante método OSNA (One-Step Nucleic Acid Amplification)[dissertation]. Madrid: UAM: 2023(29/09/2023). Director: Hardisson Hernández DA.

Publications

- **Aragón-Niño I, Cuesta-Urquía C, González-Martín-Moro J, Moran-Soto MJ, Pozo-Kreiling JJ, Pampín-Martínez MM, Del Castillo-Pardo-de Vera JL, Cebrián-Carretero JL.** HPV infection in oral cancer, our experience: prevalence, clinical implications, and current vaccination program in Spain. *J Clin Exp Dent.* 2023; 15(7): e584-9. Review. Not indexed
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- **Bernet L, Hardisson D, Rodrigo M, Córdoba A, Sancho M, Peg , Ruiz , Godey F, Sánchez-Mendez J, Prat A.** OSNA total tumor load for the prediction of axillary involvement in breast cancer patients: should we use different thresholds according to the intrinsic molecular subtype? *MOTTO Study. Clin Pathol.* 2023; 16: 2632010X231183693. Article. IF: 1.9; Q3

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Cancer and Human Molecular Genetics Area

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- **Sánchez-Méndez JI, Horstmann M, Méndez N, Frías L, Moreno E, Yébenes L, Roca MJ, Hernández A, Martí C.** Surgical Interest of an accurate real-world prediction of primary systemic therapy response in HER2 breast cancers. *Cancers (Basel).* 2023; 15(10): 2757. Article. IF: 4.5; Q1

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Research projects

- **Guerra Pastrán L.** Desarrollo de tareas de revisión patológica nacional del ensayo clínico Paediatric Hepatic International Tumour Trial (PHITT). Fundación para la Investigación Biomédica de Córdoba Fibico. 2019-Ongoing. *Management centre: FIBHULP*
- **Hardisson Hernández D.** Identificación de biomarcadores de recaída en carcinomas de endometrio de riesgo clínico intermedio mediante análisis multi-ómico y de microambiente inmune (PI21/00920). ISCIII. 2022-2024. *Management centre: FIBHULP*
- **Hardisson Hernández D.** Identificación de biomarcadores en cáncer de pulmón no microcítico (cpnm). Astrazeneca Farmaceutica Spain S.A. 2020-Ongoing. *Management centre: FIBHULP*
- **Hardisson Hernández D.** Puesta en marcha del ensayo clínico "idyllatm" geneufusion panel 1.x clinical performance study. Biocartis NV. 2022-Ongoing. *Management centre: FIBHULP*
- **Hardisson Hernández D.** Realización de las tareas necesarias para el desarrollo del ensayo clínico "a phase ib/ii, randomized, double blind, placebo controlled, multicenter clinical trial to evaluate the safety, pharmacokinetics and efficacy of oral treatment with ost-122 in patients with moderate to severe ulcerative colitis ct-ost-122-02. Oncostellae S.L. 2020-Ongoing. *Management centre: FIBHULP*

- **Hardisson Hernández D.** Riesgo de recaída en pacientes con carcinoma de mama primario HER2 negativo y receptores estrogénicos positivos: estudio comparativo de dos perfiles de expresión génica (Mammaprint® y Endopredict®). Fundación Sociedad Española de Anatomía Patológica. 2019-Ongoing. *Management centre: FIBHULP*
- **Mendiola Sabio M, Hardisson Hernández D.** Identificación de biomarcadores en cáncer de pulmón no microcítico. Astrazeneca Farmaceutica Spain S. A. 2020-Ongoing. *Management centre: FIBHULP*
- **Mendiola Sabio M.** Establecimiento y caracterización de modelos in vitro de sarcoma. FIBHULP. 2022-Ongoing. *Management centre: FIBHULP*
- **Mendiola Sabio M.** Exploration of 2 and 3d models of angiosarcoma and their farcological sdreening. Grupo Español de Investigación en Sarcomas. 2019-Ongoing. *Management centre: FIBHULP*
- **Mendiola Sabio M.** Identificación de marcadores de HRD y predicción de la respuesta a inhibidores de PARP en líneas celulares establecidas y organoides derivados de pacientes con cáncer de ovario. Grupo Español de Investigación en Cáncer de Ovario. 2021-Ongoing. *Management centre: FIBHULP*
- **Mendiola Sabio M.** Identificación de perfiles de expresión génica diferencial relacionados con la angiogénesis entre el carcinoma de ovario primario y sus metástasis. Ortomedimatec. 2012-Ongoing. *Management centre: FIBHULP*
- **Mendiola Sabio M.** Identificación de perfiles de expresión génica diferencial relacionados con la angiogénesis entre el carcinoma de ovario primario y sus metástasis. Ortomedimatec. 2012-Ongoing. *Management centre: FIBHULP*
- **Mendiola Sabio M.** Papel de RANKL en el sarcoma de Ewing: un estudio in vitro para la confirmación de una nueva diana terapéutica. Grupo Español de Investigación en Sarcomas. 2012-Ongoing. *Management centre: FIBHULP*
- **Mendiola Sabio M.** Realización de técnicas de detección de expresión proteica el IGTp. Construcción de matrices tisulares y tinciones con anticuerpos específico. Fundacio Institut Dinvestigació

Én Ciéncies de la S. A.lut Germans Trias I Pujol. 2015-Ongoing. *Management centre: FIBHULP*

Clinical trials

- **Hardisson Hernández D.** Estudio de correlación entre el diámetro de metástasis ganglionar y la carga tumoral determinada por osna en pacientes de cáncer de mama tras neoadyuvancia. *Type/Phase: OTROS*
Sponsored by: Sysmex España, S.L
Signed date: 11/05/2023
- **Mendiola Sabio M.** Estudio retrospectivo, observacional, multicéntrico en vida real de dostarlimab en pacientes con cáncer de endometrio recurrente o metastásico con deficiencia del sistema mismatch repair (mrr) o inestabilidad alta de microsátélites. *Type/Phase: EPA-OD*
Sponsored by: Grupo Español De Investigacion Cancer De Ovario (Geico)
Signed date: 18/04/2023

Patents and trademarks

- **Redondo Sánchez A, Hardisson Hernández D, Barriuso Feijoo J, Mendiola Sabio M, inventors; FIBHULP, assignee.** Method to obtain useful data for the prediction of a patient's clinical response to an anticancer treatment. P200930400; 2009 July 01.
- **Redondo Sánchez A, Hardisson Hernández D, Barriuso Feijoo J, Mendiola Sabio M, inventors; FIBHULP, assignee.** Method to obtain useful data for the prediction of a patient's pathological response to an anticancer treatment. P200930438; 2009 July 10.
- **Zapardiel Gutiérrez I, de Santiago García J, inventors; FIBHULP, assignee.** Laparoscopic surgical instrument. P201230950, PCT/ES2013/000139; 2012 June 18.
- **Zapardiel Gutiérrez I, de Santiago García J, inventors; FIBHULP, assignee.** Surgical device. P201330532, PCT/ES2014/070277; 2013 April 15.



3.5.6 Mechanisms of Tumour Progression Group



Publications:11 | Q1:9

COMPOSITION

José Manuel González Sancho.

Profesor Titular. Universidad Autónoma de Madrid

- **David Albanea Rodríguez.** Investigador Predoctoral. IIB "Sols-Morreale"
- **Aurora Burgos García.** Jefe de Sección Unidad de Endoscopias. Hospital Universitario La Paz
- **Antonio Barbachano Becerril.** Investigador Postdoctoral. IIB "Sols-Morreale"
- **Pilar de la Paz Bustamante Madrid.** Investigadora Postdoctoral. IIB "Sols-Morreale"
- **Gemma Domínguez Muñoz.** Profesora Titular. Universidad Autónoma de Madrid
- **Asunción Fernández Barral.** Profesora Ayudante Doctor. Universidad Autónoma de Madrid
- **Arturo González de la Aleja Molina.** Investigador Postdoctoral. Universidad Autónoma de Madrid
- **María Jesús Larriba Muñoz.** Científica Titular. IIB "Sols-Morreale"
- **Ester Martín Villar.** Investigadora Postdoctoral. IIB "Sols-Morreale"
- **Alberto Muñoz Terol.** Profesor de Investigación. IIB "Sols-Morreale"
- **José Luis Orgaz Bueno.** Jefe de Laboratorio de Citoesqueleto y Metástasis. IIB "Sols-Morreale"
- **Francisco Portillo Pérez.** Catedrático. Universidad Autónoma de Madrid
- **Silvia Rodríguez Marrero.** Investigador predoctoral. IIB Alberto Sols
- **Johana Alexandra Troya Balseca.** Lab Manager. FIBHULP

STRATEGIC OBJECTIVE

- Characterize vitamin D action in stem cells and tumor microenvironment in colorectal cancer.
- Comparative study of early onset colorectal cancer (EOCRC) vs. late onset colorectal cancer (LOCRC).
- Analysis of tumor invasion, metastasis and therapy resistance mechanisms in solid tumors.

RESEARCH LINES

- Study of vitamin D effects on patient-derived colon normal and cancer-associated fibroblasts and organoids.
- Comparative study of early onset colorectal cancer (EOCRC) vs. late onset colorectal cancer: Effects of vitamin D (LOCRC).
- Identification of early diagnostic biomarkers in liquid biopsy in colorectal cancer.
- Cell plasticity and tumor metastasis.
- Mechanisms of tumor resistance

RESEARCH ACTIVITY

Publications

- **Agudo-Ibáñez L, Morante M, García-Gutiérrez L, Quintanilla A, Rodríguez J, Muñoz A, León J, Crespo P.** ERK2 stimulates MYC transcription by anchoring CDK9 to the MYC promoter in a kinase activity-independent manner. *SCI Signal.* 2023; 16(794): eadg4193. Article. IF: 6.7; Q1
- **Alonso-Nocelo M, Ruiz-Cañas L, Sancho P, Görgülü K, Alcalá S, Pedrero C, Vallespinos M, López-**

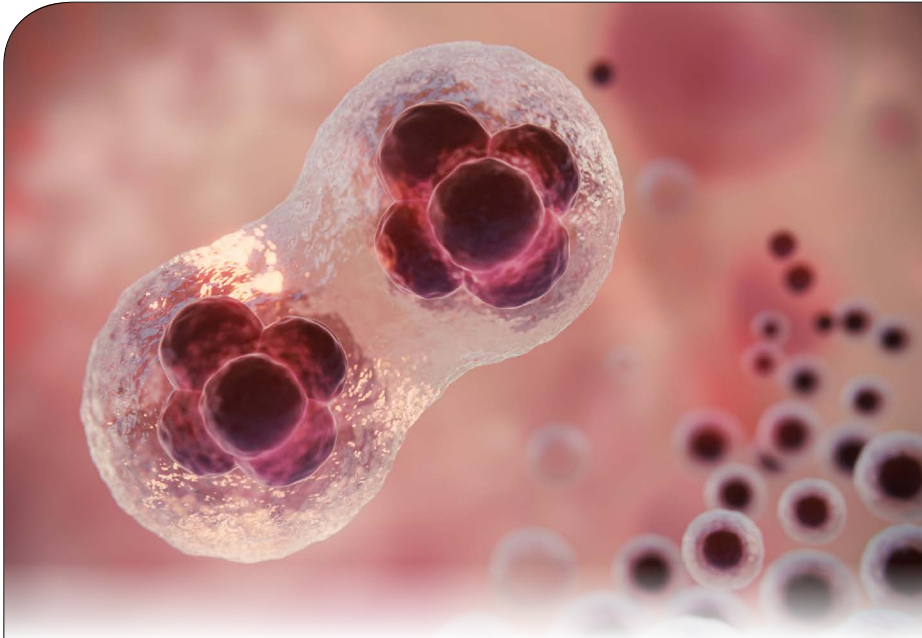
Gil JC, Ochando M, García-García E, Trabulo SMD, Martinelli P, Sánchez-Tomero P, Sánchez-Palomo C, González-Santamaría P, Yuste L, Wörmann SM, Kabacoglu D, Earl J, Martín A, Salvador F, Valle S, Martín-Hijano L, Carroto A, Erkan M, García-Bermejo L, Hermann PC, Algül H, Moreno-Bueno G, Heeschen C, Portillo F, Cano A, Sainz B. Macrophages direct cancer cells through a LOXL2-mediated metastatic cascade in pancreatic ductal adenocarcinoma. *Gut.* 2023; 72(2): 345-59. Article. IF: 23.0; D1

• **Cano A, Eraso P, Mazon MJ, Portillo F.** LOXL2 in cancer: A two-decade perspective. *Int J Mol Sci.* 2023; 24(18): 14405. Review. IF: 4.9; Q1

• **Eraso P, Mazón MJ, Jiménez V, Pizarro-García P, Cuevas EP, Majuelos-Melguizo J, Moril-**

lo-Bernal J, Cano A, Portillo F. New functions of intracellular LOXL2: Modulation of RNA-binding proteins. *Molecules.* 2023; 28(11): 4433. Article. IF: 4.2; Q2

- **García-Martínez JM, Chocarro-Calvo A, Martínez-Useros J, Fernández-Aceñero MJ, Fiuza MC, Cáceres-Rentero J, de la Vieja A, Barbáchano A, Muñoz A, Larriba MJ, Jiménez CG.** Vitamin D induces SIRT1 activation through K610 deacetylation in colon cancer. *Elife.* 2023; 12: RP86913. Article. IF: 6.4; D1
- **Martínez N, Gragera T, de Lucas MP, Cámara AB, Ballester A, Anta B, Fernández-Medarde A, López-Briones T, Ortega J, Peña-Jiménez D, Barbáchano A, Montero-Calle A, Cordero V, Barderas R, Iglesias T, Yunta M,**



Oliva JL, Muñoz A, Santos E, Zarich N, Rojas-Cabañeros JM. PKD phosphorylation and COP9/Signalosome modulate intracellular Spry2 protein stability. *Oncogenesis*. 2023; 12(1): 20. Article. IF: 5.9; Q1

• Martínez-Pérez D, Viñal D, Peña-López J, Jiménez-Bou D, Ruiz-Gutiérrez I, Martínez-Recio S, Alameda-Guijarro M, Rueda-Lara A, Martín-Montalvo G, Ghanem I, Custodio AB, Trilla-Fuertes L, Gámez-Pozo A, Barbachano A, Rodríguez-Cobos J, Bustamante-Madrid P, Fernández-Barral A, Burgos A, Prieto-Nieto MI, Pastrían LG, González-Sancho JM, Muñoz A, Feliú J, Rodríguez-Salas N. Clinico-pathological features, outcomes and impacts of covid-19 pandemic on patients with early-onset colorectal cancer: a single-institution experience. *Cancers (Basel)*. 2023; 15(17): 4242. Article. IF: 4.5; Q1

• Montero JC, del Carmen S, Abad M, Sayagués JM, Barbáchano A, Fernández-Barral A, Muñoz A, Pandiella A. An amino acid transporter subunit as an antibody-drug conjugate target in colorectal cancer. *J Exp Clin Canc Res*. 2023; 42(1): 200. Article. IF: 11.4; Q1

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• Prieto I, Barbáchano A, Rodríguez-Salas N, Viñal D, Cortés-Guiral D, Muñoz A, Fernández-Barral A. Tailored chemotherapy for colorectal cancer peritoneal metastases based on a drug-screening platform in patient-derived organoids: a case report. *J Gastrointest Oncol*. 2023; 14(1): 442-9. Article. IF: 2.0; Q3

• Samain R, Maiqués O, Monger J, Lam H, Candido J, George S, Ferrari N, Kohhammer L, Lunetto S, Varela A, Orgaz JL, Vilardell F, Olsina JJ, Matias-Guiu X, Sarker D, Biddle A, Balkwill FR, Eyles J, Wilkinson RW, Kocher HM, Calvo F, Wells CM, Sanz-Moreno V. CD73 controls Myosin II-driven invasion, metastasis, and immunosuppression in amoeboid pancreatic cancer cells. *Sci Adv*. 2023; 9(42): eadi0244. Article. IF: 11.7; D1

Research projects

• **Domínguez Muñoz G.** Combinación de técnicas “ómicas” y de imagen para la identificación de marcadores asociados a la respuesta al tratamiento neoadyuvante en pacientes con cáncer de recto: Implicaciones pronósticas y terapéuticas (PI21/01047). ISCIII. 2022-2024. *Management centre: FIBHULP*

• **Domínguez Muñoz G.** Identificación de los mecanismos implicados en la diseminación peritoneal del cáncer colorrectal. Papel de Deltanp73: implicaciones diagnósticas, pronósticas y terapéuticas (PI18/00473). ISCIII. 2019-2023. *Management centre: FIBHULP*

• **González Sancho JM.** PRECICOLON-CM Hacia la medicina de precisión en cáncer de colon: Biomarcadores, microambiente tumoral y microbiota (P2022/BMD-7212). Comunidad de Madrid. 2023-2026. *Management centre: UAM*

• **Martín Villar E.** Podoplanin-mediated crosstalk between cancer cells and the microenvironment controls epithelial carcinogenesis and malignant progression. Opening new therapeutic avenues (PID2021-126816OB-I00). Ministerio de Ciencia e Innovación, Proyectos de generación del conocimiento 2021. 2022-2025. *Management centre: UFV*

• **Muñoz Terol A, Larriba Muñoz MJ.** Efectos de la vitamina D sobre las células troncales y el microambiente tumoral en cáncer de colon: diferenciación, metabolismo y comunicación intercelular (PID2022-136729OB-I00). Ministerio de Ciencia e Innovación, Proyectos de Generación de Conocimiento. 2023-2026. *Management centre: CSIC*

• **Muñoz Terol A, Larriba Muñoz MJ.** Estudio de los efectos de la vitamina D en la fisiología y patología del colon humano usando organoides y cultivos primarios de fibroblastos derivados de pacientes (PID2019-104867RB-I00). Ministerio de Ciencia e Innovación, Proyectos del Programa Estatal de I+D+i orientada a los Retos de la Sociedad. 2020-2023. *Management centre: CSIC*

• **Orgaz JL.** Estudio de la regulación de miosina no muscular de clase II en la progresión del melanoma (MYOMEL) (PID2021-122306OB-I00). Ministerio de Ciencia e Innovación, Proyectos del

Programa Estatal de I+D+i orientada a los Retos de la Sociedad. 2022-2025. *Management centre: CSIC*

• **Orgaz Bueno JL.** Investigando la regulación del citoesqueleto de miosina durante la adaptación a terapias dirigidas en melanoma e intervenciones terapéuticas ootenciales para retrasar la resistencia (2019-T1/BMD-13642). Comunidad de Madrid, Programa de Atracción de Talento Investigador. 2020-2024. *Management centre: CSIC*

• **Portillo Pérez F.** LOXL2 y LOXL3: Descubriendo nuevas vulnerabilidades terapéuticas en la progresión tumoral (PID2019-111052RB-I00). Ministerio de Ciencia e Innovación, Proyectos del Programa Estatal de I+D+i orientada a los Retos de la Sociedad. 2020-2023. *Management centre: UAM*

• **Rodríguez Salas N, Muñoz Terol A.** Cáncer colorrectal en población joven. Estudio farmacogenómico en organoides y efectos del microambiente tumoral (ICI20/00057). ISCIII. 2021-2024. *Management centre: FIBHULP*

Cibers and Retics

• **Muñoz Terol A.** Networked Biomedical Research Center for Cancer. (CIBERonc). ISCIII. (31/12/2024). CSIC

Patents and trademarks

• **Olmeda Casadomé D, Moreno Bueno G, Portillo Pérez F, Cano García A, inventors; UAM, CSIC, assignees.** Method for the diagnosis and/or prognosis of breast cancer. P200702342, PCT/ES2008/000563; 2007 August 28.

• **Olmeda Casadomé D, Peinado Selgas H, Portillo Pérez F, Nieto Toledano MA, Cano García A, inventors; UAM, assignee.** Materials and methods for the derepression of the Ecadherin promoter. US20060003956; 2004 March 03.



3.5.7 Research and Diagnosis of Inherited Metabolic Diseases



Publications: 8 | Q1: 5

COMPOSITION

María Belén Pérez González.

Catedrática Bioquímica y Biología Molecular.
 Universidad Autónoma de Madrid. CBM
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- **Patricia Alcaide Alonso.** Investigadora Senior. CEDEM
- **Margarita Castro Reguera.** Técnico Titulado Superior. CEDEM
- **Magdalena de Ugarte Pérez.** Directora del CEDEM. CEDEM
- **Isaac Ferrer López.** Técnico de Laboratorio. CEDEM
- **María Alejandra Gámez Abascal.** Profesora Titular. Universidad Autónoma de Madrid. CBM "Severo Ochoa"

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- **Fátima Leal Pérez.** Técnico de Laboratorio. CIBERER
- **Rosa María Navarrete López de Soria.** Técnico de Laboratorio. CIBERER
- **Eva María Richard Rodríguez.** Profesora Titular. Universidad Autónoma de Madrid. CBM "Severo Ochoa"
- **María Pilar Rodríguez Pombo.** Profesora Titular. Universidad Autónoma de Madrid. CBM "Severo Ochoa"
- **María Lourdes Ruiz Desviat.** Catedrática Bioquímica y Biología Molecular. Universidad Autónoma de Madrid. CBM "Severo Ochoa"
- **Pedro Ruiz Sala.** Investigadora Senior. CEDEM

STRATEGIC OBJECTIVE

- Development of multiomic approaches aimed at improving the diagnosis of hereditary metabolic diseases.
- Study of mitochondrial dysfunction and oxidative stress as a modifier of the clinical phenotype and as a potential therapeutic target in organic acidurias.
- Development of novel therapeutic strategies: RNA therapies, pharmacological chaperone, repurposing
- Development of animal and cellular models.
- Pathophysiology studies targeted to identify new druggable targets
- Registry of patients with hereditary metabolic diseases.

RESEARCH LINES

- Improved diagnosis of congenital defects of glycosylation and mitochondrial defects through the application of genomic techniques
- Identification of deep intronic mutations in metabolic disorders gene by transcriptional analysis. Functional validation in cellular splicing systems.
- Development of antisense therapy and pharmacological chaperones as therapeutic approaches
- Study of oxidative stress and evaluation of common signatures of neuropathogenicity and cardiotoxicity in congenital defects of glycosylation, organic acidemias and mitochondrial diseases.
- Evaluation of drugs aimed at the recovery of mitochondrial function and biogenesis.
- Search for biomarkers as predictors of severity and as systems for the evaluation of pharmacological therapies.
- Characterization of pathophysiology in a murine model of propionic acidemia.
- Identification of dysregulated miRNA in propionic acidemia and characterization of its association with pathology and its usefulness as biomarkers.
- Generation of iPSC from patient-derived fibroblast with organic acidemia and congenital defects of glycosylation. Differentiation to hepatocytes, neural progenitors or cardiomyocytes.



RESEARCH ACTIVITY

Doctoral theses

- **Vilas Lagoa A.** Desarrollo de modelos con fines diagnósticos y terapéuticos para la deficiencia de fosfomanomutasa 2. [dissertation]. Madrid: UAM: 2023(14/04/2023). Director: Pérez González MB. International Mention
- **Segovia Falquina C.** Generación de una plataforma de análisis funcional de variantes en PMM2 con fines diagnósticos y terapéuticos [dissertation]. Madrid: UAM: 2023(04/09/2023). Director: Pérez González MB, Gamez Abascal MA
- **Arribas Carreira L.** Implicaciones del metabolismo de la glicina en la salud y la enfermedad humana: Hiperglicinemia no Cetósica, una enfermedad con fenotipo clínico neurológico [dissertation]. Madrid: UAM: 2023(19/06/2023). Director: Rodríguez Pombo P PI19/01155

Final Degree Theses

- **González Garnacho I.** Estudio de la fisiopatología de la acidemia propiónica en modelos celulares neurales humanos derivados de iPSCs [dissertation]. Madrid: UAM: 2023(30/06/2023). Director: Richard Rodríguez EM
- **Alvera Alonso B.** Generación de modelos celulares y evaluación de terapia antisentido para defectos de splicing en enfermedades neurológicas [dissertation]. Madrid: UAM: 2023(30/06/2023). Director: Ruiz Desviat ML

Publications

- **Álvarez M, Ruiz-Sala P, Pérez B, Desviat LR, Richard E.** Dysregulated cell homeostasis and mirnas in human ipsc-derived cardiomyocytes from a propionic acidemia patient with cardiomyopathy. *Int J Mol Sci.* 2023; 24(3): 2182. Article. IF: 4.9; Q1
- **Arribas-Carreira, L; Dallabona, C; Swanson, MA; Farris, J; Ostergaard, E; Tsiakas, K; Hempel, M; Aquaviva-Bourdain, C; Koutsoukos, S; Stence, NV; Magistrati, M; Spector, EB; Kronquist, K; Christensen, M; Karstensen, HG; Feichtinger, RG; Achleit-**

ner, MT; Merritt, JL; Pérez, B; Ugarte, M; Grünewald, S; Riel, AR; Julve, N; Arnoux, JB; Haldar, K; Donnini, C; Santer, R; Lund, AM; Mayr, JA; Rodríguez-Pombo, P; Van Hove, JLK. Pathogenic variants in GCSH encoding the moonlighting H-protein cause combined nonketotic hyperglycinemia and lipoate deficiency. *Hum Mol Genet.* 2023; 32(6): 917-33. Article. IF: 3.1; Q3

- **Bravo-Alonso I, Morin M, Arribas-Carreira L, Álvarez M, Pedrón-Giner C, Soletto L, Santolaria C, Ramón-Maiques S, Ugarte M, Rodríguez-Pombo P, Ariño J, Moreno-Pelayo MA, Pérez B.** Pathogenic variants of the coenzyme A biosynthesis-associated enzyme phosphopantothienoylcysteine decarboxylase cause autosomal-recessive dilated cardiomyopathy. *J Inherit Metab Dis.* 2023; 46(2): 261-72. Article. IF: 4.2; Q1
- **Himmelreich N, Bertoldi M, Alfadhel M, Alghamdi MA, Anikster Y, Bao XH, Bashiri FA, Ben Zeev B, Bisello G, Ceylan AC, Chien YH, Choy YS, Elsea SH, Flint L, García-Cazorla A, Gijavanekar C, Guemues EY, Hamad MH, Hismi B, Honzik T, Huebschmann OK, Hwu WL, Ibanez-Mico S, Jeltsch K, Julia-Palacios N, Kasapkara ÇS, Kurian MA, Kusmierska K, Liu N, Ngu LH, Odom JD, Ong WP, Opladen T, Oppeboen M, Pearl PL, Pérez B, Pons R, Rygiel AM, Shien TE, Spaul R, Sykut-Cegielska J, Tabarki B, Tangeraas T, Thoeny B, Wasenberg T, Wen YX, Yakob Y, Yin JGC, Zeman J, Blau N.** Prevalence of DDC genotypes in patients with aromatic L-amino acid decarboxylase (AADC) deficiency and in silico prediction of structural protein changes. *Mol Genet Metab.* 2023; 139(3): 107624. Article. IF: 3.7; Q2
- **Marín-Quílez A, Di Buduo CA, Díaz-Ajenjo L, Abbonante V, Vuelta E, Soprano PM, Miguel-García C, Santos-Minguez S, Seramito-Gómez I, Ruiz-Sala P, Peñarrubia MJ, Pardal E, Hernández-Rivas JM, González-Porras JR, García-Tuñón I, Benito R, Rivera J, Balduini A, Bastida JM.** Novel variants in GALE cause syndromic macrothrom-

bocytopenia by disrupting glycosylation and thrombopoiesis. *Blood.* 2023; 141(4): 406-21. Article. IF: 21.0; D1

- **Musokhranova U, Grau C, Vergara C, Rodríguez-Pascual L, Xiol C, Castells AA, Alcantara S, Rodríguez-Pombo P, Pizcueta P, Martínell M, García-Cazorla A, Oyarzábal A.** Mitochondrial modulation with leriglitazone as a potential treatment for Rett syndrome. *J Transl Med.* 2023; 21(1): 756. Article. IF: 6.1; Q1
- **Peña-Burgos EM, Regojo RM, de Pipaón MS, Santos-Simarro F, Ruiz-Sala P, Pérez B, Esteban-Rodríguez MI.** Neuropathological findings in short-chain enoyl-coa hydratase 1 deficiency (echs1d): case report and differential diagnosis. *Pediatr Devel Pathol.* 2023; 26(2): 138-43. Article. IF: 1.3; Q3
- **Tangeraas T, Constante JR, Backe PH, Oyarzábal A, Neugebauer J, Weinhold N, Boemer F, Debray FG, Ozturk-Hism B, Evren G, Tuba EF, Ummuhan O, Footitt E, Davison J, Martínez C, Bueno C, Machado I, Rodríguez-Pombo P, Al-Sanna N, de los Santos M, López JM, Ozturkmen-Akay H, Karaca M, Tekin M, Pajares S, Ormazabal A, Stoway SD, Artuch R, Dixon M, Morkrid L, García-Cazorla A.** BCKDK deficiency: a treatable neurodevelopmental disease amenable to newborn screening. *Brain.* 2023; 146(7): 3003-13. Article. IF: 10.6; D1

Research projects

- **Pérez González MB.** Enfoque cross-ómico para el descubrimiento de la base genética de errores innatos del metabolismo y para una intervención terapéutica personalizada (PI19/01155). ISCIII. 2020-2023. *Management centre: UAM*
- **Richard Rodríguez EM.** Acidemia propiónica: impacto en el epigenoma y el proteoma en relación con el fenotipo cardiaco y neurológico. Fundación Ramón Areces. 2021-2024. *Management centre: UAM*
- **Ruiz Desviat LM.** Mecanismos responsables del fenotipo patológico en enfermedades neurometabólicas raras y aproximaciones terapéuticas per-

sonalizadas (PID2019-105344RB-I00). MCINN. 2020-2023. *Management centre: UAM*

- **Pérez González MB.** Mejora del diagnóstico y desarrollo de terapias para errores congénitos del metabolismo a través del análisis genómico, transcriptómico, epigenómico y funcional de pacientes y modelos (PI22/00699). ISCIII. 2023-2025. *Management centre: FIBHULP*
- **Ruiz Desviat LM.** Rare neurometabolic diseases: from research in novel disease models to targeted therapies- (PID2022-137238OB-I00 MCINN). MCINN. 2023-2026. *Management centre: UAM*

Cibers and Retics

- **Pérez González MB.** Centro de Investigación en Red de Enfermedades Raras (CIBERER). ISCIII. (31/12/2024). UAM

Patents and trademarks

- **Pérez González B, Ruiz Desviat L, Jorge Finnigan A, Ugarte Pérez M, Martínez Ruiz A, Underhaug J, Barnejee R, inventors; UAM, Universidad de Bergen, Universidad de Michigan, assignees; Compounds useful for the treatment of methylmalonic aciduria.** P201330171; 2013 February 11.
- **Pérez González B, Gámez Abascal A, Yuste Checa P, Arduim Brasil S, Ugarte Pérez M, Martínez Ruiz A, Underhaug J, inventors; UAM, Universidad de Bergen, assignees; Compounds for treating congenital disorders of glycosylation.** EP16382373.5; 2016.
- **Ruiz-Desviat L, Martínez-Pizarro A, Picó S, Lucas JJ, Andrésen BS, inventors; UAM, CSIC, University of Southern Denmark, assignees; Splice shifting oligonucleotides for use in the treatment of diseases characterized by altered inclusion of microexons.** PCT/EP2022/077882, EP4163373A1 2023 April 12



3.5.8 Dyslipidemias of Genetic Origin and Metabolic Diseases Group



Publications:3 | Q1:3

COMPOSITION

Sonia María Rodríguez Novoa.

Facultativo Especialista de Área. Responsable del Laboratorio de Genética de Enfermedades Metabólicas. Hospital Universitario La Paz

- **Ana Carazo Álvarez.** Técnico de Laboratorio. Hospital Universitario La Paz
- **Amanda Herranz Cecilia.** Facultativo Especialista de Área en Bioquímica Clínica. Hospital Universitario La Paz
- **Irene Hidalgo Mayoral.** Facultativo Especialista de Área en Genética. FIBHULP

- **Álvaro del Monte Vergara.** Investigador Predoctoral. Hospital Universitario La Paz
- **Carmen Rodríguez Jiménez.** Facultativo Especialista de Área en Bioquímica Clínica. Hospital Universitario La Paz
- **Elena Sevilla Alonso.** Investigadora Predoctoral. Hospital Universitario La Paz
- **Javier Sanguino Otero.** Investigador Posdoctoral. Hospital Universitario La Paz
- **Rosa Torres Jiménez.** Investigadora Senior (Contrato Miguel Servet - I2) Jefe de Laboratorio. FIBHULP

STRATEGIC OBJECTIVE

- Our research is especially focused on the molecular diagnosis of dyslipidemias of genetic origin. Among dyslipidemias, Familial Hypercholesterolemia (FH) stands out for its impact on health. FH is an important risk factor in the development of early cardiovascular disease. Patients with pathogenic variants in the main genes involved in FH (LDLR, APOB, PCSK9, and LDLRAP1) are at high risk of premature coronary disease. The autosomal dominant hipercolesterolemia is caused by pathogenic variants at LDLR, APOB or PCSK9 genes. Patients with FH have a 50% of having a child with the condition. In this context, early detection of genetic alterations in patient's relatives is essential in order to establish an early treatment. Genetic studies of the family have proven to be cost-effective. The massively parallel sequencing technology (NGS) provide an useful tool to carry out this type of studies. However, it is important not only the detection of new variants but the characterization of them to determine their impact or pathogenicity. For this purpose, our research group has developed and validated functional in vitro studies for the characterization of genetic variants in the main genes associated with FH.
- An important percentage of patients with hypercholesterolemia do not present pathogenic variants in the most frequent genes. Our group has a line of research focused on the search for new candidate genes and epigenetic causes related with altered lipid metabolism. We have developed in vitro studies to determine the impact of microRNAs on the expression of LDLR and PCSK9.
- In addition to FH, we also study other genetic dyslipidemias such as familial hypertriglyceridemia and other "rare" dyslipidemias that are often not diagnosed with the usual diagnostic tools.

RESEARCH LINES

- Molecular diagnosis of familial hypercholesterolemia by massive sequencing of a panel of genes. Study of the exome to detect new candidate genes.
- Functional studies of genetic variants in LDLR, PCSK9 and APOB in cellular model.
- Study of microRNAs as modulators of cholesterol regulation and their impact on familial hypercholesterolemia.
- Molecular diagnosis of hypertriglyceridemia and other "rare" dyslipidemia.
- Genetic diagnosis of metabolic diseases.



RESEARCH ACTIVITY

Final Degree Theses

- **García Mesa J.** Estudio del carácter oligogénico de la hipercolesterolemia mediante secuenciación masiva de panel customizado y exoma completo [dissertation]. *Madrid: Universidad Francisco de Vitoria: 2023(30/06/2023). Director: Rodríguez Jiménez C, Rodríguez Novoa S.*

Publications

- **Guijarro-Eguinoa J, Arjona-Hernández S, Stewart S, Pernía O, Arias P, Losantos-García I, Rubio T, Burdiel M, Rodríguez-Antolín C, Cruz-Castellanos P, Higuera O, Borobia AM, Rodríguez-Novoa S, de Castro-Carpeño J, de Cáceres II, Rosas-Alonso R.** Prognostic impact of dihydropyrimidine dehydrogenase germline variants in unresectable non-small cell lung cancer patients treated with platinum-based chemotherapy. *Int J Mol Sci.* 2023; 24(12): 9843. Article. IF: 4.9; Q1
- **Rodríguez-Jiménez C, de la Peña G, Sanguino J, Poyatos-Peláez S, Carazo A, Martínez-Hernández PL, Arrieta F, Mostaza JM, Gómez-Coronado D, Rodríguez-Nóvoa S.** Identification and functional analysis of apob variants in a cohort of hypercholesterolemic patients. *Int J Mol Sci.* 2023; 24(8): 7635. Article. IF: 4.9; Q1
- **Stewart S, Dodero-Anillo JM, Guijarro-Eguinoa J, Arias P, De las Huertas AGL, Seco-Meseguer E, García-García I, García ER, Rodríguez-Antolín C, Carcas AJ, Rodríguez-Novoa S, Rosas-Alonso R, Borobia AM.** Advancing pharmacogenetic testing in a tertiary hospital: a retrospective analysis after 10 years of activity. *Front Pharmacol.* 2023; 14: 1292416. Article. IF: 4.4; Q1

Research projects

- **Rodríguez Novoa SM.** Diagnóstico genético de la hipercolesterolemia familiar mediante secuenciación masiva. Estudio funcional de nuevas variantes y detección de mosaïcismo. Estudio

de miRNAs (PI18/00917). ISCIII. 2019-2023. Management centre: FIBHULP

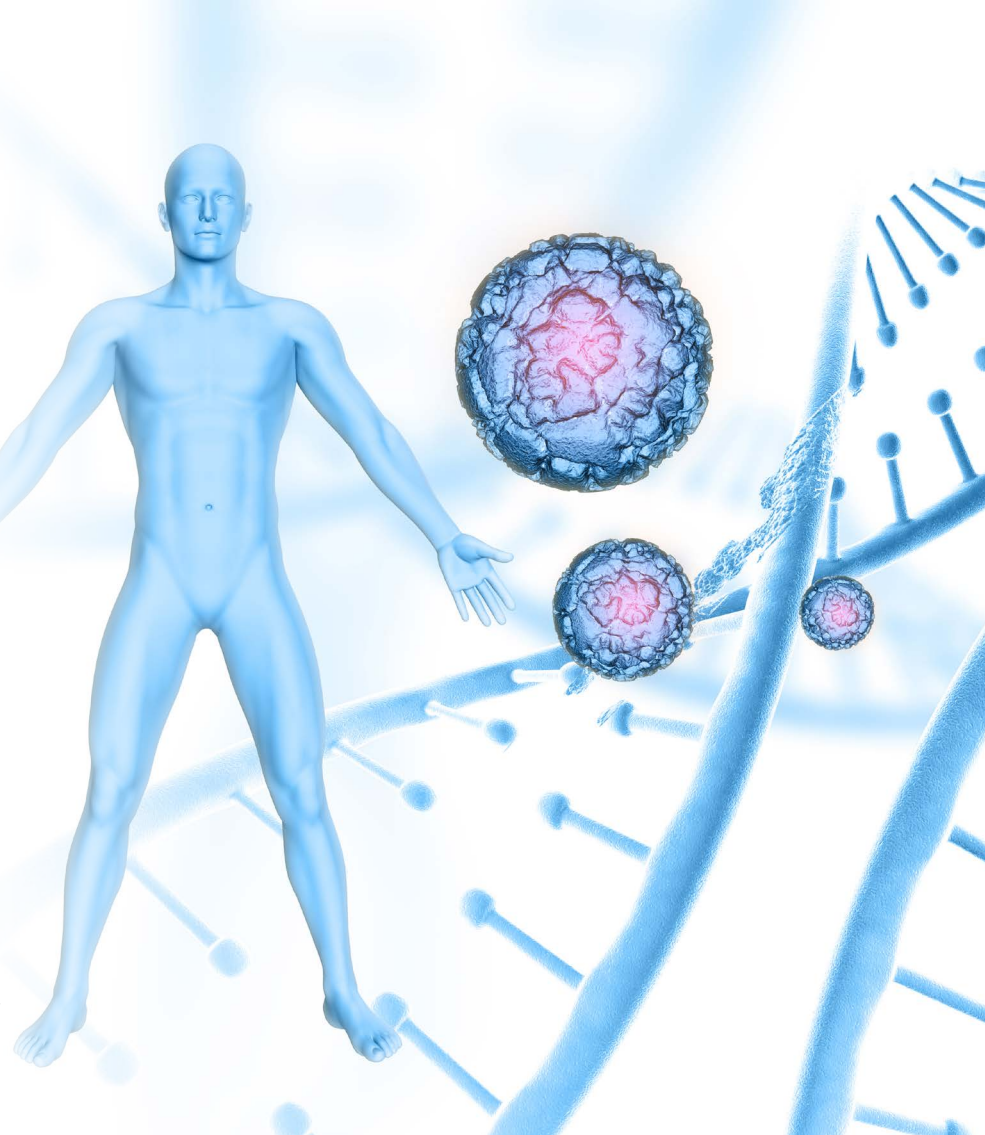
- **Rodríguez Novoa SM.** Impacto de las variantes genéticas en región 3'UTR de los genes causantes de la Hipercolesterolemia Familiar: regulación del metabolismo de lípidos mediante miRNAs. (PI21/01239). ISCIII. 2022-2024. Management centre: FIBHULP
- **Rodríguez Novoa SM.** Renal tubular and markers of bone turnover in hbv monoinfected patients during long term treatment with entecavir or tenofovir (P11/30). Bristol-Myers Squibb International Corporation. 2011-Ongoing. Management centre: FIBHULP
- **Rodríguez Novoa SM.** Plataforma: dislipemias de origen genético y enfermedades metabólicas. Varios Financiadores. 2021-Ongoing. Management centre: FIBHULP

Patents and trademarks

- **Rodríguez Novoa SM, del Monte Vergara A, Rosas Alonso R, Queiruga Parada J, Yuste González F, authors; FIBHULP, assignee.** Trademark name: Pharma Genfinder; CM18332183; 2020 November 05.



- **Ibáñez de Cáceres I, de Castro Carpeño J, Jiménez Hernández J, Rodríguez Antolín C, Rodríguez Jiménez C, Rosas Alonso R, Cruz Castellanos P, Burdiel Herencia M, Pernía Arias O, Diestro Tejada MD, Esteban Rodríguez MI, inventors; FIBHULP, assignee.** miR-151A-3p as an universal endogenous control for exosome cargo normalization. EP19382252.5 (EP3719144), PCT/EP2020/059774 PCT Direct, EP20719957.1 (EP3947733), US17/601,657; 2019 April 05.





3.5.9 Human Genetic Variability Group

Publications:7 | Q1:4

COMPOSITION

Ana Fernández Santander.

Catedrática de Genética del Departamento de Medicina. Universidad Europea de Madrid

- **Beatriz Antón Pascual.** Médico Adjunto en Oncología Médica. Hospital Universitario Doce de Octubre

- **María Gaibar Alonso.** Profesora contratada doctora. 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

STRATEGIC OBJECTIVE

- 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.

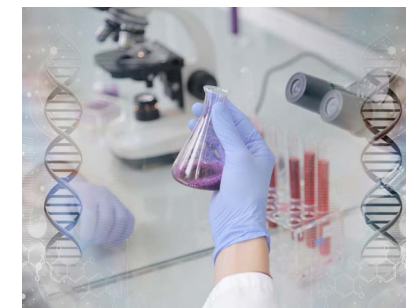
RESEARCH LINES

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

RESEARCH ACTIVITY

Publications

- **Bueno-Muino C, Echavarría I, López-Tarruella S, Roche-Molina M, del Monte-Millan M, Massarrah T, Jerez Y, de la Peña FA, García-Saenz JA, Moreno F, Rodríguez-Lescure A, Malon-Giménez D, García AIB, Marín-Aguilera M, Galvan P, Braso-Maristany F, Waks AG, Tolaney SM, Mittendorf EA, Vivancos A, Villagrasa P, Parker JS, Perou CM, Pare L, Villacampa G, Prat A, Martín M.** Assessment of a genomic assay in patients with erbb2-positive breast cancer following neoadjuvant trastuzumab-based chemotherapy with or without pertuzumab. *JAMA Oncol.* 2023; 9(6): 841-6. Article. IF: 22.5; D1
- **Delcuratolo MD, Modrego-Sánchez A, Bungaro M, Antón-Pascual B, Teran S, Dipace V, Novello S, García-Carbonero R, Passiglia F, Grávalos-Castro C.** Liquid biopsy in advanced colorectal cancer: clinical applications of different analytes. *J. Mol Pathol(Basel).* 2023; 4(3): 128-55. Review. Not indexed
- **García-Carbonero R, Antón-Pascual B, Modrego A, Riesco-Martínez MD, Lens-Pardo A, Carretero-Puche C, Rubio-Cuesta B, Soldevilla B.** Advances in the treatment of gastroenteropancreatic neuroendocrine carcinomas: are we moving forward? *Endocr Rev.* 2023; 44(4): 724-36. Review. IF: 22.0; D1
- **López IS, Martínez JAG, Giménez DM, Lajusticia LR, González CP, de Soignie AMMF, Luque CD, Vila BL, Baños NS, Martín FE, Moreno EM, Abad DG, Martel IJ, Muñárriz BJ, Rodríguez JC.** News and updates in the treatment of localized stage triple-negative breast cancer. *Oncol Clin Pract.* 2023; 19(5): 362-70. Review. IF: 0.3; Q4
- **Mouron S, Bueno MJ, Muñoz M, Torres R, Rodríguez S, Apala JV, Silva J, Sánchez-Bayona R, Manso L, Guerra J, Rodríguez-Lajusticia L, Malón D, Malumbres M, Quintela-Fandino M.** p27Kip1 V109G as a biomarker for CDK4/6 inhibitors indication in hormone receptor-positive breast cancer. *JNCI Cancer Spectr.* 2023; 7(2): pkad014. Article. IF: 3.4; Q2
- **Novillo A, Gaibar M, Romero-Lorca A, Malón D, Antón B, Moreno A, Fernández-Santander A.** HER2 and BARD1 polymorphisms in early HER2-positive breast cancer patients: relationship with response to neoadjuvant anti-HER2 treatment. *Cancers (Basel).* 2023; 15(3): 763. Article. IF: 4.5; Q1



- **Soldevilla B, Lens-Pardo A, Espinosa-Olarte P, Carretero-Puche C, Molina-Pinelo S, Robles C, Benavent M, Gómez-Izquierdo L, Fierro-Fernández M, Morales-Burgo P, Jiménez-Fonseca P, Antón-Pascual B, Rodríguez-Gil Y, Teijo-Quintans A, La Salvia A, Rubio-Cuesta B, Riesco-Martínez MC, García-Carbonero R.** MicroRNA signature and integrative omics analyses define prognostic clusters and key pathways driving prognosis in patients with neuroendocrine neoplasms. *Mol Oncol.* 2023; 17(4): 582-97. Article. IF: 5.0; Q1

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*
- **Fernández Santander A.** Biomarcadores genéticos de toxicidad en inmunoterapia en pacientes con melanoma maligno: análisis de polimorfismos de tipo snp en genes reguladores de las respuestas inmunitaria e inflamatoria (2022/UEM19). *UEM.* 2022-2023. *Managment centre: UEM*
- **Fernández Santander A.** Expresión de toxicidad de microRNAs como posibles biomarcadores de toxicidad en inmunoterapia en tumores sólidos (XSAN002305). *Fundación de la Universidad Europea.* 2023-2023. *Managment centre: UEM*
- **Nadler M.** Incidence, prevalence, risk factors, and impact of fatty liver disease in metastatic HR+/HER2- breast cancer patients in first or second line of treatment with Endocrine Therapy and CDK 4/6 Inhibitor (). *Universidad de Toronto.* 2023-2025. *Managment centre: Universidad de Toronto*



3.6 Surgery, Transplant and Health Technologies Area

Documents: 208 | Originals: 152 | D1: 29 | Q1: 84

Area coordinator: Nuria Vilaboa Díaz

coordinadorcirugia@idipaz.es

RESEARCH GROUPS

3.6.1 Bone Pathophysiology and Biomaterials - Nuria Vilaboa Díaz

3.6.2 Cellular Engineering - María Paz de Miguel González

3.6.3 Clinical Pharmacology - Antonio J. Carcas Sansuán

3.6.4 Osteoarticular Surgery Research - GICOA - Enrique Gómez Barrena

3.6.5 Translational Research in Maxillofacial Surgery and Head and Neck Cancer
- José Luis Cebrián Carretero/Ana Sastre Perona

3.6.6 Patients Safety and Quality Research - Elena Ramírez García

3.6.7 Translational Research and Innovation in General and Digestive Surgery
- Constantino Fondevila Campo



Strategic Objectives	Development forecast for the coming years:	Actions
<p>Surgery, Transplant and Health Technologies Area is composed of 10 very heterogeneous groups and the absence of common activities between them make the general objectives equivalent to the sum of the research lines of each of the groups. The main objective of the area is to locate points where synergies between groups can be established</p>	Cellular and organ engineering, underdeveloped.	Support researchers to continue being a reference in the national area.
	Stem and precursor cells. This is one of the most successful lines and the one that has motivated more collaborations between them. It is certainly one of the possibilities for the future	Identify and promote at international level the new research lines identifying as innovative and competitive.
	Animal models. Cellular models. They require personnel trained in cell culture techniques and who masters animal models of human disease	
	Minimally invasive surgery: one of the most important translational fields in recent years, a permanent demand from the population and an indicator of the quality of healthcare systems	

HIGH IMPACT PUBLICATIONS

Fundora Y, Hessheimer AJ, Del Prete L, Maroni L, Lanari J, Barrios O, Clarysse M, Gastaca M, Gómez MB, Bonadona A, Janek J, Bosca A, Martínez JMA, Zozaya G, Garnica DL, Magistri P, León F, Magini G, Patrono D, Nicovsky J, Hakeem AR, Nadalin S, McCormack L, Palacios P, Zieniewicz K, Blanco G, Nuño J, Saborido BP, Echeverri J, Bynon JS, Martins PN, López VL, Dayangac M, Lodge JPA, Romagnoli R, Toso C, Santoyo J, Di Benedetto F, Gómez-Gavara C, Rotellar F, Gómez-Bravo MA, Andújar RL, Girard E, Valdivieso A, Pirenne J, Lladó L, Germani G, Cescon M, Hashimoto K, Quintini C, Cillo U, Polak WG, **Fondevila C**. Alternative forms of portal vein revascularization in liver transplant recipients with complex portal vein thrombosis. *J Hepatol.* 2023; 78(4): 794-804. Article. IF: 26.8; D1

Hessheimer AJ, Vargas-Martínez AM, Trapero-Bertrán M, Navasa M, **Fondevila C**. Posttransplant Hepatocellular Carcinoma Surveillance A Cost-effectiveness and Cost-utility Analysis. *Ann Surg.* 2023; 277(2): E359-65. Article. IF: 7.5; D1

Cadenas-Martín M, Arnalich-Montiel F, **Miguel MP**. Derivation of Limbal Stem cells from human adult mesenchymal stem cells for the treatment of limbal stem cell deficiency. *Int J Mol Sci.* 2023; 24(3): 2350. Article. IF: 4.9; Q1

Yeom DC, Hwang DJ, Lee WB, Cho JY, Koo JH, **Rodríguez-Merchán EC**. Effects of low-load, high-repetition resistance training on maximum muscle strength and muscle damage in elite weightlifters: a preliminary study. *Int J Mol Sci.* 2023; 24(23): 17079. Article. IF: 4.9; Q1

Li JT, Wu GF, Xu CH, Cai ZN, Ji JL, Yu ZY, Zhang J, Wang JL, **Rodríguez-Merchán EC**. Slit Guidance Ligand 3 (SLIT3) loaded in hydrogel microparticles enhances the tendon-bone healing through promotion of type-H Vessel formation: An experimental study in mice. *Int J Mol Sci.* 2023; 24(17): 13638. Article. IF: 4.9; Q1

Scientific Events by Surgery, Transplant and Health Technologies

- **20/01/2023**. Scientific Seminar - ¿Cómo puedo sacarle partido a la Inteligencia Artificial en Medicina y en mis Proyectos de Investigación?
- **10/02/2023**. Scientific Seminar - Generación de córnea biomimética con células madre mesenquimales de tejido adiposo
- **03/02/2023**. Scientific Seminar - Identificación de mecanismos de progresión y resistencia a terapias en cáncer de cabeza y cuello
- **23~24/03/2023**. Jornadas internacionales de ética en la investigación e innovación pediátrica
- **23/06/2023**. Scientific Seminar - La miraculina y la percepción del sabor en el estado nutricional de pacientes oncológicos en tratamiento activo que presentan desnutrición
- **19/10/2023**. Jornada sobre desarrollo de herramientas clínicas basadas en PCR cuantitativa
- **31/10/2023**. Jornada Farmacogenética en la Práctica Clínica



3.6.1 Bone Pathophysiology and Biomaterials

Publications:4 | Q1:2

COMPOSITION

Nuria Elda Vilaboa Díaz.

Investigadora Senior (Miguel Servet contract - I2). Jefe de Laboratorio. FIBHULP

- **Clara Escudero Duch.** Investigadora Postdoctoral. CIBER-BBN
- **Marcos de Mesa Cáceres.** Técnico de Laboratorio. FIBHULP
- **Eduardo García Cimbreló.** Médico Emérito de la Comunidad de Madrid. Hospital Universitario La Paz. Profesor Asociado. Departamento de Cirugía. Facultad de Medicina. Universidad Autónoma de Madrid
- **Beatriz García Brihuega.** Técnico de Laboratorio. FIBHULP
- **Rebeca Garrido Punzano.** Técnico de Laboratorio. FIBHULP

- **Miguel Ángel Lerma Juárez.** Investigador Predoctoral. FIBHULP
- **Carmen Martín Hervás.** Facultativo Especialista de Área en Radiodiagnóstico. Hospital Universitario La Paz. Profesora Asociada. Facultad de Medicina. Universidad Autónoma de Madrid
- **Alonso Carlos Moreno García.** Facultativo Especialista de Área en Cirugía Ortopédica y Traumatología. Hospital Universitario La Paz
- **Laura Saldaña Quero.** Investigadora Senior (Contrato Miguel Servet-Tipo II). Jefe de Laboratorio. FIBHULP
- **Gema Vallés Pérez.** Investigadora Senior. Responsables de Cultivos Celulares y de los Laboratorios Comunes de IdiPAZ. FIBHULP



STRATEGIC OBJECTIVES

- The Bone Physiopathology and Biomaterials group includes basic and clinical researchers from IdiPAZ. The group has broad experience in clinical and basic research on biomaterials for orthopaedic implants and bone tissue engineering. The main goal of the group is to improve the clinical outcome of orthopaedic surgery through research on implants and biomaterials used for manufacturing prosthetic devices.
- The group is interested in the study of mechanisms underlying joint diseases, in developing tissue engineering-based therapies as well as in evaluating biomaterials manufactured by collaborative partners. Specific areas of clinical research on implants include follow-up studies on various devices in use for osteoarticular surgery.
- The team is also involved in the manipulation of the heat shock response to generate transcriptional targeting strategies that provide tight control of the expression of therapeutic proteins. Their potential application in bone and wound healing therapies as well as in the generation of influenza vaccines with anti-herpetic activity are being explored. This strategic objective also includes the identification and characterization of the heat shock transcription factor 1 (HSF1) inhibitors as potential antitumoral agents.

RESEARCH LINES

- Clinical research in implants for bone repair
- Study of the pathophysiology of joint diseases and mechanisms involved in bone regeneration.
- Evaluation of new biomaterials, including scaffolds and nanoparticles, for their potential use in wound healing and bone tissue engineering application.
- Development of gene therapy switches to control the expression of transgenes to a) enhance bone regeneration and wound healing or b) generate influenza vaccines. Application of non-invasive near-infrared energy combined with photothermal nanoparticles.
- Identification and characterization of HSF1 inhibitors as antitumoral drugs.



RESEARCH ACTIVITY

Publications

- **Arnold JB, Halstead J, Martín-Hervás C, Grainger AJ, Keenan AM, Hill CL, Conaghan PG, McGonagle D, Redmond AC.** Bone marrow lesions and magnetic resonance imaging-detected structural abnormalities in patients with midfoot pain and osteoarthritis: a cross-sectional study. *Arthrit Care Res.* 2023; 75(5): 1113-22. Article. IF: 3.7; Q1
- **Escudero-Duch C, Muñoz-Moreno L, Martín-Saavedra F, Sánchez-Casanova S, Lerma-Juarez MA, Vilaboa N.** Remote control of transgene expression using noninvasive near-infrared irradiation. *J Photoch Photobio B.* 2023; 242: 112697. Article. IF: 3.9; Q2
- **Sánchez CB, Mateo NC, Saldaña L, Valdivieso A, Earl J, Gómez IG, Rodríguez-Lorenzo LM.** Selection and optimization of a bioink based on panc-1-plasma/alginate/methylcellulose for pancreatic tumour modelling. *Polymers-Basel.* 2023; 15(15): 3196. Article. IF: 4.7; Q1
- **Vilaboa N, López JA, de Mesa M, Escudero-Duch C, Winfield N, Bayford M, Voellmy R.** Disruption of proteostasis by natural products and synthetic compounds that induce pervasive unfolding of proteins: therapeutic implications. *Pharmaceuticals (Basel).* 2023; 16(4): 616. Article. IF: 4.3; Q2

Research projects

- **Beatriz García Brihuega.** Contrato garantía juvenil (PEJ-2021-TL/BMD-22184). CM. 2022-2024. *Managment centre: FIBHULP*
- **Escudero-Duch C.** Films de PLA con patrón microestructurado para promover la cicatrización de heridas. CIBER-BBN. 2023-2024. *Managment centre: CIBER-BBN*
- **Lerma Juarez MA.** Contrato predoctoral (PRE2019-090430). MICIU. 2020-2024. *Managment centre: FIBHULP*
- **Rodrigo Fernando Serrano Yamba.** Contrato garantía juvenil (PEJ-2020-AI/BMD-17656). CM. 2021-2023. *Managment centre: FIBHULP*

- **Saldaña Quero L.** Identificación de factores moleculares implicados en la osteonecrosis idiopática: análisis del transcriptoma del tejido óseo (PI18/00643). ISCIII. 2019-2023. *Managment centre: FIBHULP*
- **Saldaña Quero L.** Osteonecrosis de cabeza femoral: identificación de alteraciones en el hueso trabecular, correlación clínica y factores de riesgo en la fijación de la prótesis total de cadera (PI22/00939). ISCIII. 2023-2025. *Managment centre: FIBHULP*
- **Vilaboa Díaz NE, Saldaña Quero L.** Desarrollo de fluidos que potencien o favorezcan la osteointegración de los implantes ante distintas situaciones. Mozo-Grau S. A. 2017-Ongoing. *Managment centre: FIBHULP*
- **Vilaboa Díaz NE.** Contrato Miguel Servet Categoría A (CES07/031). CM. 2007-2025. *Managment centre: FIBHULP*
- **Vilaboa Díaz NE.** Detección de activación de HSF partes XV y XVI. HSF Pharmaceuticals S.A.. 2004-Ongoing. *Managment centre: FIBHULP*
- **Vilaboa Díaz NE.** Hidrogeles que responden a energía infrarroja y contienen adenovirus de alta capacidad. Aplicación en regeneración ósea (RTI2018-095159-B-I00). MICIU. 2019-2022. *Managment centre: FIBHULP*
- **Vilaboa Díaz NE.** Nuevas soluciones terapéuticas para el tratamiento de la piel radiada (RADI-OPROTECT-CM) (P2022/BMD-7406). CM. 2023-2026. *Managment centre: FIBHULP*
- **Vilaboa Díaz NE.** Potencial traslacional de inhibidores del factor de transcripción HSF1 como drogas anticancerígenas (PID2021-126325OB-I00). Ministerio de Ciencia e Innovación. 2022-2024. *Managment centre: FIBHULP*

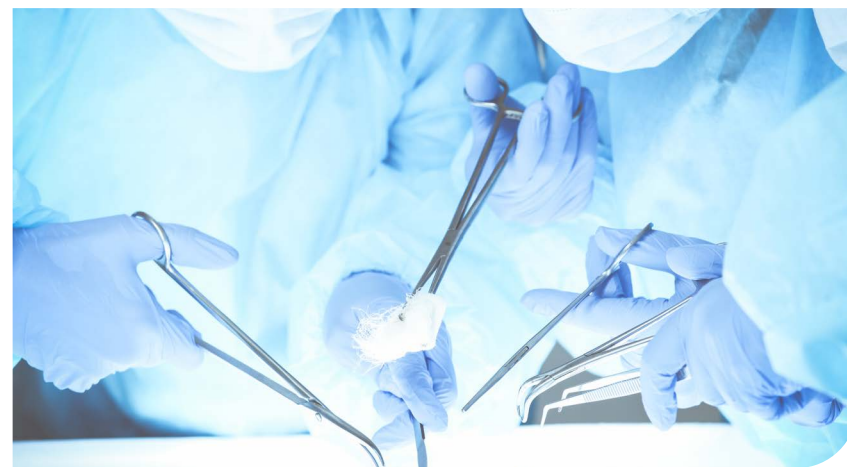
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- **Vilaboa Díaz NE.** Networked Biomedical Research Center for Bio-engineering, Biomaterials and Nanomedicine. (CIBER-bbn). Carlos III Health Institute. (31/12/2024). FIBHULP

Patents and trademarks

- **González Carrasco JL, Benavente Castro R, Cifuentes Cuellar SC, Lieblich Rodríguez M, Olalde Graells B, Atorrasagasti Goyalde G, Argarate Madariaga N, Pacha Olivenza MA, Fernández Calderón MC, Saldaña Quero L, González Martín ML, Pérez Giraldo C, Gallardo Moreno AM, inventors; CSIC, Fundación Tecnalia Research & Innovation, FIBHULP, Universidad de Extremadura, Centro de Investigación Biomédica en Red (CIBER).** Moldable, biodegradable, biocompatible and bioresorbable implant material, method for its preparation and uses thereof. P201530683; 2015 May 18.
- **Martín Saavedra FM, Vilaboa Díaz NE, Cebrián Hernando V, Arruebo Gordo M, Santamaría Ramiro J, Gómez Navascués L, inventors; FIBHULP, CIBER-BBN, Universidad de Zaragoza, assignees.** Fibrin hydrogel with plasmonic nanoparticles; P201330894, PCT/ES2014/070484; 2013 June 14.

- **Vilaboa Díaz NE, Calzado Martín A, Crespo García L, Saldaña Quero L, Moreo Calvo P, Alastrué Vera V, inventors; FIBHULP, CIBER-BBN, assignees.** Chamber device for dynamic cell culture on biomaterials; P201330040, PCT/ES2013/070819; 2013 January 16.
- **Vilaboa Díaz NE, González Carrasco JL, Multigner Domínguez M, Lieblich Rodríguez M, Muñoz Hernández M, Frutos Torres E, Saldaña Quero L, inventors; FIBHULP, CSIC, CIBER-BBN, Universidad Alfonso X El Sabio, assignees.** Magnesium/polymer composite biomaterial for biomedical applications; P201030950, PCT/ES2011/070440; 2010 June 21.
- **Vilaboa Díaz NE, González Carrasco JL, Saldaña Quero L, Frutos Torres E, inventors; FIBHULP, CSIC, CIBER-BBN, assignees.** Method to obtain a metallic-coated biomaterial; P201030949, PCT/ES2011/070400; 2010 June 21.
- **Voellmy R, Vilaboa Díaz NE, inventors; HSF Pharmaceuticals S.A., assignee.** Inhibitors of heat shock factor I and uses thereof. US 16501272, 2023 March 7.





3.6.2 Cellular Engineering Group



Publications:3 | Q1:3

COMPOSITION

María Paz de Miguel González.

Investigadora Senior (Contrato Miguel Servet - I2). Jefe de Laboratorio. FIBHULP

- **Marta Cadenas Martín.** Investigador Predoctoral. FIBHULP
- **María Pilar González-Peramato Gutiérrez.** Facultativo Especialista de Área en Anatomía Patológica. Hospital Universitario La Paz
- **Manuel Nistal Martín de Serrano.** Catedrático Departamento de Histología y Neurociencia. Facultativo de Medicina. Universidad Autónoma de Madrid
- **Javier Francisco Regadera González.** Catedrático. Departamento de Histología y Neurociencia. Facultad de Medicina. Universidad Autónoma de Madrid
- **Elsa Umiri Condo.** Técnico de Laboratorio. FIBHULP

STRATEGIC OBJECTIVE

- To ascertain the mechanisms responsible for converting a differentiated cell into a pluripotent cell and at the same time how these establish a relationship between cellular reprogramming and oncogenic transformation, in order to use divergent pathways governing these processes as clinical early diagnostic tools and therapeutic targets for clinical intervention.
- To develop new cell therapy approaches in diverse organs transplants.

RESEARCH LINES

- Molecular mechanisms of cellular reprogramming in normal and neoplastic environments.
- New techniques and therapies in transplants.

RESEARCH ACTIVITY

Master theses

- **Pardinas del Águila L.** Hacia el desarrollo de un estroma corneal biomimético por impresión 3D: comparativa de biomateriales de colágeno I con aplicabilidad clínica [dissertation]. Madrid: Universidad CEU San Pablo: 2023(01/06/2023). Director: de Miguel González MP. StemVision
- **Caballero Rodríguez S.** Estudios de biocompatibilidad in vitro de prótesis estromales corneales bio-fabricadas por impresión 3D [dissertation]. Madrid: Universidad CEU San Pablo: 2023(01/06/2023). Director: de Miguel González MP. AJLOphthalmic

Publications

- **Cadenas-Martín M, Arnalich-Montiel F, Miguel MP.** Derivation of limbal stem cells from human adult mesenchymal stem cells for the treatment of limbal stem cell deficiency. *Int J Mol Sci.* 2023; 24(3): 2350. Article. IF: 4.9; Q1
- **González-Guerrero C, Borsò M, Alkhani P, Alcaína Y, Salas-Lucía F, Liao XH, García-Giménez J, Bertolini A, Martín D, Moratilla A, Mora R, Buño-Soto A, Mani AR, Bernal J, Saba A, de Miguel MP, Refetoff S, Zucchi R, Moreno JC.** Iodotyrosines are biomarkers for preclinical stages of iodine-deficient hypothyroidism in dehal1-knockout mice. *Thyroid.* 2023; 33(6): 752-61. Article. IF: 5.8; Q1
- **Paz-García M, Povo-Retana A, Jaén RI, Prieto P, Peraza DA, Zaragoza C, Hernández-Jiménez M, Pineiro D, Regadera J, García-Bermejo ML, Rodríguez-Serrano EM, Sánchez-García S, Moro MA, Lizasoain I, Delgado C, Valenzuela C, Boscá L.** Beneficial effect of TLR4 blockade by a specific aptamer antagonist after acute myocardial infarction. *Biomed Pharmacother.* 2023; 158: 114214. Article. IF: 6.9; Q1

Research projects

- **de Miguel González MP.** Bio-Ingeniería de tejido corneal para trasplante endotelial: desarrollo de láminas ultrafinas de cornea decelularizada colonizadas por endotelio corneal humano expandido in cultivo. Roche Farma S.A. 2016-Ongoing. *Management centre: FIBHULP*
- **de Miguel González MP.** Contrato Miguel Servet Categoría A (CP03/0007). CM. 2010-2025. *Management centre: FIBHULP*
- **de Miguel González MP.** Contribución de la modificación metabólica a la reprogramación celular y la transformación oncogénica. Fundación Domingo Martínez. 2017-Ongoing. *Management centre: FIBHULP*
- **de Miguel González MP.** Generación de estroma corneal bio-mimético por impresión 3D de colágeno y células madre mesenquimales. *Stem Vision S. L.* 2021-Ongoing. *Management centre: FIBHULP*
- **de Miguel González MP.** Contratos de Ayudante de Investigación financiados por el Fondo Social Europeo. Fondo Social Europeo. 2023-2025. *Management centre: FIBHULP*
- **de Miguel González MP.** Estudios de biocompatibilidad con células madre mesenquimales (MSC) aisladas de tejido adiposo. *AJL Ophthalmic S.A.* 2023-2023. *Management centre: FIBHULP*

Patents and trademarks

- **de Miguel González MP, Arnalich Montiel F, Royuela MM, inventors; FIBHULP, Fundación para la Investigación Biomédica del Hospital Universitario Ramón y Cajal, Universidad de Alcalá, assignees.** Corneal endothelium injector; P201131222, PCT/ES2012/070543; 2011 July 18.
- **De Miguel González MP., Arnalich-Montiel F, Cadenas Martín M, Moratilla Riofrío A. inventors; FIBHULP, FIBHRYC, assignees.** Constructos artificiales para su uso en oftalmología, su procedimiento de obtención y utilización del mismo. Patente Europea EP22382119.0 2022 February 14. PCT/EP2023/053668 2023 February 14.



3.6.3 Clinical Pharmacology

Publications:16 | Q1:7

COMPOSITION

Antonio Javier Carcas Sansuán.

Facultativo Especialista de Área en Farmacología Clínica. Hospital Universitario La Paz. Profesor Titular. Facultad de Medicina. Universidad Autónoma de Madrid

- **Pilar Ayllón García.** Técnico de laboratorio. Universidad Autónoma de Madrid
- **Alberto Borobia Pérez.** Facultativo Especialista de Área en Farmacología Clínica. Hospital Universitario La Paz
- **Raquel de Madariaga Castell.** Enfermera. Coordinadora de Ensayos Clínicos. FIBHULP
- **Laura Díaz García.** Facultativo Especialista en Farmacología Clínica. Hospital Universitario La Paz
- **Blanca Duque Bascuñana.** Responsable de calidad. Universidad Autónoma de Madrid
- **Jesús Frías Iniesta.** Jefe de Servicio de Farmacología Clínica. Hospital Universitario La Paz.

STRATEGIC OBJECTIVE

- Clinical pharmacology, as a scientific and professional discipline, has the objective of achieving an effective, efficacious and efficient use of drugs, at both the individual and group level. This means that Clinical Pharmacology is a cross-sectional discipline that must establish collaborations with numerous other disciplines and health professionals.
- In this context and in the field of clinical research, the interests of our group are focused on two fundamental aspects:
 1. Customisation of drug treatments: research and development of techniques and methods that individualise the use of drugs, improve their efficacy and reduce their risks.
 2. The improvement of treatment by obtaining high quality evidence on the efficacy of clinical trials, strategies of identification, evaluation and prevention of adverse reactions to medication (pharmacovigilance programmes) and evaluation of the suitability of their use and effectiveness (studies on the use of medication).

Catedrático. Facultad de Medicina. Universidad Autónoma de Madrid

- **Alberto García Bartolomé.** Investigador Postdoctoral. Hospital Universitario La Paz
- **Irene García García.** Facultativo Especialista en Farmacología Clínica. Hospital Universitario La Paz
- **Cristina López Crespo.** Enfermera. Coordinadora de Ensayos Clínicos. FIBHULP
- **José Carlos Martínez Ávila.** Investigador Postdoctoral. Hospital Universitario La Paz
- **Lucía Martínez de Soto.** Coordinadora de Ensayos Clínicos. FIBHULP
- **Vega Mauleón Martínez.** Enfermera. Coordinadora de Ensayos Clínicos. FIBHULP
- **Pablo Molina Benítez.** Investigador Predoctoral. FIBHULP
- **Paloma Moraga Alapont.** Gestora de proyectos SCReN (Spanish Clinical Research Network). FIBHULP
- **María Cristina Murano Murano.** Investigador Postdoctoral. FIBHULP
- **Paula Prieto Correa.** Monitora de Ensayos Clínicos. FIBHULP
- **Rocío Prieto Pérez.** Gestora de proyectos SCReN (Spanish Clinical Research Network). FIBHULP
- **Laura Vitón Vara.** Enfermera. Coordinadora de Ensayos Clínicos. FIBHULP
- **Hoi Yan Tong.** Responsable de Farmacovigilancia. Hospital Universitario La Paz



RESEARCH LINES

- Therapeutic drug monitoring (TDM) – Development of individualised therapeutic drug monitoring programmes and pharmacogenetics.
- Getting quality evidences for the establishment of drug efficacy, safety and adequate use of medicines in humans



RESEARCH ACTIVITY

Publications

- **Alapont PM, Prieto P, Urroz M, Jiménez M, Carcas AJ, Borobia AM.** Evaluation of factors associated with recruitment rates in early phase clinical trials based on the European Clinical Trials Register data. *Cts-Clin Transl Sci.* 2023; 16(12): 2654-64. Article. IF: 3.1; Q2
- **Butta NV, Arias-Salgado EG, Manzano EM, Acuña P, Román MTA, Buño-Soto A, Ramos JCR, Belda-Iniesta C, Frías J, Carcas AJ, de Soto LM, Buckley RD, Lora D, García-Morales MT, Borobia AM, Arribas JR, Yuste VJ, CombiVacS Study Grp.** No changes in hemostasis after COVID-19-heterologous vaccination schedule: A subanalysis of the phase 2 CombiVacS study. *Res Pract Thromb Haemost.* 2023; 7(1): e100049. Article. IF: 3.4; Q2
- **Carpio C, Qasem A, Buño A, Borobia AM, Arnalich F, Rey V, Lázaro T, Mariscal P, Laorden D, Salgueiro G, Moreno A, Peiró C, Lorenzo O, Álvarez-Sala R.** Krebs von den Lungen-6 (KL-6) levels in post-COVID follow-up: Differences according to the severity of COVID-19. *J Clin Med.* 2023; 12(19): 6299. Article. IF: 3.0; Q1
- **Corominas J, Garriga C, Prenafeta A, Moros A, Cañete M, Barreiro A, González-González L, Madrenas L, Güell I, Clotet B, Izquierdo-Useros N, Raich-Regué D, Gallemí M, Blanco J, Pradenas E, Trinité B, Prado JG, Blanch-Lombarte O, Pérez-Caballero R, Plana M, Esteban I, Pastor-Quiñones C, Núñez-Costa X, Abu Taleb R, McSkimming P, Soriano A, Nava J, Anagua JO, Ramos R, Lluch RM, Comas AC, Romero SO, Gomez XM, Sans-Pola C, Moltó J, Benet S, Bailón L, Arribas JR, Borobia AM, Parada JQ, Navarro-Pérez J, Giner MJF, Lucas RO, Jiménez MDV, Compán SO, Álvarez-Mon M, Troncoso D, Arana-Arri E, Mejjide S, Imaz-Ayo N, García PM, Martínez SD, Fernández SR, Prat T, Torroella E, Ferrer L.** Safety and immunogenicity of the protein-based PHH-1V compared to BNT162b2 as a heterologous SARS-CoV-2 booster vaccine in adults vaccinated against COVID-19: a multicentre, randomised, double-blind, non-inferiority phase IIb trial. *Lancet Reg Health Eur.* 2023; 28: 100613. Article. IF: 13.6; D1
- **Galgani I, Poder A, Jogi R, Anttila VJ, Milleri S, Borobia AM, Launay O, Testa M, Casula D, Grassano L, Tasciotti A, Dozot M, Arora AK.** Immunogenicity and safety of the non-typable *Haemophilus influenzae*-Moraxella catarrhalis (NTHi-Mcat) vaccine administered following the recombinant zoster vaccine versus administration alone: Results from a randomized, phase 2a, non-inferiority trial. *Hum Vacc Immunother.* 2023; 19(1): 2187194. Article. IF: 4.1; Q2
- **Gonzaga A, Andreu E, Hernández-Blasco LM, Meseguer R, Al-Akioui-Sanz K, Soria-Juan B, Sanjuan-Giménez JC, Ferreras C, Tejedro JR, López-Lluch G, Gotteris R, Maciá L, Sempere-Ortells JM, Hmadcha A, Borobia A, Vicario JL, Bonora A, Aguilar-Gallardo C, Poveda JL, Arbona C, Alenda C, Tarín F, Marco FM, Merino E, Jaime F, Ferreres J, Figueira JC, Cañada-Illana C, Querol S, Guerreiro M, Eguizabal C, Martín-Quirós A, Robles-Marhuenda A, Pérez-Martínez A, Solano C, Soria B.** Rationale for combined therapies in severe-to-critical COVID-19 patients. *Front Immunol.* 2023; 14: 1232472. Review. IF: 5.7; Q1
- **Marín-Candón A, García-García I, Arias P, Carcas AJ, Díaz-García I, Ochoa RF, Cano NH, Pinto PH, González MJ, López-Granados E, Martínez-Feito A, Mayor-Ibarguren A, Rosas-Alonso R, Seco-Meseguer E, Borobia AM.** Identifying biomarkers of treatment response to ciclosporin in atopic dermatitis through multiomic predictive modelling: DERMATOMICs study protocol. *BMJ Open.* 2023; 13(7): e072350. Article. IF: 2.4; Q1
- **Moraga P, Prieto P, Conradie A, Benhayoun M, Rousell V, Davy M, Fuhr U, Arbos RA, Abad-Santos F, Portolés A, Van Duinen J, Carcas AJ, Borobia AM.** Academia and industry agreement on a feasibility tool for first-time-in-human clinical trial units. *CTS-Clin Transl Sci.* 2023; 16(12): 2421-8. Article. IF: 3.1; Q2
- **Neuhann JM, Stemler J, Carcas AJ, Frías-Iniesta J, Akova M, Bethe U, Heringer S, Salmanton-García J, Tischmann L, Zarrouk M, Cüppers A, Grothe J, Leon AG, Mallón P, Negi R, Gaillard C, Saini G, Lammens C, Hotterbeekx A, Loens K, Malhotra-Kumar S, Goossens H, Kumar-Singh S, König F, Yeghi-azaryan L, Posch M, Koehler P, Cornely OA.** Immunogenicity and reactogenicity of a first booster with BNT162b2 or full-dose mRNA-1273: A randomised VACCELERATE trial in adults >75 years (EU-COVAT-1). *Vaccine.* 2023; 41(48): 7166-75. Article. IF: 4.5; Q2
- **Ramírez E, González-Muñoz M, Kulkarni C, De Abajo EJ.** Editorial: Reducing the harm of medication-recent trends in pharmacovigilance (volume II). *Front Pharmacol.* 2023; 14: 1175039. Editorial Material. IF: 4.4; Q1
- **Salmantón-García J, Wipfler P, Valle-Simón P, Merakou C, Kopsidas I, Bethe U, Steinbach A, Spivak O, Souckova L, Mendonca MA, Konioridou M, Hellemans M, Frías-Iniesta J, Davis RJ, Barta I, Azzini AM, Askling HH, Argyropoulos CD, Álvarez-Barco E, Akova M, Bonten MMJ, Cohen-Kandli M, Cox RJ, Flisiak R, Husa P, Jancoriene L, Koscalova A, Launay O, Lundgren J, Mallon P, Marques L, Naucner P, Ochando J, Pana ZD, Tacconelli E, Toth K, Trelle S, van Damme P, Zaoutis TE, Zeitlinger M, Albus K, Stewart FA, Hofstraat SHI, Bruijning-Verhagen P, Cornely OA.** VACCELERATE Site Network: Real-time definition of clinical study capacity in Europe. *Vaccine.* 2023; 41(26): 3915-100613. Article. IF: 4.5; Q2
- **Saz-Leal P, Zamorano-Domínguez L, Frías J, Guerra P, Saura-Valls M, Roca-Juanes R, Nebot-Troyano J, García-Aguilar E, Vilchez T, Urso K.** Bioavailability of Cariban® capsules: A modified-release fixed-dose combination of doxylamine and pyridoxine to relieve nausea and vomiting during pregnancy. *Drugs R&D.* 2023; 23(2): 185-95. Article. IF: 2.2; Q3
- **Stewart S, Doderer-Anillo JM, Guijarro-Eguinoa J, Arias P, De las Huertas AGL, Seco-Meseguer E, García-García I, García ER, Rodríguez-Antolín C, Carcas AJ, Rodríguez-Novoa S, Rosas-Alonso R, Borobia AM.** Advancing pharmacogenetic testing in a tertiary hospital: a retrospective analysis after 10 years of activity. *Front Pharmacol.* 2023; 14: 1292416. Article. IF: 4.4; Q1
- **Valle-Simón P, Borobia AM, Pérez-Martínez A.** Clinical research with targeted drugs in paediatric oncology. *Drug Discov Today.* 2023; 28(8): 103672. Review. IF: 6.5; D1
- **Zamarrón E, Carpio C, Villamañán E, Álvarez-Sala R, Borobia AM, Gómez-Carrera L, Buño A, Prados C.** Impact of systemic corticosteroids on hospital length of stay among patients with COVID-19. *Farm Hosp.* 2023; 47(2): 55-63. Article. IF: 1.0; Q4
- **Zamarrón E, Carpio C, Villamañán E, Álvarez-Sala R, Borobia AM, Gómez-Carrera L, Buño A, Prados MC.** Impact of systemic corticosteroids on length of hospitalization among patients with COVID-19. *Farm Hosp.* 2023; 47(2): T55-63. Article. IF: 1; Q4

Research projects

- **Borobia Pérez A.** AMASCIS-02. Alogenic adipose tissue-derived mesenchymal stem cells in ischemic stroke. A phase IIB multicenter double blind placebo controlled clinical trial (PIC18/00016). ISCI. 2019-2024. *Management centre: FIBHULP*
- **Borobia Pérez A.** Coordinación del ensayo clínico Ensayo multicéntrico, adaptativo, aleatorizado y controlado sobre la seguridad y eficacia de las estrategias antitrombóticas en adultos hospitalizados con COVID-19. New York University School of Medicine. 2020-Ongoing. *Management centre: FIBHULP*
- **Borobia Pérez A.** Corona Accelerated R&D in Europe (H2020-JTI-IMI2-2020-21-single-stage). UE. 2020-2025. *Management centre: FIBHULP*
- **Borobia Pérez A.** Ensayo clínico aleatorizado y multicéntrico para evaluar la efectividad y la eficiencia de una estrategia de genotipado an-



tipicado de voriconazol en pacientes con riesgo de aspergilosis (P118/01322). ISCIII. 2019-2023. *Management centre: FIBHULP*

- **Borobia Pérez A.** Ensayo clínico de fase II, comparativo, aleatorizado, adaptativo para evaluar la seguridad e inmunogenicidad de una dosis de cominarty® en sujetos que hayan recibido una dosis de vaxzeria (5859 CombiVacS). ISCIII. 2021-Ongoing. *Management centre: FIBHULP*
- **Borobia Pérez A.** ERA4HEALTH_Fostering a European Research Area for Health Research (ERA4HEALTH_ALBERTO BOROBIA). UE. 2023-2029. *Management centre: FIBHULP*
- **Borobia Pérez A.** European Regimen Accelerator for Tuberculosis - ERA4TB (H2020-JTI-IMI2-2018-15). UE. 2019-Ongoing. *Management centre: FIBHULP*
- **Borobia Pérez A.** LIVERATION_Unravelling the impact of radiofrequency in liver surgery: the key to decrease the local recurrence? (2023.417). UE. 2023-2028. *Management centre: FIBHULP*
- **Borobia Pérez A.** Marie Skłodowska-Curie Actions - Individual Fellow (CareInTrials). UE. 2019-2023. *Management centre: FIBHULP*
- **Borobia Pérez A.** Optimización del tratamiento de la dermatitis atópica con ciclosporina mediante el desarrollo de modelos multiómicos de predicción de respuesta (Proyecto DermAtOmics) (PI21/01219). ISCIII. 2022-2024. *Management centre: FIBHULP*
- **Borobia Pérez A.** Proyecto ipharmgx: estudio colaborativo nacional para evaluar la efecti-

dad y eficiencia de la implementación de biomarcadores farmacogenéticos mediante una estrategia de genotipado anticipado en el sns (PMP22/00055). ISCIII. 2023-2025. *Management centre: FIBHULP*

- **Borobia Pérez A.** Puesta en marcha del ensayo clínico: efficacy and safety of thrombectomy in stroke with extended lesion and extended time window: a randomized controlled trial (tension). ECRIN European Clinical Research Inf. 2021-Ongoing. *Management centre: FIBHULP*
- **Borobia Pérez A.** Puesta en marcha del ensayo clínico: test de gaxilosa en orina en niños de 5 a 11 años de edad: confirmación de la tolerabilidad de la dosis y del límite de normalidad de la cantidad de xilosa excretada en orina. Venter Pharma S.L. 2022-Ongoing. *Management centre: FIBHULP*
- **Borobia Pérez A.** Puesta en marcha del estudio: a randomized, double-blind, placebo-controlled, parallel-group, multicentre study of the efficacy and safety of nicotinamide in patients with friedreich's ataxia (nicofa). ECRIN European Clinical Research Inf. 2020-Ongoing. *Management centre: FIBHULP*
- **Borobia Pérez A.** Puesta en marcha del estudio: multi-centre, adaptive, randomized trial of the safety and efficacy of treatments of COVID-19 in hospitalized adults - discovery. ECRIN European Clinical Research Inf. 2022-Ongoing. *Management centre: FIBHULP*
- **Borobia Pérez A.** Puesta en marcha y realización del EE.CC.: ensayo clinico aleatorizado contro-

lado y simple ciego en mujeres con cancer de mama y linfadenectomia axilar, para evaluar la efectividad de hemopathcr en la reducción del drenaje seroso postquirúrgico (hvst-hemo-20). Asociación de Cirujanos de Mama de Toledo. 2021-Ongoing. *Management centre: FIBHULP*

- **Borobia Pérez A.** Puesta en marcha y realización del ensayo clínico: european discovery for solidarity: an adaptive pandemic and emerging infection platform trial. ECRIN European Clinical Research Inf. 2022-Ongoing. *Management centre: FIBHULP*
- **Borobia Pérez A.** Puesta en marcha y realización del ensayo clinico-proyecto acanto y proyecto facet. Fundación para ia Investigación Biomédica Hospital Universitario de Getafe. 2018-Ongoing. *Management centre: FIBHULP*
- **Borobia Pérez A.** Puesta en marcha y realización del estudio: apoyo metodológico, monitorización, farmacovigilancia y estadística y manejo de datos. ensayo clínico para la realización de la investigación clínica sobre una nueva tecnica diagnostica basada en pcr a tiempo real, para determinar la predisposición a infecciones en pacientes con infarto de miocardio, necesario para su aprobación regulatoria. Crazy Science & Business Sl. 2021-Ongoing. *Management centre: FIBHULP*
- **Borobia Pérez A.** Registro de pacientes atendidos en la unidad de farmacogenética del Hospital La Paz y análisis de la actividad realizada desde

su creación. Varios. 2017-Ongoing. *Management centre: FIBHULP*

- **Borobia Pérez A.** Tareas necesarias para la puesta en marcha y realización del ensayo clínico Treatment of high grade non-muscle invasive urothelial carcinoma of the bladder by standard number and dose of intravesical BCG instillations versus reduced number of intravesical instillations with standard dose of BCG, a european association of urology research foundation randomised phase iii clinical trial- nimbus. Fundación para la Investigación de la Asociación Europea de Urología. 2017-Ongoing. *Management centre: FIBHULP*
- **Borobia Pérez A.** Tareas necesarias para la puesta en marcha y realización del estudio observacional Estudio de evaluación y manejo del dolor agudo en Servicios de Urgencias hospitalarias e intervención educativa: estudio Edurg17. Laboratorio Menarini S.A. 2018-Ongoing. *Management centre: FIBHULP*
- **Borobia Pérez A.** ZODIAC Coordinación. Imperial College of Science, Technology and Medicine. 2023-2029. *Management centre: FIBHULP*
- **Carcas Sansuán AJ.** Dosificación individualizada de tacrolimus en trasplante renal pediátrico: desarrollo de modelos predictivos, simulaciones y aplicaciones basados en PBPk (ModSimTer-Tacro) (PI21/01507). ISCIII. 2022-2024. *Management centre: FIBHULP*
- **Carcas Sansuán AJ.** Eficacia a cuatro años de las vacunas COVID-19 frente a enfermedad graves e infecciones asintomáticas: estudio COVIDVAC @



3.6 Surgery, Transplant and Health Technologies Area

España (IC121/00065). ISCI. 2022-2024. *Management centre: FIBHULP*

- **Carcas Sansuán AJ.** Four-year effectiveness of covid-19 vaccines against severe disease and asymptomatic infection: the covidvac@spain study (PI-4877 COVIDVAC@SPAIN). FIBHULP. 2021-Ongoing. *Management centre: FIBHULP*
- **Carcas Sansuán AJ.** Identificación mediante diferentes estrategias ómicas, de biomarcadores que permitan la mejora en la individualización de tacrolimus en pacientes pediátricos con trasplante renal (PI18/00136). ISCI. 2019-2023. *Management centre: FIBHULP*
- **Carcas Sansuán AJ.** Unidad clínica de Investigación y Control de Ensayos Clínicos. CM. 2011-Ongoing. *Management centre: FIBHULP*
- **Frías Iniesta J.** Población en riesgo de hipertermia maligna: cohorte ambispectiva (PI20/01444). ISCI. 2021-2023. *Management centre: FIBHULP*
- **Frías Iniesta J.** VACCELERATE_European Corona Vaccine Trial Accelerator Platform (VACCELERATE_JESÚS FRÍAS). UE. 2021-2025. *Management centre: FIBHULP*
- **Murano Murano MC.** CAREINTRIALS_Care in clinical trials involving youth. Exploring vulnerability through empirical philosophy in a clinical trials unit. (CAREINTRIALS_M C MURANO). UE. 2021-2023. *Management centre: FIBHULP*

Cibers and Retics

- **Carcas Sansuán A.** Unidad de Investigación clínica y ensayos clínicos del Hospital Universitario La Paz (PT20/00036). ISCI. (31/12/2023). FIBHULP
- **Carcas Sansuán A.** European Clinical Research Infrastructures Network. (ECRIN). EU. (31/12/2023). FIBHULP
- **Carcas Sansuán A.** Plataforma ISCI de soporte para la Investigación Clínica (PTC20/00018). ISCI. (31/12/2023). FIBHULP

Clinical trials

- **Borobia Pérez A.** Estudio de fase 1, aleatorizado, doble ciego, controlado con placebo para evaluar la seguridad y la farmacocinética de dosis únicas ascendentes y múltiples dosis ascendentes de

cs6253 en voluntarios sanos y en portadores de apoe4.

Type/Phase: I

Sponsored by: Artery Therapeutics, Inc

Signed date: 01/08/2023

- **Borobia Pérez A.** Estudio de cohortes de fase 3b, no aleatorizado, abierto e internacional para describir la seguridad de las participantes que recibieron o la vacuna para inmunización materna rsvpref3 (cualquier dosis) o el placebo (grupo control) en los estudios rsv mat anteriores (rsv mat-001, rsv mat-004, rsv mat-010, rsv mat-011, rsv mat-009, rsv mat-012 y rsv mat-039), durante cualquier embarazo posterior a la vacunación con la vacuna rsvpref3 o el placebo.

Type/Phase: III

Sponsored by: Glaxosmithkline, S.A.

Signed date: 14/02/2023

- **Díaz García L.** Evaluación de la farmacocinética de la teicoplanina en pacientes pediátricos para la elaboración de un modelo farmacocinético poblacional.

Type/Phase: E0m prospectivo

Sponsored by: Díaz García Lucía

Signed date: 03/05/2023

- **Borobia Pérez A.** A phase i, single-centre, double-blind, randomized, placebo-controlled clinical trial to determine urinary xylose cut-off point for the diagnosis of hypolactasia, after a single dose of gaxilose in children between 5-11 years of age.

Type/Phase: I

Sponsored by: Venter Pharma SI

Signed date: 21/06/2023

- **García García I.** Optimization of atopic dermatitis treatment that requires second-line systemic therapy through multiomic predictive models of treatment response (dermatomics-ii).

Type/Phase: IV

Sponsored by: García García Irene

Signed date: 16/08/2023

- **Borobia Pérez A.** Estudio de fase III, multinacional, observador ciego, aleatorizado, controlado con placebo para demostrar la eficacia de una

dosis única, así como de dosis anuales de revacunación, de la vacuna en investigación rsvpref3 oa de gsk en adultos de 60 años o más de edad, con el número de protocolo 212494 (rsv oa=adj-006).

Type/Phase: III

Sponsored by: Glaxosmithkline, S.A.

Signed date: 12/06/2023

- **Borobia Pérez A.** Estudio de fase III, multinacional, observador ciego, aleatorizado, controlado con placebo para demostrar la eficacia de una dosis única, así como de dosis anuales de revacunación, de la vacuna en investigación rsvpref3 oa de gsk en adultos de 60 años o más de edad, con el número de protocolo 212494 (rsv oa=adj-006).

Type/Phase: III

Sponsored by: Glaxosmithkline, S.A.

Signed date: 10/08/2023

Patents and trademarks

- **Carcas Sansuán AJ, author; Carcas Sansuán AJ, assignee.** Brand name: IBJ IberoAmerican Journals. ESM 3.063.048; 2013 February 12.



- **Carcas Sansuán AJ, author; Carcas Sansuán AJ, assignee Brand name: IberoAmerican Journals Plus.** ESM 3.063.052; 2013 February 12.



- **Carcas Sansuán AJ, author; Carcas Sansuán AJ, assignee Brand name: IberoAmerican Journals Clinical Pharmacology.** ESM 3.063.053; 2013 February 12.



- **Carcas Sansuán AJ, author; Carcas Sansuán AJ, assignee Brand name: IberoAmerican Journals Medicine.** ESM 3.063.049; 2013 February 12.



- **Lapunzina Badía P, Borobia Pérez AM, Carcas Sansuán AJ, Tenorio Castaño JA, Arias Lajara P, Lubomirov Jristov R, authors; FIBHULP, UAM, assignees.** Brand name: PharmArray. USM 86.004.412, CM 11.608.403; 2013 July 08, 2013 February 27.



- **Carcas Sansuán AJ, Borobia Pérez AM, authors; FIBHULP, assignee.** Brand name: CRDataX. CM 13.681.614; 2015 May 28.



CRDataX

- **Lapunzina Badía PD, Borobia Pérez AM, Carcas Sansuán AJ, Tenorio Castaño JA, Arias Lajara P, Frías Iniesta J, Dapia García I, Muñoz M, authors; FIBHULP, UAM, assignees.** Brand name: ClinPharmarray., CM15489511; 2016 May 31, 2016 September 07.





3.6.4 Osteoarticular Surgery Research - GICOA Group

Publications:38 | Q1:8

COMPOSITION

Enrique Gómez Barrena.

Jefe de Sección de Cirugía Ortopédica y Traumatología. Hospital Universitario La Paz. Catedrático de Cirugía Ortopédica y Traumatología. Facultad de Medicina. Universidad Autónoma de Madrid

- **Samuel Antuña Antuña.** Jefe de Sección en Cirugía Ortopédica y Traumatología. Hospital Universitario La Paz. Profesor Asociado en Cirugía Ortopédica y Traumatología. Facultad de Medicina. Universidad Autónoma de Madrid
- **Raúl Barco Laakso.** Facultativo Especialista de Área en Cirugía Ortopédica y Traumatología. Hospital Universitario La Paz
- **Ana Cruz Pardos.** Jefe de Sección en Cirugía Ortopédica y Traumatología. Hospital Universitario La Paz
- **Marta Domínguez García-Simón.** Enfermera Coordinadora de Ensayos Clínicos. Universidad Autónoma de Madrid
- **Eduardo García Rey.** Facultativo Especialista de Área en Cirugía Ortopédica y Traumatología. Hospital Universitario La Paz. Profesor Asociado en Cirugía Ortopédica y Traumatología. Facultad de Medicina. Universidad Autónoma de Madrid
- **Pablo Hernández Esteban.** Facultativo Especialista de Área en Cirugía Ortopédica y Traumatología. Hospital Universitario La Paz
- **Carlos Agustín Hernández Gil.** Facultativo Especialista de Área en Cirugía Ortopédica y Traumatología. Hospital Universitario La Paz
- **Norma Griset Padilla Eguiluz.** Investigadora Predoctoral. Universidad Autónoma de Madrid
- **Carlos Emérito Rodríguez Merchán.** Jefe de Sección de Cirugía Ortopédica y Traumatología. Hospital Universitario La Paz
- **Juan Carlos Rubio Suárez.** Jefe de Sección en Cirugía Ortopédica y Traumatología. Hospital Universitario La Paz

STRATEGIC OBJECTIVE

- Orthopaedic implant studies are required to assess the results of implants, detect the causes of failure, and deepen our understanding of the prevention and solution of these failures. The medical, social, and economic relevance of orthopaedic implants, and their influence on quality of life, place this technology in the centre of translational research in orthopaedic surgery. Reconstruction based on biological strategies and biomaterials is rapidly evolving, and cutting edge research on these topics may offer an advantage in clinical translational research. The group has also developed studies on sports medicine and ligament reconstruction, with various outcome approaches and devices that may enhance surgical results. In this context, a multidisciplinary clinical and basic research group on orthopaedic surgery deepens our understanding of a wide variety of current research topics in the field and provides further progress towards clinical translation.
- In order to contribute to new advances in the field, our main clinical and experimental objectives are addressed by a joint research line that covers issues related to bone and joint reconstruction. These issues include the following:
 - Failed hip and knee prostheses, including the material, biological, and clinical mechanisms of failure. This research may lead to proposals for materials and design modifications in orthopaedic implants and reconstructive devices and techniques. Functional recovery of the patient is the ultimate goal, considering various scenarios from an experimental and clinical point of view.
 - Regenerative medicine approaches to bone and joint reconstruction, to generate preclinical and clinical proposals for bone and joint regeneration and repair, both in traumatic and non-traumatic bone and soft-tissue injuries.



RESEARCH LINES

- Clinical and basic research in Orthopaedics implants, and in bone and joint reconstruction



RESEARCH ACTIVITY

Publications

- **Antuña S.** Onlay versus inlay humeral components in reverse shoulder arthroplasty: A systematic review and meta-analysis Commentary. *Shoulder Elbow.* 2023; 15(1): 14. Editorial Material. IF: 1.5; Q3
- **Antuña S.** The Commentary. *Shoulder Elbow.* 2023; 15(1): 27. Editorial Material. IF: 1.5; Q3
- **Antuña S.** The Commentary. *Shoulder Elbow.* 2023; 15(1): 74. Editorial Material. IF: 1.5; Q3
- **Antuña S.** The Commentary. *Shoulder Elbow.* 2023; 15(1): 82. Editorial Material. IF: 1.5; Q3
- **Antuña S.** Commentary Samuel Antuna. *Shoulder Elbow.* 2023; 15(1): 93. Editorial Material. IF: 1.5; Q3
- **Antuña S.** The Commentary. *Shoulder Elbow.* 2023; 15(1): 104. Editorial Material. IF: 1.5; Q3
- **Antuña SA, Raganato R, Dopico LR, Barco R.** Influence of Coronoid fixation on the functional outcome and rate of complications in surgically treated acute complex elbow instability. *Injury.* 2023; 54: 110892. Article. IF: 2.2; Q3
- **Barco R, González-Escobar S, Acerboni-Flores F, Vaquero-Picado A.** Acute elbow dislocation: a critical appraisal of the literature. *JSES Int.* 2023; 7(6): 2560-4. Review. Not indexed
- **Blázquez-Ramos N, Romero-Garrido JA, del Valle LG, Collada-Sánchez VL, Álvarez-Román MT, Jiménez-Yuste V, Martín-Salces M, de la Corte-Rodríguez H, Herrero-Ambrosio A, Benedi-González J, Rodríguez-Merchan EC.** Development of a telematic pharmaceutical care app (Haemoassist) for multidisciplinary follow-up of patients with congenital coagulopathies. *Expert Rev Hematol.* 2023; 16(3): 213-26. Article. IF: 2.3; Q2
- **de la Corte-Rodríguez H, Rodríguez-Merchan EC.** Chronic pain in haemophilia: assessment and analgesic treatment. *Blood Coagul Fibrin.* 2023; 34: S1-4. Article. IF: 1.2; Q4
- **de la Corte-Rodríguez H, Román-Belmonte JM, Rodríguez-Damiani BA, Vázquez-Sasot A, Rodríguez-Merchán EC.** Extracorporeal shock

- wave therapy for the treatment of musculoskeletal pain: a narrative review. *Healthcare (Basel).* 2023; 11(21): 2830. Review. IF: 2.4; Q2
- **de Pablo-Moreno JA, Miguel-Batuecas A, Rodríguez-Merchán EC, Liras A.** Treatment of congenital coagulopathies, from biologic to biotechnological drugs: The relevance of gene editing (CRISPR/Cas). *Thromb Res.* 2023; 231: 99-111. Review. IF: 3.7; Q1
- **Encinas-Ullán CA, de la Corte-Rodríguez H, Gomez-Cardero P, Rodríguez-Merchan EC.** Orthopedic surgical procedures in people with hemophilia. *Blood Coagul Fibrin.* 2023; 34: S5-8. Article. IF: 1.2; Q4
- **Gallego JA, Pardos AC, Luque JG, Rubio LEC, Fernández RF.** Dislocation and survival rate of dual mobility cups in revision total hip arthroplasty in patients with high risk of instability. *Int Orthop.* 2023; 47(7): 1757-64. Article. IF: 2.0; Q2

- **García-Maya B, Morais S, Díez-Sebastian J, Antuña S, Barco R.** Drain use can be avoided in reverse shoulder arthroplasty. *Injury.* 2023; 54: 111041. Article. IF: 2.2; Q3
- **García-Maya B, Morais S, Díez-Sebastián J, Antuña S, Barco R.** The efficacy of topical tranexamic acid in reverse shoulder arthroplasty. *Rev Esp Cir Ortop Traumatol.* 2023; 67(5): 387-93. Article. Not indexed
- **García-Maya B, Pérez-Barragans F, Gálvez JRL, Gallego JP, Vaquero-Picado A, Barco R, Antuña S.** Percutaneous plate fixation of displaced proximal humerus fractures: Do minimally invasive techniques improve outcomes and reduce complications? *Injury.* 2023; 54: 111042. Article. IF: 2.2; Q3
- **Grupp TM, Rusch S, Massin P, Blom A, García-Rey E, Cristofolini L, Janssen D, Grimm B, Giurea A, Jaeger M, Siccaldi F, Overgaard S.**

- 1st EFORT European Consensus medical & scientific research requirements for the clinical introduction of artificial joint arthroplasty devices: background, delphi methodology & consensus process. *EFORT Open Rev.* 2023; 8(7): 499-508. Article. IF: 4.3; D1
- **Gruson KI, Tabeayo E, Stallone S, Bedeir YH, Rodríguez-Merchán EC.** Musculoskeletal literacy in orthopedics: associated factors, effects on patient-physician communication and intervention strategies. *Arch Bone Jt Surg.* 2023; 11(4): 227-35. Review. IF: 1.2; Q3
- **Li JT, Wu GF, Xu CH, Cai ZN, Ji JL, Yu ZY, Zhang J, Wang JL, Rodríguez-Merchan EC.** Slit guidance ligand 3 (SLIT3) loaded in hydrogel micro-particles enhances the tendon-bone healing through promotion of type-h vessel formation: an experimental study in mice. *Int J Mol Sci.* 2023; 24(17): 13638. Article. IF: 4.9; Q1





- **Rodríguez-Merchán EC.** In the era of primary prophylaxis in hemophilia, what types of orthopedic surgical interventions have been published in the 2020-2023 period and in which countries? *Expert Rev Hematol.* 2023; 16(12): 1077-85. Review. IF: 2.3; Q2
- **Rodríguez-Merchán EC.** Total elbow arthroplasty in hemophilia: a high-risk surgical procedure. *Expert Rev Hematol.* 2023; 16(12): 911-3. Editorial Material. IF: 2.3; Q2
- **Rodríguez-Merchán EC.** The role of intraarticular injections of hyaluronic acid in joint pain relief in hemophilic arthropathy. *Expert Rev Hematol.* 2023; 16(11): 811-7. Article. IF: 2.3; Q2
- **Rodríguez-Merchán EC.** Pharmacological thromboprophylaxis in people with hemophilia experiencing orthopedic surgery: what does the literature say in 2023? *J Clin Med.* 2023; 12(17): 5574. Review. IF: 3.0; Q1
- **Rodríguez-Merchán EC.** Hemophilic arthropathy: how to diagnose subclinical bleeding early and how to orthopedically treat a damaged joint. *Expert Rev Hematol.* 2023; 16(9): 651-8. Review. IF: 2.3; Q2
- **Rodríguez-Merchán EC.** Point-of-care ultrasonography can help detect subclinical hemarthrosis in hemophilic patients undergoing regular optimal clotting factor prophylaxis to achieve zero bleeding. *Expert Rev Hematol.* 2023; 16(8): 565-6. Editorial Material. IF: 2.3; Q2
- **Rodríguez-Merchán EC.** Synovitis in hemophilia: preventing, detecting, and treating joint bleeds. *Expert Rev Hematol.* 2023; 16(7): 525-34. Review. IF: 2.3; Q2
- **Rodríguez-Merchán EC.** Recent advances in orthopedic surgery for sports injuries. *Arch Bone Jt Surg.* 2023; 11(2): 102-5. Article. IF: 1.2; Q3
- **Rodríguez-Merchán EC.** Intra-articular injection of platelet-rich plasma in patients with hemophilia and painful knee joint cartilage degeneration. *Expert Rev Hematol.* 2023; 16(6): 407-16. Review. IF: 2.3; Q2
- **Rodríguez-Merchán EC.** The current role of disease-modifying osteoarthritis drugs. *Arch Bone Jt*

Surg. 2023; 11(1): 11-22. Review. IF: 1.2; Q3

- **Rodríguez-Merchán EC, Delgado-Martínez AD, de Andrés-Ares J.** Upper limb and lower limb radiofrequency treatments in orthopaedics. *EFORT Open Rev.* 2023; 8(6): 424-35. Article. IF: 4.3; D1
- **Rodríguez-Merchán EC, Di Minno MND, Pasta G.** Pain care management in rare diseases. *Healthcare (Basel).* 2023; 11(19): 2628. Article. IF: 2.4; Q2
- **Rodríguez-Merchán EC, Kachooei AR, Tabeayo E.** Elbow arthroplasty: A concise literature update. *Arch Bone Jt Surg.* 2023; 11(7): 465-72. Article. IF: 1.2; Q3
- **Rodríguez-Merchán EC, Tabeayo-Álvarez ED, Shojaie B, Kachooei AR.** Total wrist arthrodesis: An update on indications, technique and outcomes. *Arch Bone Jt Surg.* 2023; 11(3): 144-53. Review. IF: 1.2; Q3
- **Román-Belmonte J, Rodríguez-Merchán EC, de la Corte-Rodríguez H.** Metaverse applied to musculoskeletal pathology: Orthoverse and Rehabverse. *Postgrad Med.* 2023; 135(5): 440-8. Review. IF: 2.6; Q1
- **Sánchez BD, Barco R, Antuña SA.** Radial head replacement for acute complex elbow instability: a long-term comparative cohort study of 2 implant designs. *J Shoulder Elb Surg.* 2023; 32(12): 2581-9. Article. IF: 2.9; Q1
- **Tabayo E, Saucedo JM, Srinivasan RC, Shah AR, Karamanos E, Rockwood J, Rodríguez-Merchán EC.** Bridge plating in the setting of radiocarpal instability: Does distal fixation to the second or third metacarpal matter? A cadaveric study. *World J Orthop.* 2023; 14(4): 207-17. Article. IF: 2.0; Q2
- **Yeom DC, Hwang DJ, Lee WB, Cho JY, Koo JH, Rodríguez-Merchán EC.** Effects of low-load, high-repetition resistance training on maximum muscle strength and muscle damage in elite weightlifters: a preliminary study. *Int J Mol Sci.* 2023; 24(23): 17079. Article. IF: 4.9; Q1

Research projects

- **Barco Laakso R.** Artoplastia de cabeza radial anatómica versus espaciador de metal de vástago liso para traumatismo de codo. *Médical Simulator S. L.* 2018-Ongoing. *Managment centre: FIBHULP*
- **Barco Laakso R.** Morfología radiocapitelar, un estudio anatómico. *Acumed LLC.* 2018-Ongoing. *Managment centre: FIBHULP*
- **Barco Laakso R.** Terapia celular con células troncales derivadas del tejido adiposo (ASC) para mejorar el proceso de reparación en suturas tendinosas. Unión tendón-hueso (roturas del manguito rotador); unión tendón-músculo (roturas del tendón de aquiles). *Sociedad Española de Cirugía Ortopédica y Traumatología.* 2009-Ongoing. *Managment centre: FIBHULP*
- **García Rey E.** Identificación de factores moleculares implicados en la Osteonecrosis Idiopática: análisis del transcriptoma del tejido óseo (PI18/00643). *ISCIII.* 2018-2023. *Managment centre: FIBHULP*
- **Gómez Barrena E.** Desinfección in vivo de implantes ortopédicos metálicos mediante calor generado por inducción electromagnética. *Fundación Mutua Madrileña.* 2020-2024. *Managment centre: FIBHULP*
- **García Rey E.** Osteonecrosis de cabeza femoral: identificación de alteraciones en el hueso trabecular, correlación clínica y factores de riesgo en la fijación de la prótesis total de cadera (PI22/00939). *ISCIII.* 2023-2025. *Managment centre: FIBHULP*
- **Barco Laakso R.** Traumatic and neurogenic joint contracture in an experimental model in the Rat: preventive role of Celecoxib and Ketotifen. *European Society for Surgery of the Shoulder and the Elbow.* 2023-Ongoing. *Managment centre: FIBHULP*

Patents and trademarks

- **Arenas Vara MA, Conde del Campo A, De Damborenea González JJ, Matykina E, Esteban Moreno J, Gómez Barrena E, Pérez-Jorge Peremarch C, Pérez Tanoira R, inventors; CSIC, Instituto de Investigación Sanitaria Fundación Jiménez Díaz, assignees.** Titanium materials anodised with fluorine. P201030720, PCT/ES2011/070342; 2010 May 14
- **Gomez Barrena E, Cordero García-Galán E, Rico Nieto A, Pozo JJ, Esteban Moreno J, Sar-nago H, Lucía Gil O, Acero Acero J, Burdío JM.** Portable disinfection system based on induction heating; September 2022.



3.6.5 Translational Research in Maxillofacial Surgery and Head and Neck Cancer Group

Publications:5 | Q1:2

COMPOSITION

José Luis Cebrián Carretero.

Jefe de Servicio de Cirugía Oral y Maxilofacial. Hospital Universitario La Paz

- **Ana Sastre Perona.** Investigadora senior. FIBHULP
- **Lucía Acero Riaguas.** Investigadora Predoctoral. FIBHULP
- **Estefanía Alonso Rodríguez.** Facultativo Especialista de Área en Cirugía Oral y Maxilofacial. Hospital Universitario La Paz
- **Íñigo Aragón Niño.** Médico Interno Residente de Cirugía Oral y Maxilofacial. Hospital Universitario La Paz
- **Sara María Fernández Díaz.** Técnico de Grado Superior. FIBHULP
- **Javier González Martín-Moro.** Facultativo Especialista de Área en Cirugía Oral y Maxilofacial. Hospital Universitario La Paz
- **Ana Belén Griso Acevedo.** Investigadora Predoctoral. FIBHULP
- **José Luis del Castillo Pardo de Vera.** Facultativo Especialista de Área en Cirugía Oral y Maxilofacial. Hospital Universitario La Paz
- **Pedro Manuel Losa Muñoz.** Facultativo Especialista de Área en Cirugía Oral y Maxilofacial. Hospital Universitario La Paz
- **Marta Mascarque Checa.** Investigadora Postdoctoral. Contrato Sara Borrel. FIBHULP
- **María José Morán Soto.** Facultativo Especialista de Área en Cirugía Oral y Maxilofacial. Hospital Universitario La Paz
- **Marta María Pampín Martínez.** Facultativo Especialista de Área en Cirugía Oral y Maxilofacial. Hospital Universitario La Paz
- **César Pérez-Pérez Brotons.** Bioinformático. FIBHULP
- **Elena Ruiz Bravo-Bruguillos.** Facultativo Especialista de Área en Anatomía Patológica. Hospital Universitario La Paz
- **Alejandro San Lorenzo Vaquero.** Investigadora Predoctoral. FIBHULP
- **Rocío Sánchez Siles.** Investigadora Predoctoral. FIBHULP



STRATEGIC OBJECTIVE

- To improve the diagnosis and surgical treatment of patients with Oral Cancer using the latest technologies applied to the field of Head and Neck Oncology planning and treatment. Our goal is to establish a workflow in which technological and technical advances are included as part of the treatment protocol for patients with oral cavity cancer.
- The identification of biomarkers of cancer progression and therapy response in head and neck cancers (HNC). HNC are low frequent tumors with poor outcome and limited treatment options. This is due to a poor understanding on the initial steps in tumor initiation and progression, and the implication of the tumor microenvironment in these processes. Using mouse models and novel patient derived organoid models, we are defining the mechanism driving the most aggressive HNC and developing this knowledge into translational tools to guide patient management. In addition, we are applying novel functional genomics to identify genes involved in driving resistance to chemo and targeted therapies, to uncover biomarkers of treatment response and new therapeutic targets. Overall, our goal is to improve patient survival and to increase patient life quality.

RESEARCH LINES

1. Epigenetic characterization of oral tumors and their association with resistance to chemotherapies and immunotherapies, identification of new biomarkers that predict response: Oral squamous cell carcinomas are an aggressive type of HNC with 370.000 cases per year and 50% 5-year survival rate. This is due to the lack of understanding of the biology of the disease and, in consequence, sufficiently efficient therapies. In this line, we are carrying out an epigenetic characterization of these tumors, analyzing characteristics such as their transcriptome and enhancer landscape using novel massive sequencing techniques on patient samples. Through bioinformatics analysis and monitoring the evolution of patients, we uncovered a population of cancer cells that associates with the most aggressive cancers and predicts patients with worse outcomes. Currently we are evaluating the translational impact of these findings. This research line is funded by CP19/00063 and PI20/00329 (ISCIII) and a Luis Álvarez PI5102 grant (FIBHULP).
2. Search for vulnerabilities in oral carcinoma cells using functional genomics. To define the vulnerabilities of tumor cells, our group has established CRISPR/Cas9 screens to evaluate the function of genes involved in the response to different therapies such as chemotherapies or immunotherapies. These screens, which target all protein-coding genes, are allowing us to identify in an unbiased way mechanisms of action that will allow us to understand how cells survive chemotherapy or how they are able to escape the action of the immune system. In this way, we will be able to reuse drugs already approved for these targets or design new ones that will allow us to improve the quality of life of patients with oral tumors. This research line is funded by CP19/00063 and PI20/00329 (ISCIII).



3. The implication of the tumor microenvironment in the acquisition of metastatic capacity of oral tumors. In this research line we are analyzing the connection between tumor microenvironment and the induction cancer progression programs. To this end, we are using novel co-cultures of paired organoids and TME cells from patients and measuring the influence at the level of chromatin remodeling and gene expression. This research is financed by an international competitive grant funded by the Worldwide cancer research and Scientific Foundation of the "Asociación Española Contra el Cáncer" (WWRC-23-0272), and FIBHULP Luis Álvarez grant.
4. Salivary glands malignancies. Salivary gland tumors are rare tumors that account for 5% of head and neck tumors. Their histological diversity and the lack of knowledge of the molecular basis of the disease make their treatment complex. Using NGS techniques we are characterizing the mutations, methylation profiles and tumor heterogeneity of these tumors to identify biomarkers of progression, mutations with targeted therapies and possible targets within the tumor microenvironment. Funding P122/01512, (ISCIII) and Gilead (GLD22/00166).
5. Study of mechanism of initiation and progression of cutaneous squamous cell carcinoma (cSCC): In this research line, we are exploring the function of several tumor suppressor genes and how their loss of expression affects the composition on the tumor microenvironment and the response to therapy. This project is done in collaboration with L. Sastre, at IIBM Alberto Sols.
6. Application of 3D Medicine in the planning and treatment of head and neck cancer. Virtual design and segmentation of facial structures for generation of biomodels, cutting guides and custom implants. Surgery and personalized medicine. Mutua Madrileña 2022 grant funding.
7. Use of radiotracers and fluorescence with indocyanine green for sentinel node detection in squamous tumors and melanoma of the head and neck.

RESEARCH ACTIVITY

Master theses

- **Ibáñez Herrera B.** Caracterización del papel del gen DUSP1 en la progresión de cáncer escamoso de glándula salival [dissertation]. *Madrid: UCM: 2023(03/01/2023). Director: Sastre Perona A.*

Final Degree Theses

- **San Lorenzo A.** Regulación de la transición epitelio mesénquima parcial en cáncer oral: el papel de TGFβ y los fibroblastos asociados al cáncer [dissertation]. *Madrid: UAM: 2023(14/06/2023). Director: Sastre Perona A.*
- **López García I.** Identificación de mecanismos de resistencia a quimioterapias en tumores de cabeza y cuello [dissertation]. *Madrid: UAM: 2023(30/06/2023). Director: Sastre Perona A.*

Publications

- **Burdíel M, Jiménez J, Rodríguez-Antolín C, García-Guede A, Pernía O, Sastre-Perona A, Rosas-Alonso R, Colmenarejo J, Rodríguez-Jiménez C, Diestro MD, Martínez-Marín V, Higuera O, Cruz P, Losantos-García I, Peinado H, Vera O, de Castro J, de Cáceres II.** MiR-151a: a robust endogenous control for normalizing small extracellular vesicle cargo in human cancer. *Biomark Res.* 2023; 11(1): 94. Letter. IF: 9.5; D1
- **Cuéllar CN, Urmeneta AS, Marcos RL, Antúnez-Conde R, López AL, de Vera JLDP, Martín-Moro JG, Carretero JLC, Serrano FA, Orabona GD, Zamorano-León JJ, Cuéllar IN.** Prognostic value of lymph node density in lingual squamous cell carcinoma. *Appl Sci(Basel).* 2023; 13(9): 5611. Article. IF: 2.5; Q2
- **Cuéllar IN, Alonso SE, Serrano FA, Herrera IH, León JJ, de Vera JLDP, López AML, Muela CM, de Frutos GA, Caicoya SO, Rial MT, Sevilla AG, Antúnez-Conde R, Carretero JLC, Alonso MIGH, Escobar JIS, García MB, Vila CN, Cuellar CN.** Depth of invasion: Influence of the latest TNM classification on the prognosis of clinical early stages of oral tongue squamous cell carcinoma and its association with other histological risk factors. *Cancers (Basel).* 2023; 15(19): 4882. Article. IF: 4.5; Q1
- **de Vera JLDP, Calleja JMLA, Albertos CSG, de Cavallos JGD, Carretero JLC.** Wooden clothes' pin

- device for trismus treatment. *Brit J Oral Max Surg.* 2023; 61(2): 181-2. Editorial Material. IF: 1.7; Q3
- **de Vera JLDP, Martínez MP, Niño IA, Blanco MB, Carretero JLC.** Temporomandibular joint meniscopexy using the JuggerKnot® Soft Anchor System. *Brit J Oral Max Surg.* 2023; 61(4): 327-8. Article. IF: 1.7; Q3

Research projects

- **Cebrián Carretero JL.** Identificación de nuevos biomarcadores de predicción de progresión en pacientes con tumores adenoides císticos y ductales de glándula salivar (P122/01512). ISCIII. 2023-2025. *Management centre: FIBHULP*
- **del Castillo Pardo de Vera JL.** Determinación de la relación causal entre el empleo de bifosfonatos y el desarrollo de osteonecrosis en los maxilares. Aplicación de células madre mesenquimales para su tratamiento sobre modelo experimental animal. Varios Financiadores. 2015-Ongoing. *Management centre: FIBHULP*
- **del Castillo Pardo de Vera JL.** Expresión de moléculas inmunoreguladoras pd1/ pd-l1 en el carcinoma oral de células escamosas. Osteoplac Innovations S.L.U.. 2021-Ongoing. *Management centre: FIBHULP*
- **del Castillo Pardo de Vera JL.** Repositorio de biomodelos en traumatología: una biblioteca 3D multidisciplinar y colaborativa (AP180652022). Fundación Mutua Madrileña. 2022-2024. *Management centre: FIBHULP*
- **Sastre Perona A.** Contrato garantía juvenil Ayudante de Investigación (PEJ-2020-AI/BMD-17846). CM. 2021-2023. *Management centre: FIBHULP*
- **Sastre Perona A.** Contrato garantía juvenil Ayudante de Investigación (PEJ-2023-AI/SAL-GL-27700). CM. 2023-2025. *Management centre: FIBHULP*
- **Sastre Perona A.** Contrato garantía juvenil Técnico (PEJ-2021-TL/BMD-21631). CM. 2022-Ongoing. *Management centre: FIBHULP*
- **Sastre Perona A.** Desarrollo de herramientas predictivas y terapéuticas para combatir la resistencia a cisplatino en carcinomas escamosos de cabeza y cuello (PI20/00329). ISCIII. 2021-2023. *Management centre: FIBHULP*
- **Sastre Perona A.** Desarrollo de métodos de predicción de la respuesta a inmunoterapia en tumores orales. (PI-5102). FIBHULP. 2022-Ongoing. *Management centre: FIBHULP*

- **Sastre Perona A.** Developing therapeutic and predictive tools to overcome cisplatin resistance in head and neck squamous cell carcinomas (CP19/00063). ISCIII. 2020-2023. *Management centre: FIBHULP*
- **Sastre Perona A.** Dinamización de Ciencia Disruptiva en Predictores de Enfermedades tumorales, infecciosas y hereditarias como base de la Medicina Personalizada (FORT23/00006). ISCIII. 2024-2027. *Management centre: FIBHULP*
- **Sastre Perona A.** Integración de las características moleculares, genómicas, morfológicas, y ambientales para mejorar el diagnóstico y tratamiento de precisión en enfermedades pulmonares intersticiales difusas fibrosantes(PRECISION-EPID) (PMP22/00083). ISCIII. 2023-2025. *Management centre: FIBHULP*
- **Sastre Perona, A.** Contrato Sara Borrel (CD23/00167). ISCIII. 2024-2026. *Management centre: FIBHULP*
- **Sastre Perona, A.** Defining CAF-induced tumor cell plasticity as a positive switch for tumor progression and therapy resistance. (WWCR-23-0272). Worldwide Cancer Research AECC. 2023-2025. *Management centre: CSIC*

Clinical trials

- **Cebrián Carretero JL.** A randomized, double-blind, multi-center, placebo-controlled, parallel-group phase 3 study to compare the efficacy, acceptability, and safety of tranexamic acid oral solution with placebo in the prevention of clinically relevant bleeding events in subjects treated with direct oral anticoagulants or vitamin k antagonists and undergoing a single or multiple tooth extraction.
Type/Phase: III
Sponsored by: Hyloris Developments S.A.
Signed date: 18/10/2023
- **Cebrián Carretero JL.** Ensayo clínico aleatorizado, doble ciego, controlado con placebo y con tratamiento activo, para evaluar la eficacia analgésica y la seguridad de una combinación oral de ibuprofeno (arginina)-tramadol hcl administrada a pacientes con dolor moderado a severo tras someterse a cirugía dental.
Type/Phase: III
Sponsored by: Farmalider S.A.
Signed date: 17/04/2023



3.6.6 Patients Safety and Quality Research Group

Publications:19 | Q1:8

COMPOSITION

Elena Ramírez García.

Facultativo Especialista de Área en Farmacología Clínica. Hospital Universitario La Paz

- **Miguel Avenza Jaén.** Fisioterapeuta. Hospital Universitario La Paz
- **Nelson Butrago Sánchez.** Facultativo Especialista de Área en Radiología Pediátrica. Hospital Universitario La Paz
- **Luis Castro Parga.** Facultativo Especialista en Anestesiología y Reanimación. Hospital Universitario La Paz
- **Susana Francisca Chajma Izquierdo.** Facultativo Especialista en Medicina Física y Rehabilitación. Hospital Universitario La Paz
- **Pilar Durán de la Fuente.** Facultativo Especialista en Anestesiología y Reanimación. Hospital Universitario La Paz
- **María Fernández-Velilla Peña.** Facultativo Especialista en Radiología. Hospital Universitario La Paz
- **Miguel González Muñoz.** Facultativo Especialista de Área en Inmunología. Hospital Universitario La Paz
- **Alberto Martín Vega.** Facultativo Especialista de Área en Medicina Preventiva y Salud Pública. Hospital Universitario La Paz
- **Bárbara Martínez de Miguel.** Facultativo Especialista en Radiofarmacia. Hospital Universitario La Paz
- **Ana Isabel Martínez Escandell.** Unidad Hospitalización Quirúrgica. Hospital Universitario La Paz
- **Covadonga Mendieta Azcona.** Facultativo Especialista en Cirugía Vascolar. Hospital Universitario La Paz



- **Inés Narrillos Martín.** Enfermera en Cirugía general y del aparato digestivo. Hospital Universitario La Paz
- **José Jonay Ojeda Feo.** Facultativo Especialista de Área en Medicina Preventiva y Salud Pública. Hospital Universitario La Paz
- **Paola Andrea Parra Ramírez.** Facultativo Especialista de Área en Endocrinología y Nutrición. Hospital Universitario La Paz
- **Almudena Quintas Viqueira.** Médico Adjunto en Medicina Preventiva. Hospital Universitario La Paz
- **Ana Robustillo Rodela.** Jefe de Servicio de Medicina Preventiva. Hospital Universitario La Paz
- **Pascual Sanabria Carretero.** Jefe de Sección Anestesiología Infantil. Hospital Universitario La Paz
- **Yuri Fabiola Villán Villan.** Responsable de Seguridad del Paciente. Hospital Universitario La Paz

STRATEGIC OBJECTIVE

- The occurrence of adverse events due to unsafe care is likely one of the 10 leading causes of death and disability in the world. Research into reducing harm to patients can lead to better health outcomes, as well as significant savings in healthcare costs.
- Patient safety is the health care discipline that arises with the increasing complexity of health care systems and the consequent increase in harm to patients. Its objective is to prevent and reduce the risks, errors and damages suffered by patients during the provision of healthcare. A cornerstone of the discipline is continuous improvement based on learning from mistakes and adverse events.

RESEARCH LINES

- Culture of Patient Safety.
- Incident reporting system for notification and analysis of adverse events associated to Healthcare.
- Zero Infections related to Healthcare.
- Safe Surgery Saves Lives, whose purpose is to reduce the risks associated with surgery.
- Safe Medication, reduce the harm of medications.
- Zero venous thromboembolism, in order to reduce complications attributed to hospitalization.
- Safe Health Worker, Safe patients.
- Safe Transfusions, reduce adverse reactions to transfusion.
- Safe Radiations, to the right patient in the right area.
- Safe Diagnostics, reduce errors that can cause harm.
- Septicemia as a medical emergency.



RESEARCH ACTIVITY

Publications

- Araujo-Castro M, Fano MP, Boillos MG, Pascual-Corrales E, Cano AMG, Ramírez PP, Rojas-Marcos PM, Delgado AV, Casteràs A, Puig A, Sanz IG, Guardiola PD, Lazaro CR, Núñez MAS, Guerrero-Vázquez R, Tous MD, Alevras TM, Rodrigo ST, Hanzu FA. Diagnostic accuracy of adrenal iodine-131 6-beta-iodomethyl-19-nor-cholesterol scintigraphy for the subtyping of primary aldosteronism. *Biomedicines*. 2023; 11(7): 1934. Article. IF: 3.9; Q2
- Araujo-Castro M, Fano MP, Peris BP, Boillos MG, Pascual-Corrales E, Cano AMG, Ramírez PP, Rojas-Marcos PM, Ruiz-Sánchez JG, Delgado AV, Hoyos EG, Ferreira R, Sanz IG, Sala MR, San Millán RB, César MJP, Guardiola PD, Perdomo CM, Miguélez LM, Centeno RG, Percovich JC, Román AR, Gimeno PG, Lázaro CR, Morales-Ruiz M, Gutiérrez MC, Collao SAF, Meneses D, Núñez MAS, Quesada VE, Ribas EM, Sánchez AS, Díaz CG, Lamas C, Guerrero-Vázquez R, Tous MD, Gotarredona JS, Alevras TM, Mateo EMM, Hanzu FA. Prevalence, risk factors and evolution of diabetes mellitus after treatment in primary aldosteronism. Results from the SPAIN-ALDO registry. *J Endocrinol Invest*. 2023; 46(11): 2343-52. Article. IF: 3.9; Q2
- Araujo-Castro M, Fano MP, Peris BP, Boillos MG, Pascual-Corrales E, García-Cano AM, Ramírez PP, Rojas-Marcos PM, Ruiz-Sánchez JG, Vicente A, Gómez-Hoyos E, Ferreira R, Sanz IG, Recasens M, San Millán RB, César MJP, Guardiola PD, Perdomo C, Manjón L, García-Centeno R, Percovich JC, Román AR, Gimeno PG, Lázaro CR, Morales M, Calatayud M, Collao SAF, Meneses D, Nuñez MAS, Quesada VE, Ribas EM, Sánchez AS, Díaz CG, Lamas C, Guerrero-Vázquez R, Tous MD, Serrano J, Michalopoulou T, Mateo EMM, Hanzu F. Autonomous cortisol secretion in patients with primary aldosteronism: prevalence and implications on cardiometabolic profile and on surgical outcomes. *Endocr Connect*. 2023; 12(9): e230043. Article. IF: 2.6; Q3
- Araujo-Castro M, Ojeda CM, Sanz IG, Calatayud M, Hanzu F, Mora M, Vicente A, Carrera CB, Novoa PD, García MDL, Lamas C, Manjón-Miguélez L, Tous MD, de Vera PR, Millán RBS, Recasens M, Fernández-Ladreda MT, Valdés N, Gimeno PG, Lazaro CR, Michalopoulou T, Ramírez PP, Marazuela M, Escolá CA, Centeno RG. Genetic study in pheochromocytoma: is it possible to stratify the risk of hereditary pheochromocytoma? *Neuroendocrinology*. 2023; 113(6): 657-66. Article. IF: 3.2; Q2
- Araujo-Castro M, Pascual-Corrales E, Rojas PM, Ramírez PP. Primary aldosteronism: Practical recommendations for treatment and follow-up. *Hipertens Riesgo Vasc*. 2023; 40(4): 215-21. Review. IF: 1.2; Q3
- de la Puente S, Espinosa Gongora R, Souto Romero H, Rico Espineira C, Luis Huertas A L, Garces Visier C, Ramos Rodríguez P, Muñoz Hernández D, Espinoza Vega M L, Acedo Ruiz J A, Maruszewski P, Rinon C, Morato Robert P, Palomino L, Velasco M, Martín Vega A, Alonso Calderón J L. Pediatric perianal Crohn's disease behavior in the era of biologic therapy. *Acta Pediatr*. 2023; 36(1): 22-7. Article. Not indexed
- Herrera-Martínez AD, Román AR, Corrales EP, Idrobo C, Ramírez PP, Rojas-Marcos PM, Lázaro CR, Marginean DL, Araujo-Castro M. Adrenal incidentalomas and other endocrine-related adenomas: how much does cortisol secretion matter? *Cancers (Basel)*. 2023; 15(19): 4735. Article. IF: 4.5; Q1
- Mariscal-Aguilar P, Gómez-Carrera L, Carpio C, Zamarrón E, Bonilla G, Fernández-Velilla M, Torres I, Esteban I, Regojo R, Díaz-Almirón M, Gayá F, Villamañán E, Prados C, Álvarez-Sala R. Relationship between air pollution exposure and the progression of idiopathic pulmonary fibrosis in Madrid: Chronic respiratory failure, hospitalizations, and mortality. A retrospective study. *Front Public Health*. 2023; 11: 1135162. Article. IF: 3.0; Q2
- Molina LD, Gallego LYB, Nozal P, Soto-Serrano Y, Martínez-Feito A, Reche-Yebra K,



- González-Torbay A, de la Cámara RCM, Gianelli C, Cámara C, González-García J, González-Muñoz M, Rodríguez-Pena R, Granados EL.** Detection of specific RBD+ IgG+ memory B cells by flow cytometry in healthcare workers and patients with inborn errors of immunity after BNT162b2 mRNA COVID-19 vaccination. *Front Immunol.* 2023; 14: 1136308. Article. IF: 5.7; Q1
- **Nin-Valencia A, Domínguez-Ortega J, Cabañas R, Sánchez H, Fiandor A, Lluch M, Ramírez E, Gómez-Traseira C, Rodríguez A, González-Muñoz M.** The lymphocyte transformation test in delayed hypersensitivity reactions induced by ibuprofen and/or metamizole. *J Invest Allerg Clin.* 2023; 33(1): 52-3. Editorial Material. IF: 6.1; Q1
 - **Nin-Valencia A, Fiandor A, Lluch M, Quirce S, Caballero T, Heredia RR, González-Muñoz M, Caballero ML, Cabañas R.** Safe administration of SARS-CoV-2 vaccine after desensitization to a biologic containing polysorbate 80 in a patient with polyethylene glycol-induced severe anaphylaxis and sensitization to polysorbate 80. *J Invest Allerg Clin.* 2023; 33(2): 151-3. Article. IF: 6.1; Q1
 - **Plasencia-Rodríguez C, Martínez-Feito A, Hernández M, del Pino-Molina L, Novella-Navarro M, Serrano Y, González-Muñoz M, Peiteado D, Bonilla G, Monjo I, Nuño L, Tornero C, López-Granados E, Balsa A, Nozal P.** Immune response after SARS-CoV-2 vaccination in patients with inflammatory immune-mediated diseases receiving immunosuppressive treatment. *Allergy Asthma Clin Immunol.* 2023; 19(1): 71. Article. IF: 2.6; Q2
 - **Ramírez E, González-Muñoz M, Kulkarni C, de Abajo FJ.** Editorial: Reducing the harm of medication-recent trends in pharmacovigilance (volume II). *Front Pharmacol.* 2023; 14: 1175039. Editorial Material. IF: 4.4; Q1
 - **Ramírez PP, Rojas-Marcos PM, Hernández MC, Ruiz-Sánchez JG, Oliveira CL, Hanzu FA, Araujo-Castro M.** First survey on the diagnosis and treatment of primary aldosteronism by

Spanish Endocrinology and Nutrition specialists. *Endocrinol Diabetes Nutr.* 2023; 70(6): 374-80. Article. IF: 1.8; Q4

- **Reinoso-Barbero F, Sanabria-Carretero P, Alonso-Prieto M.** Sevoflurane versus propofol for LMA® removal in awake children: more respiratory adverse effects or faster recovery of airway reflexes in more awake children? *Anesth Analg.* 2023; 137(1): E4-5. Article. IF: 4.6; D1
- **Ruiz-Fernández C, Cuesta R, Martín-López S, Guijarro J, de las Huertas ALG, Urroz M, Miguel-Berenguel L, González-Muñoz M, Ramírez E.** Immune-mediated organ-specific reactions to covid-19 vaccines: a retrospective descriptive study. *Pharmaceuticals (Basel).* 2023; 16(5): 720. Article. IF: 4.3; Q2
- **Ruiz-Sánchez JG, Paja-Fano M, Boillos MG, Peris BP, Pascual-Corrales E, Cano AMG, Ramírez PP, Rojas-Marcos PM, Delgado AV, Hoyos EG, Ferreira R, Sanz IG, Sala MR, San Millan RB, César MJP, Guardiola PD, González JJG, Perdomo CM, Miguélez LM, Centeno RG, Percovich JC, Román AR, Gimeno PG, Lázaro CR, Morales-Ruiz M, Hanzu FA, Araujo-Castro M.** Effect of obesity on clinical characteristics of primary aldosteronism patients at diagnosis and postsurgical response. *J Clin Endocrinol Metab.* 2023; 109(1): e379-88. Article. IF: 5.0; Q1
- **Stewart S, Doderio-Anillo JM, Guijarro-Eguino J, Arias P, de las Huertas AGL, Seco-Meseguer E, García-García I, García ER, Rodríguez-Antolín C, Carcas AJ, Rodríguez-Novoa S, Rosas-Alonso R, Borobia AM.** Advancing pharmacogenetic testing in a tertiary hospital: a retrospective analysis after 10 years of activity. *Front Pharmacol.* 2023; 14: 1292416. Article. IF: 4.4; Q1
- **Valderrama PB, Calvo AC, Riesco LR, Zapata RR, Ramírez PP.** Fibrous variant of Hashimoto's thyroiditis as a sign of IgG4-related disease, mimicking thyroid lymphoma: Case report. *Endocrinol Diabetes Nutr.* 2023; 70: 60-2. Letter. IF: 1.8; Q4

Research projects

- **González Muñoz M.** Evaluación de la causalidad de las reacciones adversas a medicamentos de carácter grave: utilidad de los algoritmos, test in vitro, toxicología y farmacogenética (HUL-VIT-2018). FIBHULP. 2019-Ongoing. *Management centre: FIBHULP*
- **Ramírez García E, Sanabria Carretero P, Peiró Vallejo C.** Registro de parada cardiorespiratoria perioperatoria (HUL-PCP-2017). FIBHULP. 2017-Ongoing. *Management centre: FIBHULP*
- **Ramírez García E.** Análisis de desproporcionalidad de meningitis aséptica para las vacunas covid-19 en Europa, versión 1.0 del 21/02/2022 (NEUROVAC). FIBHULP. 2022-2023. *Management centre: FIBHULP*
- **Ramírez García E.** Cohorte retrospectiva de miocarditis y pericarditis por vacunas para la covid-19 en el hospital universitario la paz, versión 1.9 del 17/01/2022 (CARDIOVAC-19). FIBHULP. 2022-2023. *Management centre: FIBHULP*
- **Ramírez García E.** Cohorte Retrospectiva De Registro De Alergias En Atención Primaria Y En HCIS En El Hospital Universitario La Paz (HUL-ALRA-2023). FIBHULP. 2023-2024. *Management centre: FIBHULP*
- **Ramírez García E.** Estudio de casos y controles anidado en una cohorte para evaluar el efecto de la co-medición en la evolución de la infección por el coronavirus sars-cov-2. Versión 2 de 24.06.2020 (HULP-COVID19-ACE2-20). FIBHULP. 2021-2022. *Management centre: FIBHULP*
- **Ramírez García E.** Estudio de incidentes y eventos adversos en el hospital (ESINEA). FIBHULP. 2023-Ongoing. *Management centre: FIBHULP*
- **Ramírez García E.** Evaluación de la causalidad de las reacciones adversas graves a fármacos: utilidad de los algoritmos de causalidad y ensayos in vitro (PI21/01159). ISCIII. 2022-2024. *Management centre: FIBHULP*
- **Ramírez García E.** Tareas de consultoría relacionadas con la evaluación de viabilidad de un potencial estudio observacional para evaluar el riesgo de anafilaxis en usuarios de hierro endove-

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- **Sanabria Carretero P.** Mejora de la humanización de la asistencia sanitaria en el bloque quirúrgico infantil del Hospital La Paz. Fundación Icomem Para la Educación y Formación Sanitarias. 2021-Ongoing. *Management centre: FIBHULP*
- **Sanabria Carretero P.** Población en riesgo de hipertemia maligna: cohorte ambispectiva (Código HULP: PI-3528) (HUL-RHM-2019). FIBHULP. 2019-Ongoing. *Management centre: FIBHULP*
- **Sanabria Carretero P.** Población en riesgo de hipertemia maligna: cohorte ambispectiva (PI20/01444). ISCIII. 2021-2025. *Management centre: FIBHULP*

Patents and trademarks

- **Herrero Ambrosio A, Ramírez García E, Ojeda Feo JJ, Pérez Rodríguez J, Asensio Martín MJ, González Sánchez ML, Moro Agud M, Lorente Romeo M, López Nieto M, Gómez Rioja R, authors; FIBHULP, assignee.** Brand name: SINOIRES. CM 13.080.056; 2014 July 14.





3.6.7 Translational Research and Innovation in General and Digestive Surgery Group

Publications:58 | Q1:34

COMPOSITION

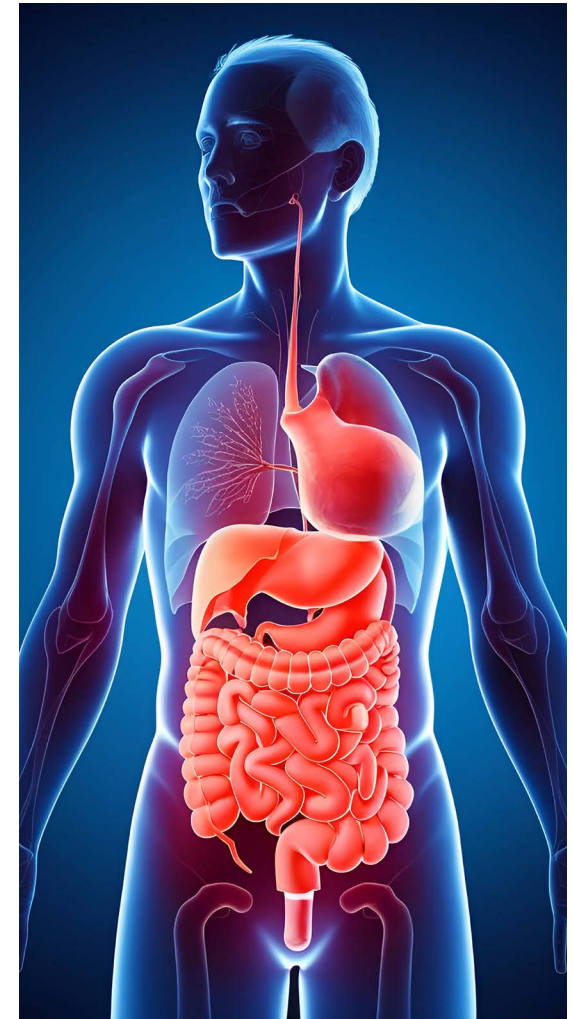
Constantino Fondevila Campo.

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- **Amelia Hessheimer.** Facultativo Especialista de Área en Cirugía General y de Aparato Digestivo. Hospital Universitario La Paz
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- **Javier Muñoz Luque.** Técnico de Grado Superior. CIBEREHD
- **Elisa York Pineda.** Facultativo Especialista de Área en Cirugía General y de Aparato Digestivo. Hospital Universitario La Paz
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- **María Isabel Prieto Nieto.** Facultativo Especialista de Área en Cirugía General y de Aparato Digestivo. Hospital Universitario La Paz
- **Javier Salinas Gómez.** Facultativo Especialista de Área en Cirugía General y de Aparato Digestivo. Hospital Universitario La Paz
- **Juan José Segura Sampedro.** Facultativo Especialista de Área en Cirugía General y de Aparato Digestivo. Hospital Universitario La Paz
- **Mario Álvarez Gallego.** Facultativo Especialista de Área en Cirugía General y de Aparato Digestivo. Hospital Universitario La Paz
- **Ramón Corripio Sánchez.** Facultativo Especialista de Área en Cirugía General y de Aparato Digestivo. Hospital Universitario La Paz
- **Aída Vaquero Rey.** Investigadora Predoctoral. FIBHULP
- **Jordi Vengohechea Llorens.** Investigador Predoctoral. Universidad de Barcelona

STRATEGIC OBJECTIVE

- **PROBLEM:** Surgery and perioperative care encompass one of the most expensive and resource-intensive areas of clinical medicine. Surgical patients undergo complex interventions, with the goal of curing or at least relieving distressing symptoms from different medical conditions. These same interventions, however, may sometimes result ineffective in achieving this goal. Additionally, they can provoke complications (morbidity) and further affect a patient's physical, mental, and emotional states.
- **APPROACH:** The Translational Research & Innovation in General Surgery Group (GITIC) is a multidisciplinary group comprised of surgeons, nurses, and biologists, with various areas of dedication and expertise. The GITIC team works together with the common goal of using surgical innovation and diverse research initiatives to offer the highest level of patient care possible today.
- Given its broad knowledge base and skill set, projects that GITIC currently develops include lines of basic science and experimental research, translational and pre-clinical surgical models, clinical investigation, analysis of post-surgical outcomes, studies involving economic evaluation, the creation of mathematical models, and surgical device design and implementation.
- In order to fulfill its broad research interests and initiatives, GITIC actively collaborates not only with other groups within Hospital Universitario La Paz and IdiPAZ but also other hospitals and public and private research institutions in Spain and abroad. The following is a list of some of GITIC's current collaborations:
 - Donation & Transplantation Institute (DTI), Barcelona, España
 - Guangong Shunde Innovative Design Institution, Guangdong, China
 - Hospital Virgen de la Salud, Toledo, España
 - Universidad Internacional de Catalunya (UIC), Sant Cugat, España
 - Policlinico Universitario "A. Gemelli", Università Cattolica del Sacro Cuore, Roma, Italia
 - Instituto de Empresa (IE), Madrid, España.
 - Tekniker, Gipuzkoa, España.





RESEARCH LINES

- Injury, inflammation, organ failure, & transplantation:
- Assessment and implications of chronic inflammation in obesity
- Experimental models of end-stage liver disease and portal hypertension
- Applicability and results of liver transplantation in the treatment of acute-on-chronic liver failure
- Approaches to transplantation in patients with complex portal vein thrombosis
- Translation and clinical research in ischemia-reperfusion injury
- Novel preservation solutions and techniques of in situ and ex situ organ machine perfusion
- Clinical outcomes and strategies for improvement in donation after circulatory death (DCD) organ transplantation
- Assessment and clinical implications of markers of allograft dysfunction following liver transplantation
- **Surgical oncology:**
- Evaluation of a novel polyfunctional immune liquid biopsy platform to predict and improve responses to cancer immunotherapy using innate immunomodulators
- Evaluation of the utility of cryoablation to provoke immune activation and response to immunotherapy in primary breast tumors
- Evaluation of the diagnostic and therapeutic role of novel immune checkpoints in colon cancer
- Development of three-dimensional in vitro organoid biomodels of colon cancer
- Combination of "omic" and imaging techniques to identify markers associated with response to neoadjuvant therapy in rectal cancer patients
- Effectiveness and safety of hyperthermic intraperitoneal chemotherapy in the prevention of peritoneal recurrence in high-risk colorectal cancer patients
- Immunological and molecular predictors of ovarian cancer arising in the background of endometriosis (Collaboration with H.U. La Paz Gynecology Service)
- **Surgical technology & innovation:**
- Development and pre-clinical evaluation of a novel device for ex situ liver machine perfusion
- Development and clinical trial assessment on the safety and feasibility of a novel rectoscope for rectal cancer surgery
- Development and utility assessment of novel surgical drains
- Evaluation of novel surgical techniques strategies to reduce drainage following axillary lymphadenectomy in breast cancer therapy
- **Value-based care:**
- Patient safety and prevention of perioperative infection
- Evaluation of "best possible outcomes" (benchmarks) in surgical care
- Assessment of perioperative complications, patient quality of life, and postoperative disability following general surgical operations
- Cost-effectiveness and cost-utility of postoperative cancer surveillance strategies
- Economic evaluation of novel surgical approaches and technologies

RESEARCH ACTIVITY

Doctoral theses

- **Martín Prieto L.** Utilidad de un programa de tratamiento de Biofeedback electromiográfico y Electroestimulación endoanal para pacientes con Incontinencia Fecal[dissertation]. Madrid: UAM: 2023(15/09/2023). Director: Pascual Miguelañez I.

Final Degree Theses

- **Cubillo Heras P.** Bocios grandes ¿factor de riesgo para hipoparatiroidismo postquirúrgico?[dissertation]. Madrid: UAH: 2023(30/06/2023). Director: Gómez Ramírez J.

Publications

- **Aguilar JN, Dovigo AG, González JA, Conde BG, Aguirre PA, Ares DM, González JS, Redondo MPD, Díaz OM, García MIT, Rivas AD, Rivilla SD, Marcos JMR, Ruiz PR, Pallarés PD, Gallego MA, Besteiro IG.** Multicenter clinical trial for the resection of rectal polyps using a new laparoendoscopic hybrid transanal access device. *Cir Espan.* 2023; 101(6): 435-44. Article. IF: 1.3; Q3
- **Aizza G, Russolillo N, Ferrero A, Syn NL, Cipriani F, Aghayan D, Marino MV, Memeo R, Mazzaferro V, Chiow AKH, Sucandy I, Ivanecz A, Vivarelli M, Di Benedetto F, Choi SH, Lee JH, Park JO, Gastaca M, Fondevila C, Efanov M, Rotellar F, Choi GH, Robles-Campos R, Wang XY, Sutcliffe RP, Pratschke J, Tang CN, Chong CC, D'Hondt M, Yong CC, Ruzzenente A, Herman P, Kingham TP, Scatton O, Liu R, Sandri GBL, Soubrane O, Mejia A, López-Ben S, Monden K, Wakabayashi G, Cherqui D, Troisi RI, Yin MQ, Giuliant F, Geller D, Sugioka A, Edwin B, Cheung TT, Long TCD, Abu Hilal M, Fuks D, Chen KH, Aldrighetti L, Han HS, Goh BKP.** Impact of tumor size on the difficulty of laparoscopic left lateral sectionectomies. *J Hepato-Bil-Pan Sci.* 2023; 30(5): 558-69. Article. IF: 3.2; Q2
- **Ashwat E, Kaltenmeier C, Liu H, Reddy D, Thompson A, Dharmayan S, Ayloo S, Nadalin S, Ciccarelli O, Xu QY, Adam R, Karam V, Zie-**

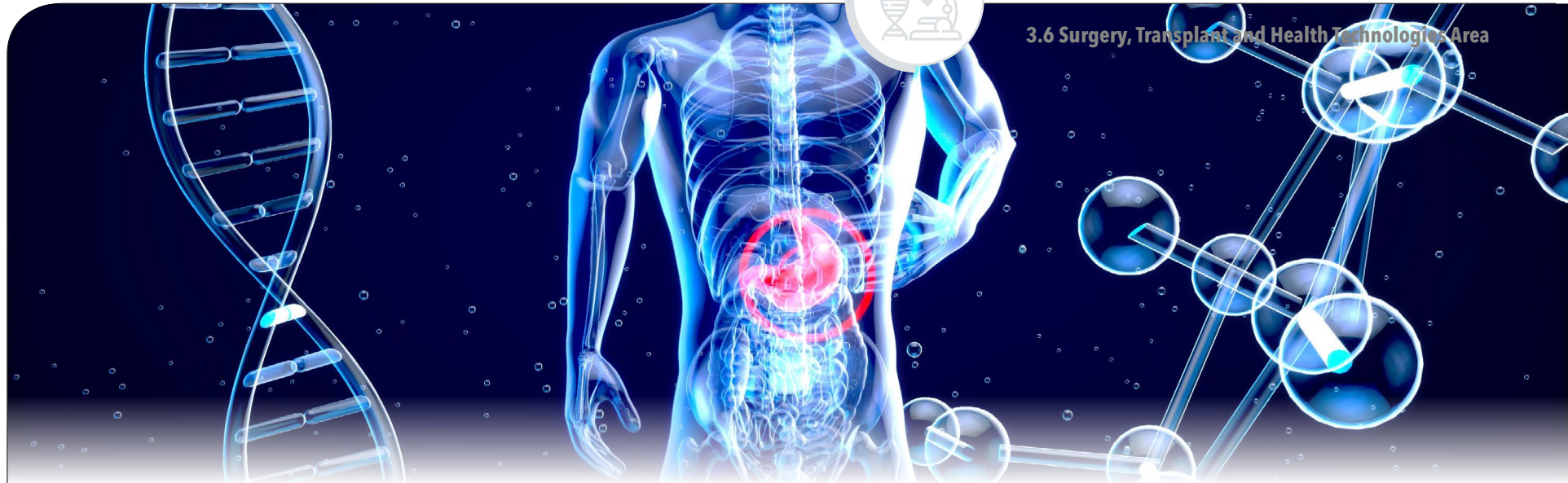
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- **Badia JM, del Toro MD, Gracia JFN, Balibrea JM, Herruzo R, Sánchez CG, García JL, Pérez IR, Guirao X, Soria-Aledo V, Ortí-Lucas R.** Surgical infection reduction program of the observatory of surgical infection (PRIO-O): Delphi prioritization and consensus document on recommendations for the prevention of surgical site infection. *Cir Espan.* 2023; 101(4): 238-51. Article. IF: 1.3; Q3
- **Berardi G, Kingham TP, Zhang WG, Syn NL, Koh YX, Jaber B, Aghayan DL, Siow TF, Lim C, Scatton O, Herman P, Coelho FF, Marino MV, Mazzaferro V, Chiow AKH, Sucandy I, Ivanecz A, Choi SH, Lee JH, Gastaca M, Vivarelli M, Giuliant F, Dalla B, Ruzzenente A, Yong CC, Chen ZW, Yin MQ, Fondevila C, Efanov M, Morise Z, Di Benedetto F, Brustia R, Dalla Valle R, Boggi U, Geller D, Belli A, Memeo R, Gruttadauria S, Mejia A, Park JO, Rotellar F, Choi GH, Robles-Campos R, Wang XY, Sutcliffe RP, Schmelzle M, Pratschke J, Lai ECH, Chong CCN, Meurs J, D'Hondt M, Monden K, López-Ben S, Liu Q, Liu R, Ferrero A, Etorre GM, Cipriani F, Pascual F, Cherqui D, Zheng JH, Liang X, Soubrane O, Wakabayashi G, Troisi RI, Cheung TT, Kato Y, Sugioka A, D'Silva M, Han HS, Nghia PP, Long TCD, Edwin B, Fuks D, Abu Hilal M, Aldrighetti L, Chen KH, Goh BKP.** Impact of body mass index on perioperative outcomes of laparoscopic major hepatectomies. *Surgery.* 2023; 174(2): 259-67. Article. IF: 3.2; Q1
- **Berenguer M, de Martín E, Hessheimer AJ, Levitsky J, Maluf DG, Mas VR, Selzner N, Hernández-Evole H, Lutu A, Wahid N, Zubair H.** European society for organ transplantation consensus statement on biomarkers in liver transplantation. *Transpl Int.* 2023; 36: 11358. Article. IF: 2.7; Q1



- **Bueno-Lledó J, Rubio-Pérez I, Moreno-Gijón M, Olona-Casas C, Barbosa E, Molina JM, Castellanos G.** Prophylactic use of incisional negative pressure wound therapy for the prevention of surgical site occurrences in general surgery: Consensus document. *Surgery*. 2023; 173(4): 1052-9. Article. IF: 3.2; Q1
- **Chen ZW, Yin MQ, Fu JH, Yu S, Syn NL, Chua DW, Kingham TP, Zhang WG, Hoogteijling TJ, Aghayan DL, Siow TF, Scatton O, Herman P, Marino MV, Mazzaferro V, Chiow AKH, Sucandy I, Ivanecz A, Choi SH, Lee JH, Prieto M, Vivarelli M, Giuliani F, Ruzzenente A, Yong CC, Dokmak S, Fondevila C, Efanov M, Morise Z, Di Benedetto F, Brustia R, Dalla Valle R, Boggi U, Geller D, Belli A, Memeo R, Gruttadauria S, Mejia A, Park JO, Rotellar F, Choi GH, Robles-Campos R, Wang XY, Sutcliffe RP, Pratschke J, Lai ECH, Chong CCN, D'Hondt M, Monden K, López-Ben S, Liu Q, Liu R, Ferrero A, Ettore GM, Cipriani F, Cherqui D, Liang X, Soubrane O, Wakabayashi G, Troisi RI, Cheung TT, Kato Y, Sugioka A, Han HS, Long TCD, Fuks D, Abu Hilal M, Aldrighetti L, Chen KH, Edwin B, Goh BKP.** Impact of body mass index on the difficulty and outcomes of laparoscopic left lateral sectionectomy. *EJSO-Eur J Surg Onc*. 2023; 49(8): 1466-73. Article. IF: 3.5; Q2
- **Cheung TT, Liu R, Cipriani F, Wang XY, Efanov M, Fuks D, Choi GH, Syn NL, Chong CCN, Di Benedetto F, Robles-Campos R, Mazzaferro V, Rotellar F, López-Ben S, Park JO, Mejia A, Sucandy I, Chiow AKH, Marino MV, Gastaca M, Lee JH, Kingham TP, D'Hondt M, Choi SH, Sutcliffe RP, Han HS, Tang CN, Pratschke J, Troisi RI, Wakabayashi G, Cherqui D, Giuliani F, Aghayan DL, Edwin B, Scatton O, Sugioka A, Long TCD, Fondevila C, Abu Hilal M, Ruzzenente A, Ferrero A, Herman P, Chen KH, Aldrighetti L, Goh BKP.** Robotic versus laparoscopic liver resection for huge (≥ 10 cm) liver tumors: an international multicenter propensity-score matched cohort study of 799 cases. *Hepatobil Surg Nutr*. 2023; 12(2): 205-15. Article. IF: 6.1; Q1
- **Claasen MPAW, Sneiders D, Rakké YS, Adam R, Bhoori S, Cillo U, Fondevila C, Reig M, Sapisochin G, Tabrizian P, Toso C.** European Society of Organ Transplantation (ESOT) consensus report on downstaging, bridging and immunotherapy in liver transplantation for hepatocellular carcinoma. *Transpl Int*. 2023; 36: 11648. Article. IF: 2.7; Q1
- **Coelho FF, Herman P, Kruger JAP, Wu AGR, Chin KM, Hasegawa K, Zhang WG, Alzoubi M, Aghayan DL, Siow TF, Scatton O, Kingham TP, Marino M, Mazzaferro V, Chiow AKH, Sucandy I, Ivanecz A, Choi SH, Lee JH, Gastaca M, Vivarelli M, Giuliani F, Ruzzenente A, Yong CC, Dokmak S, Fondevila C, Efanov M, Morise Z, Di Benedetto F, Brustia R, Dalla Valle R, Boggi U, Geller D, Belli A, Memeo R, Gruttadauria S, Mejia A, Park JO, Rotellar F, Choi GH, Robles-Campos R, Wang XY, Sutcliffe RP, Pratschke J, Lai ECH, Chong CCN, D'Hondt M, Monden K, López-Ben S, Liu R, Ferrero A, Ettore GM, Cipriani F, Cherqui D, Liang X, Soubrane O, Wakabayashi G, Troisi RI, Yin MQ, Cheung TT, Sugioka A, Han HS, Long TCD, Fuks D, Abu Hilal M, Chen KH, Aldrighetti L, Edwin B, Goh BKP.** Impact of liver cirrhosis, the severity of cirrhosis, and portal hypertension on the outcomes of minimally invasive left lateral sectionectomies for primary liver malignancies. *Surgery*. 2023; 174(3): 581-92. Article. IF: 3.2; Q1
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- **Croghan SM, Mohan HM, Breen KJ, McGovern R, Bennett KE, Boland MR, Elhadi M, Elliott JA, Fullard AC, Lonergan PE, McDermott F, Mehraj A, Pata F, Quinlan DM, Winter DC, Bolger JC, Fleming CA.** Global incidence and risk factors associated with postoperative urinary retention following elective inguinal hernia repair: the retention of urine after inguinal hernia elective repair (RETAINER I) study. *JAMA Surg*. 2023; 158(8): 865-73. Editorial Material. IF: 15.7; D1
- **de las Casas SG, Spagnolo E, Di Saverio S, Álvarez-Gallego M, Carrasco AL, López MC, Cobos ST, Campo CF, Gutiérrez AH, Migueláñez IP.** Short-term outcomes in patients undergoing laparoscopic surgery for deep infiltrative endometriosis with rectal involvement: a single-center experience of 168 cases. *Ann Coloproctol*. 2023; 39(3): 216-22. Article. IF: 3.0; Q2
- **de Waele JJ, Coccolini F, Lagunes L, Maseda E, Rausei S, Rubio-Pérez I, Theodorakopoulou M, Arvanti K.** Optimized treatment of nosocomial peritonitis. *Antibiotics (Basel)*. 2023; 12(12): 1711. Review. IF: 4.3; Q1
- **Eden J, Da Silva RXS, Cortes-Cerisuelo M, Croome K, De Carlis R, Hesseimer AJ, Muller X, de Goeij F, Banz V, Magini G, Compagnon P, Elmer A, Lauterio A, Panconesi R, Widmer J, Dondossola D, Muiesan P, Monbaliu D, van Rosmalen MDV, Detry O, Fondevila C, Jochmans I, Pirenne J, Immer F, Oniscu GC, de Jonge J, Lesurtel M, De Carlis LG, Taner CB, Heaton N, Schlegel A, Dutkowski P.** Utilization of livers donated after circulatory death for transplantation-An international comparison. *J Hepatol*. 2023; 78(5): 1007-16. Article. IF: 26.8; D1
- **Efanov M, Salimgereeva D, Alikhanov R, Wu AGR, Geller D, Cipriani F, Aghayan DL, Fretland AA, Sijberden J, Belli A, Marino MV, Mazzaferro V, Chiow AKH, Sucandy I, Ivanecz A, Choi SH, Lee JH, Prieto M, Vivarelli M, Giuliani F, Ruzzenente A, Yong CC, Fondevila C, Rotellar F, Choi GH, Campos RR, Wang XY, Sutcliffe RP, Pratschke J, Lai E, Chong CC, D'Hondt M, Monden K, López-Ben S, Herman P, Di Benedetto F, Kingham TP, Liu R, Long TCD, Ferrero A, Sandri GBL, Cherqui D, Scatton O, Wakabayashi G, Troisi RI, Cheung TT, Sugioka A, Han HS, Abu Hilal M, Soubrane O, Fuks D, Aldrighetti L, Edwin B, Goh BKP.** Comparison between the difficulty of laparoscopic limited liver resections of tumors located in segment 7 versus segment 8: An international multicenter propensity-score matched study. *J Hepato-Bil-Pan Sci*. 2023; 30(2): 177-91. Article. IF: 3.2; Q2
- **Fondevila C, Estebanez B, Hesseimer AJ.** Practical considerations for implementation of abdominal normothermic regional perfusion. *Liver Transplant*. 2023; 29(12): 1255-7. Editorial Material. IF: 4.7; Q1
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- **Fundora Y, Hesseimer AJ, Fondevila C.** Reply to: "Reconstruction for complex portal vein thrombosis - Anatomical if possible". *J Hepatol*. 2023; 79(3): e131. Letter. IF: 26.8; D1
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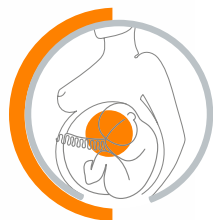
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 - **Fondevila Campo C.** Puesta en marcha del ensayo clínico: "liver transplantation in patients with cirrhosis and severe acute-on-chronic liver failure (aclf): indications and outcomes study". European Foundation for the Study of Chronic Liver Failure. 2021-Ongoing. *Management centre: FIBHULP*
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- #### Research projects
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3.7 Maternal Infant Child and Youth Research Area

Documents: 256 | Originals: 205 | D1: 28 | Q1: 102

Area coordinator: Cristina Calvo Rey y Antonio Pérez Martínez

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RESEARCH GROUPS

- 3.7.1** Neonatology - *Adelina Pellicer Martínez*
- 3.7.2** Molecular Hepatology - *Paloma Jara Vega/Loreto Hierro Llanillo*
- 3.7.3** Maternal and Fetal Medicine - *José Luis Bartha Rasero*
- 3.7.4** Pediatric Respiratory, Systemic and Neurological Infections & Host Immune Response - *Cristina Calvo Rey*
- 3.7.5** Pediatric Systemic Infections; HIV, Tuberculosis, Imported and Emergent Diseases - *Talía Sainz Costa*
- 3.7.6** Translational Research in Pediatric Oncology, Hematopoietic Transplantation and Cell Therapy - *Antonio Pérez Martínez*
- 3.7.7** Congenital Malformations and Transplantation - *Francisco Hernández Oliveros*
- 3.7.8** Research in Endometriosis - *Alicia Hernández Gutiérrez*
- 3.7.9** Research on Comprehensive Care for Transplanted Children and Adolescents - *María Jesús Pascau González-Garzón/Luz Yadira Bravo Gallego*
- 3.7.10** Food Oxidative Stress and Cardiovascular Health - *Silvia M. Arribas Rodríguez*



3.7 Maternal Infant Child and Youth Research Area

Strategic Objectives	Development forecast for the coming years:	Actions
<p>The mission of the Maternal, Child and Adolescent Health Area (MIA) is to contribute to the improvement of the health of society by reducing the negative impact of diseases in the pediatric population from birth to adolescence, as well as the mother-child binomial. This recently created area is made up of research groups that cover the entire spectrum of ages from women, through newborns, children and young people. It includes very varied areas of research and proposes to achieve a full development of the adults of the future. To achieve this, we promote and lead cooperative research of excellence, promoting innovation, a multidisciplinary approach, and the translation of scientific results into clinical practice.</p>	<p>Create a stable structure to promote research that encompasses all areas of perinatal medicine, child and adolescent medicine, and women with childbearing potential. Promote collaboration between groups in the area and provide a common space and shared infrastructure and resources that allow joint progress.</p>	<p>Create a portfolio of shared group resources, services and projects for the MIA area that facilitates common work. Hold work meetings to propose shared studies and strategic lines.</p>
	<p>Promote the search for both public and private funding for cooperative research within the MIA area. Promote participation in international projects.</p>	<p>Facilitate the application request for European projects through the IdiPAZ Internalization Platform.</p>
	<p>Promote the incorporation of new technologies in research to advance personalized and precision medicine and the transfer of research results to the scientific community and society: biomedical industry, health administration, general population and any other interlocutor and disseminate the main advances produced as a result of the research.</p>	<p>Promote at international level the different research groups of the area, identifying possible synergies between groups and centers, new partners and funding sources, as well as to forge strategic alliances.</p>

HIGH IMPACT PUBLICATIONS

Iglesias-Caballero M, Camarero-Serrano S, Varona S, Mas V, Calvo C, García ML, García-Costa J, Vázquez-Moron S, Monzon S, Campoy A, Cuesta I, Pozo F, **Casas I**. Genomic characterisation of respiratory syncytial virus: a novel system for whole genome sequencing and full-length G and F gene sequences. *Euro Surveill.* 2023; 28(49): 2300637. Article. IF: 9.9; D1

Andrés AM, Encinas JL, Sánchez-Galán A, Rodríguez JS, Estefanía K, Sacristan RG, Alcolea A, Serrano P, Estébanez B, Leon IV, Burgos P, Rocafort AG, Ramchandani B, Calderón B, Verdú C, Jiménez E, Talayero P, Stringa P, Navarro ID, Ramos E, **Oliveros FH**. First case report of multivisceral transplant from a deceased cardiac death donor. *Am J Transplant.* 2023; 23(4): 577-81. Article. IF: 8.9; D1

Stringa P, Papa-Gobbi R, Vela M, Gentilini MV, Machuca M, Klin P, Arreola NM, Serradilla J, Bueno A, Andrés AM, Ramos E, Alcolea A, Pérez-Martínez A, Prieto G, López-Santamaría M, Gondolesi G, Rumbo M, **Hernández F**. Native spleen preservation during visceral transplantation inhibits graft-versus-host-disease development clinical and experimental study. *Ann Surg.* 2023; 277(1): E235-44. Article. IF: 7.5; D1

Díaz-Garzón J, Fernández-Calle P, Aarsand AK, Sandberg S, Coskun A, Equey T, Aikin R, **Soto AB**. Long-term within- and between-subject biological variation data of hematological parameters in recreational endurance athletes. *Clin Chem.* 2023; 69(5): 500-9. Article. IF: 7.1; D1

Ibáñez-Navarro M, Fernández A, Escudero A, Esteso G, Campos-Silva C, Navarro-Aguadero MA, Leivas A, Caracuel BR, Rodríguez-Antolín C, Ortiz A, Navarro-Zapata A, Mestre-Durán C, Izquierdo M, Balaguer-Pérez M, Ferreras C, Martínez-López J, Valés-Gómez M, **Pérez-Martínez A (AC)**, Fernández L. NKG2D-CAR memory T cells target pediatric T-cell acute lymphoblastic leukemia in vitro and in vivo but fail to eliminate leukemia initiating cells. *Front Immunol.* 2023; 14: 1187665. Article. IF: 5.7; Q1

Scientific Events by Maternal Infant Child and Youth Research

- **13/01/2023.** Scientific Seminar - Identificación de procesos biológicos con potencial diagnóstico para enfermedades hepáticas en la infancia
- **27/01/2023.** Scientific Seminar - SafeBoosC: Safeguarding the brains of our smallest infants
- **02/03/2023.** 12º Taller de simulación de administración menos invasiva de surfactante
- **14/04/2023.** Scientific Seminar - Terapia celular para enfermedades causadas por virus: Resultados del ensayo clínico fase 2, RELEASE
- **28/04/2023.** Scientific Seminar - Trasplante combinado de órgano sólido y hematopoyético para inducir tolerancia
- **16/10/2023.** Jornada de reanimación cardiopulmonar para padres
- **18/10/2023.** II Jornadas de la Red de Terapias Avanzadas de la Comunidad de Madrid
- **07/11/2023.** II Jornadas de soporte respiratorio en bronquiolitis
- **14/11/2023.** VIII Jornadas Infecciones relacionadas con la asistencia sanitaria en Pediatría



3.7.1 Neonatology

Publications:37 | Q1:17

COMPOSITION

Adelina Pellicer Martínez.

Jefe de Sección de Neonatología. Hospital Universitario La Paz

- **Marta Cabrera Lafuente.** Facultativo Especialista de Área en Neonatología. Hospital Universitario La Paz
- **Susana Ares Segura.** Facultativo Especialista de Área en Neonatología. Hospital Universitario La Paz
- **María Carmen Bravo Laguna.** Facultativo Especialista de Área en Neonatología. Hospital Universitario La Paz
- **Antonio Buño Soto.** Jefe de Servicio de Laboratorio de Urgencias. Hospital Universitario La Paz
- **Fernando Cabañas González.** Jefe de Servicio de Pediatría y Neonatología. Hospital Universitario Quirónsalud Pozuelo; FIBHULP
- **María Dolores Elorza Fernández.** Jefe de Sección de Neonatología. Hospital Universitario La Paz
- **Paloma López Ortego.** Médico Adjunto en Neonatología. Hospital Universitario La Paz
- **Esperanza Escribano Palomino.** Médico Adjunto en Neonatología. Hospital Universitario La Paz
- **Miriam Martínez Biarge.** Facultativo Especialista de Área en Neonatología. Hospital Hammer Smith Londres
- **María Teresa Montes Bueno.** Enfermera. Hospital Universitario La Paz
- **María Jesús del Olmo Barros.** Profesora Contratada. Universidad Autónoma de Madrid
- **Laura Sánchez García.** Médico Adjunto en Neonatología. Hospital Universitario La Paz
- **Miguel Sáenz de Pipaón Marcos.** Facultativo Especialista de Área en Neonatología; Profesor Titular. Hospital Universitario La Paz Universidad Autónoma de Madrid
- **Belén Sáenz-Rico de Santiago.** Profesor Titular. Universidad Complutense de Madrid
- **Eva Valverde Núñez.** Facultativo Especialista de Área en Neonatología. Hospital Universitario La Paz. Profesor Asociado. Universidad Autónoma de Madrid
- **Carlos Zozaya Nieto.** Médico Adjunto en Neonatología. Hospital Universitario La Paz



STRATEGIC OBJECTIVE

- Prevent structural and functional damage to organs and systems in the high risk newborn.
- Reduce the impact of the processes that occurred in the peri-neonatal stage in later life.

RESEARCH LINES

- Macro- and microcirculation: non-invasive monitoring, signal processing and machine learning. Lead: María Carmen Bravo/Adelina Pellicer
- Developmental Neurobiology. Lead: Fernando Cabañas/Eva Valverde
- Nutrition, microbiota and Milkbank. Lead: Miguel Saenz-Pipaón/Marta Cabrera
- Perinatal and neonatal infectology. Immunology and vaccines. Lead: Laura Sánchez García
- Quality improvement. Lead: Adelina Pellicer/Paloma López-Ortego

RESEARCH ACTIVITY

Master theses

- **Crespo Gómez-Escalonilla A.** El ritmo y la percusión como herramienta de cohesión social.[dissertation]. *Madrid: UAM: 2023(29/06/2023). Director: del Olmo Barros MJ.*
- **Arjona García A.** La Música como herramienta terapéutica con alumnos con problemas de conducta[dissertation]. *Madrid: UAM: 2023(28/06/2023). Director: del Olmo Barros MJ.*

Publications

- **Alarcón A, de Vries LS, Parodi A, Arnáez J, Cabañas F, Steggerda SJ, Rebollo M, Ramenghi L, Dorronsoro I, López-Azorín M, Schneider J, Noguera-Julian A, Ríos-Barnés M, Recio M, Bickle-Graz M, Martínez-Biarge M, Fortuny C, García-Alix A, Truttmann AC.** Neuroimaging in infants with congenital cytomegalovirus infection and its correlation with outcome: emphasis on white matter abnormalities. *Arch Dis Child-Fetal.* 2024; 109(2): 151-8. Article. IF: 3.9; D1
- **Arca G, Núñez C, Stephan-Otto C, Arnaez J, Agut T, Cordeiro M, Boronat N, Lubián-López S, Benavente-Fernández I, Valverde E,**



3.7 Maternal Infant Child and Youth Research Area

- García-Alix A.** Massive neonatal arterial ischemic stroke. *Pediatr Neurol.* 2023; 144: 5-10. Article. IF: 3.2; Q2
- **Arévalo MSG, Mahillo-Fernández I, de Pipaón MS, Esteban LM, Martín DH, Delgado JR, Muñoz JCE, Andeyro-García M, Pérez RP, Savirón-Cornudella R.** Postnatal catch-up growth in term newborns with altered fetal weight patterns. The GROWIN study. *Pediatr Res.* 2023; 94(3): 1180-8. Article. IF: 3.1; Q1
 - **Bel-Fenellós C, Biencinto-López C, Sáenz-Rico B, Hernández A, Sandoval-Talamantes AK, Tenorio-Castaño J, Lapunzina P, Nevado J.** Cognitive-behavioral profile in pediatric patients with syndrome 5p-; genotype-phenotype correlations. *Genes (Basel).* 2023; 14(8): 1628. Article. IF: 2.8; Q2
 - **Bravo-Queipo-de-Llano B, García LS, Casas I, Pozo F, La Banda L, Alcolea S, Atucha J, Sánchez-León R, Pellicer A, Calvo C.** Surveillance of viral respiratory infections in the neonatal intensive care unit-evolution in the last 5 years. *Pathogens.* 2023; 12(5): 644. Article. IF: 3.3; Q2
 - **Butta NV, Arias-Salgado EG, Manzano EM, Acuña P, Román MTA, Buño-Soto A, Ramos JCR, Belda-Iniesta C, Frías J, Carcas AJ, de Soto LM, Buckley RD, Lora D, García-Morales MT, Borobia AM, Arribas JR, Yuste VJ, CombiVacS Study Grp.** No changes in hemostasis after COVID-19-heterologous vaccination schedule: A subanalysis of the phase 2 CombiVacS study. *Res Pract Thromb Haemost.* 2023; 7(1): e100049. Article. IF: 3.4; Q2
 - **Caballé I, Buño A, Bernabeu FA, Canalias F, Moreno A, Ibarz M, Puzo J, González C, González A.** Current state and future challenges of laboratory medicine in Spain: an analysis of the Spanish Society of Laboratory Medicine (SEQCML). *Adv Lab Med.* 2023; 4(1): 81-91. Article. IF: 1.1; Q4
 - **Caballé I, Buño A, Bernabeu FA, Canalias F, Moreno A, Ibarz M, Puzo J, González C, González A.** State of affairs and future challenges in laboratory medicine in Spain: a Spanish society of laboratory medicine's analysis (SEQCML). *Adv Lab Med.* 2023; 4(1): 70-80. Article. IF: 1.1; Q4
 - **Chávez EM, Oliver P, Buño A, Fernández-Calle P.** No observed interference by nucleated red blood cells in total bilirubin measurement by point-of-care testing: six years of experience. *Ann Lab Med.* 2023; 43(6): 625-7. Letter. IF: 4.0; Q1
 - **Díaz-Garzón J, Fernández-Calle P, Aarsand AK, Sandberg S, Coskun A, Equey T, Aikin R, Soto AB.** Long-term within- and between-subject biological variation data of hematological parameters in recreational endurance athletes. *Clin Chem.* 2023; 69(5): 500-9. Article. IF: 7.1; D1
 - **Domachowski JB, Chang Y, Atanasova V, Cabañas F, Furuno K, Nguyen KA, Banu I, Kubiak RJ, Leach A, Mankad VS, Shroff M, Takas T, Villafana T, Hamrén UW.** Safety of re-dosing nirsevimab prior to rsv season 2 in children with heart or lung disease. *J Pediatr Infect Dis Soc.* 2023; 12(8): 477-80. Article. IF: 2.5; Q3
 - **El-Dib M, Abend NS, Austin T, Boylan G, Chock V, Cilio MR, Greisen G, Hellstroem-Westas L, Lemmers P, Pellicer A, Pressler RM, Sansevere A, Tsuchida T, Vanhatalo S, Wusthoff CJ.** Neuromonitoring in neonatal critical care part I: neonatal encephalopathy and neonates with possible seizures. *Pediatr Res.* 2023; 94(1): 64-73. Review. IF: 3.1; Q1
 - **El-Dib M, Abend NS, Austin T, Boylan G, Chock V, Cilio MR, Greisen G, Hellström-Westas L, Lemmers P, Pellicer A, Pressler RM, Sansevere A, Szakmar E, Tsuchida T, Vanhatalo S, Wusthoff CJ.** Neuromonitoring in neonatal critical care part II: extremely premature infants and critically ill neonates. *Pediatr Res.* 2023; 94(1): 55-63. Review. IF: 3.1; Q1
 - **Embleton ND, Moltu SJ, Lapillonne A, van den Akker CHP, Carnielli V, Fusch C, Gerasimidis K, van Goudoever JB, Haiden N, Iacobelli S, Johnson MJ, Meyer S, Mihatsch W, de Pipaon MS, Rigo J, Zachariassen G, Bronsky J, Indrio F, Köglmeier J, de Koning B, Norsa L, Verduci E, Domellöf M.** Enteral nutrition in preterm infants (2022): A position paper from the ESPGHAN committee on nutrition and invited experts. *J Pediatr Gastr Nutr.* 2023; 76(2): 248-68. Article. IF: 2.4; Q3
 - **Fabre-Estremera B, Buño-Soto A, García-Esquinas E, Cabanas-Sánchez V, Martínez-Gómez D, Rodríguez-Artalejo F, Ortolá R.** Device-measured movement behaviors and cardiac biomarkers in older adults without major cardiovascular disease: the Seniors-ENRICA-2 study. *Eur Rev Aging Phys A.* 2023; 20(1): 5. Article. IF: 3.7; Q2
 - **Ferry JM, Galera-Martínez R, Campoy C, Sáenz de Pipaón M, Jarocka-Cyrta E, Walkowiak J, Romanczuk B, Escribano J, Gispert M, Grattarola P, Gruszfeld D, Iglesia I, Grote V, Demmelair H, Handel U, Gallier S, Koletzko B.** Effects of infant feeding with goat milk formula or cow milk formula on atopic dermatitis: protocol of the randomised controlled Goat Infant Formula Feeding and Eczema (GIRAFFE) trial. *BMJ Open.* 2023; 13(4): e070533. Article. IF: 2.4; Q1
 - **Fresán U, Vidal-Carou MC, Ramos-Truchero G, de Pipaon MS, Moreno LA, Salas-Salvadó J.** Knowledge, attitude, and patient advice on sustainable diets among Spanish health professionals. *Front Nutr.* 2023; 10: 1182226. Article. IF: 4.0; Q2
 - **García-Alix A, Arnaez J, Herranz-Rubia N, Alarcón A, Arca G, Valverde E, Blanco D, Lubian S.** Ten years since the introduction of therapeutic hypothermia in neonates with perinatal hypoxic-ischaemic encephalopathy in Spain. *Neurologia.* 2023; 38(5): 364-71. Review. IF: 2.9; Q2
 - **García-Alix A, de Pipaón MS, Argente J.** IN MEMORIAM José Quero Jiménez, MD, Ph.D. Full Professor of pediatrics & neonatology. *Pediatr Res.* 2023; 94(1): 400-1. Article. IF: 3.1; Q1
 - **González-Guerrero C, Borsò M, Alikhani P, Alcaina Y, Salas-Lucia F, Liao XH, García-Giménez J, Bertolini A, Martín D, Moratilla A, Mora R, Buño-Soto A, Mani AR, Bernal J, Saba A, de Miguel MP, Refetoff S, Zucchi R, Moreno JC.** Iodotyrosines as biomarkers for preclinical stages of iodine-deficient hypothyroidism in dehal1-knockout mice. *Thyroid.* 2023; 33(6): 752-61. Article. IF: 5.8; Q1
 - **Hansen ML, Pellicer A, Hyttel-Srensen S, Ergenekon E, Szczapa T, Haggmann C, Nau-laers G, Mintzer J, Fumagalli M, Dimitriou G, Dempsey E, Tkaczyk J, Cheng GQ, Fredly S, Heuchan AM, Pichler G, Fuchs H, Nesargi S, Hahn GH, Piris-Borregas S, Sirc J, Alsina-Casanova M, Stocker M, Ozkan H, Sarafidis K, Hopper AO, Karen T, Rzepecka-Weglarz B, Oguz SS, Arruza L, Memisoglu AC, del Rio Florentino R, Baserga M, Maton P, Truttmann AC, de las Cuevas I, Agergaard P, Zafrá P, Bender L, Lauterbach R, Lecart C, de Buyst J, El-Khuffash A, Curley A, Vaccarello OO, Miletin J, Papatoma E, Vesoulis Z, Vento G, Cornette L, López LS, Yasa B, Klamer A, Agosti M, Baud O, Mastretta E, Cetinkaya M, McCall K, Zeng SJ, Hatzidaki E, Bargiel A, Marciniak S, Gao XY, Lin HJ, Chalakov L, Yang L, Rao SA, Xu X, González BL, Wilinska M, Yin ZQ, Sadowska-Krawczenko I, Serrano-Viñuales I, Krolak-Olejnik B, Ybarra MM, Morales-Betancourt C, Korcek P, Teresa-Palacio M, Mosca F, Hergenhan A, Koksál N, Tsoni K, Kadri MM, Knöpfli C, Rafinska-Wazny E, Akin MS, Nordvik T, Peng Z, Kersin SG, Thewissen L, Alarcon A, Healy D, Urlesberger B, Bas M, Baumgartner J, Skylogianni E, Karadyova V, Valverde E, Bergon-Sendin E, Kucera J, Pisoni S, Wang L, Smits A, Sánchez-Salmador R, Rasmussen MI, Olsen MH, Jensen AK, Gluud C, Jakobsen JC, Greisen G.** Cerebral oximetry monitoring in extremely preterm infants. *New Engl J Med.* 2023; 388(16): 1501-11. Article. IF: 96.2; D1
 - **Herrero-Martínez JM, Trigo E, Navarro M, García-Alcázar D, Carrillo I, Fernández-López T, Calderón-Moreno M, Millán-Pérez R, Cuadros J, Velasco M, García-Bujalance S, Lizasoain M, Martín-Rabadán P, Pérez-Ayala A, Flores-Chávez M.** Prevalence of Chagas disease in Latin American pregnant women in Madrid, Spain: A multicentre cross-sectional study from 2011 to 2016. *Trop Med Int Health.* 2023; 28(12): 912-22. Article. IF: 2.6; Q2
 - **Maldonado-Barrueco A, Grasa CD, Grandioso-Vas D, del Rosal T, Sánchez-Holgado M, Sánchez-García L, López-Ortega P, Falces-Romero I, García-Rodríguez J,**



- Quiles-Melero I.** *Treponema pallidum* causing congenital syphilis with severe multisystem involvement. *J Travel Med.* 2023; 30(1): taac152. Editorial Material. IF: 9.1; D1
- **Mihatsch W, Varas MAJ, Diehl LL, Carnielli V, Schuler R, Gebauer C, Marcos MSD.** Systematic review on individualized versus standardized parenteral nutrition in preterm infants. *Nutrients.* 2023; 15(5): 1224. Review. IF: 4.8; Q1
 - **Oliver P, Pellicer M, Prieto D, Díaz-Garzon J, Mora R, Tomoiu I, González N, Carcavilla A, González-Casado I, Losantos I, Buño A, Fernández-Calle P.** Impact of COVID-19 pandemic on HbA1c management and results in pediatric and adult outpatients with diabetes. *Adv Lab Med.* 2023; 4(1): 105-11. Article. IF: 1.1; Q4
 - **Olsen MH, Hansen ML, Lange T, Gluud C, Thabane L, Greisen G, Jakobsen JC.** Detailed statistical analysis plan for a secondary Bayesian analysis of the SafeBoosC-III trial: a multinational, randomised clinical trial assessing treatment guided by cerebral oximetry monitoring versus usual care in extremely preterm infants. *Trials.* 2023; 24(1): 737. Article. IF: 2.0; Q3
 - **Pallas-Alonso C, Montealegre A, Hernández-Aguilar MT, Muñoz-Amat B, Collados-Gómez L, Jiménez-Fernández L, García-Lara N, Cabrera-Lafuente M, Moral-Pumarega MT, López-Maestro M, Chrapak N.** XIII International Conference on Kangaroo Mother Care - Different opinions, experiences and related KMC issues: Good practices, stabilisation concept, nutrition and basic respiratory support. *Acta Paediatr.* 2023; 112(12): 2478-85. Review. IF: 2.4; Q1
 - **Ramiro-Cortijo D, Arribas SD, Viu LI, Vázquez NG, de Pipaon MS.** Exclusive fish oil lipid emulsion rescue strategy improves cholestasis in neonates on partially fish oil-based lipid emulsion: a pilot study. *Nutrients.* 2023; 15(3): 509. Article. IF: 4.8; Q1
 - **Rasmussen MI, Hansen ML, Pellicer A, Gluud C, Dempsey E, Mintzer J, Hyttel-Sorensen S, Heuchan AM, Hagmann C, Ergenekon E, Dimitriou G, Pichler G, Naulaers G, Cheng GQ, Tkaczyk J, Fuchs H, Fumagalli M, Nesargi S, Fredly S, Szczapa T, Plomgaard AM, Hansen BM, Jakobsen JC, Greisen G.** Cerebral oximetry monitoring versus usual care for extremely preterm infants: a study protocol for the 2-year follow-up of the SafeBoosC-III randomised clinical trial. *Trials.* 2023; 24(1): 653. Article. IF: 2.0; Q3
 - **Rodrigo FGM, Marti LU, Nieto CZ, Henríquez GG, Suárez DR, Ávila-Álvarez A, Aloy JF, Ven-to M.** Morbidity and mortality of very-low-birth-weight twin infants according to their sex and the sex of the co-twin: a retrospective cohort study. *Neonatology.* 2023; 120(6): 718-26. Article. IF: 2.6; Q1
 - **Simoës EAF, Madhi SA, Muller WJ, Atanasova V, Bosheva M, Cabanas F, Cots MB, Domachowske JB, García-García ML, Grantina I, Nguyen KA, Zar HJ, Berglind A, Cummings C, Griffin MP, Takas T, Yuan Y, Hamrin UW, Leach A, Villafana T.** Efficacy of nirsevimab against respiratory syncytial virus lower respiratory tract infections in preterm and term infants, and pharmacokinetic extrapolation to infants with congenital heart disease and chronic lung disease: a pooled analysis of randomised controlled trials. *Lancet Child Adolesc Health.* 2023; 7(3): 180-9. Article. IF: 19.9; D1
 - **Velilla TA, Guijarro C, Ruiz RC, Piñero MR, Marcos JF, Pérez AP, López AMB, López AM, Donaire JAG, Obaya JC, Guerra LC, Carratalá VP, Cabello IE, Lazo MS, Rodrigo MMC, Prieto JMM, Doblas JGG, Soto AB.** Consensus document for lipid profile testing and reporting in Spanish clinical laboratories: what parameters should a basic lipid profile include?. *Adv Lab Med.* 2023; 4(2): 147-56. Article. IF: 1.1; Q4
 - **Velilla TA, Guijarro C, Ruiz RC, Piñero MR, Marcos JFV, Pérez AP, López MAB, López AM, Donaire JAG, Obaya JC, Guerra LC, Carratalá VP, Cabello IE, Lazo MS, Rodrigo MMC, Prieto JMM, Doblas JGG, Soto AB.** Consensus document for the determination and reporting of the lipid profile in Spanish clinical laboratories: What parameters should a basic lipid profile include? *Adv Lab Med.* 2023; 4(2): 147-56. Article. IF: 1.1; Q4
 - **Velilla TA, Guijarro C, Ruiz RC, Piñero MR, Marcos JFV, Pérez AP, López MAB, López AM, Donaire JAG, Obaya JC, Guerra LC, Carratalá VP, Cabello IE, Lazo MS, Rodrigo MMC, Prieto JMM, Doblas JGG, Soto AB.** Consensus document for lipid profile determination and reporting in Spanish clinical laboratories: What parameters should be included in a basic lipid profile?. *Clin Investig Arterioscler.* 2023; 35(2): 91-100. Article. IF: 1.9; Q3
 - **Vestager ML, Hansen ML, Rasmussen MI, Hahn GH, Hyttel-Sorensen S, Pellicer A, Heuchan AM, Hagmann C, Dempsey E, Dimitriou bello IE, Lazo MS, Rodrigo MMC, Prieto JMM, Doblas JGG, Soto AB.** Consensus document for lipid profile testing and reporting in Spanish clinical laboratories. *Endocrinol Diabetes Nutr.* 2023; 70(7): 501-10. Article. IF: 1.8; Q4



- G, Pichler G, Naulaers G, Fuchs H, Tkaczyk J, Mintzer J, Fumagalli M, Nesargi S, Fredly S, Szczapa T, Gluud C, Jakobsen JC, Greisen G.** The effects of cerebral oximetry in mechanically ventilated newborns: a protocol for the Safe-BoosC-IIIv randomised clinical trial. *Trials*. 2023; 24(1): 696. Article. IF: 2.0; Q3
- **Zozaya C, Ganji N, Li B, Lok MJ, Lee C, Koike Y, Gauda E, Offringa M, Eaton S, Shah PS, Pierro A.** Remote ischaemic conditioning in necrotising enterocolitis: a phase I feasibility and safety study. *Arch Dis Child-Fetal*. 2023; 108(1): F69-76. Article. IF: 3.9; D1

Research projects

- **Bravo Laguna MC.** Predicción de la eficacia de los fármacos cardiovasculares en recién nacidos (PI22/00567). ISCIII. 2023-2025. *Management centre: FIBHULP*
- **Bravo Laguna MC.** Valoración cuantitativa de la repercusión hemodinámica del ductus arterioso persistente y su tratamiento en el recién nacido de bajo peso. *Neonatalcare S. L.* 2008-Ongoing. *Management centre: FIBHULP*
- **Buño Soto A.** Actualización y renovación de la actividad investigadora en el servicio de análisis clínicos del Hospital Universitario La Paz. Various Funders. 2012-Ongoing. *Management centre: FIBHULP*
- **Buño Soto A.** COVID-19 severity score predictive model-technological feasibility, clinical acceptance, and potential impact upon patient management. *Siemens Healthcare S.L.* 2021-Ongoing. *Management centre: FIBHULP*
- **Buño Soto A.** Determinación de la variación biológica de magnitudes hematológicas y bioquímicas y de la metabólica en deportistas de alto rendimiento. *Int'l Marketing de Snibe Co. Ltd, Shenzhen New Industries Biomedical Engineering Co.* 2022-Ongoing. *Management centre: FIBHULP*
- **Buño Soto A.** Estudio en población cognitivamente sana (sin demencia) para la determinación de valores de referencia de una nueva técnica diagnóstica basada en espectroscopia Raman. *Raman Health Technologies S. L.* 2016-Ongoing. *Management centre: FIBHULP*
- **Buño Soto A.** Recogida de muestras de deportistas de alto rendimiento para la evaluación de su variación biológica. *Fundación para la Investigación Biomédica Hospital Universitario La Paz.* 2016-Ongoing. *Management centre: FIBHULP*
- **Buño Soto A.** Validación de un nuevo método para la detección de anticuerpos IGG e IGM anti Sars-Cov-2 en el analizador atellica solution. *Siemens Healthcare S. L.* 2020-Ongoing. *Management centre: FIBHULP*
- **Cabrera Lafuente M.** Protección, promoción y apoyo a la lactancia materna en recién nacidos prematuros, pequeños y enfermos (Neo-IHAN). *IHAN-Ministerio de Sanidad-UNICEF.* 2020-Ongoing. *Management centre: IHAN*
- **Pellicer Martínez A.** Alliance for Family Integrated Care (FiCare) Implementation in Neonatal Intensive Care Units (RISEinFAMILY). *UE.* 2020-2025. *Management centre: FIBHULP*
- **Pellicer Martínez A.** ENSEMBLE: European Newborn Study: Early Markers for a Better Life. *Fondation de Paralysee Francaise.* 2023-Ongoing. *Management centre: FIBHULP*
- **Pellicer Martínez A.** Estudio aleatorizado, doble ciego, de tres brazos controlado con placebo, sobre el tratamiento con dobutamina de la insuficiencia hemodinámica en el periodo postnatal inmediato (PI18/01551). *ISCIII.* 2019-2023. *Management centre: FIBHULP*
- **Pellicer Martínez A.** Estudio retrospectivo de pacientes con sospecha de meningitis para identificar meningitis que requieran o no tratamiento mediante un moelo de IA. *Neos New Born Solutions S. L.* 2020-Ongoing. *Management centre: FIBHULP*
- **Pellicer Martínez A.** Online cerebral pressure autoregulation continuous monitorin as a neurobiomarker to guide assessment and intervention to prevent or minimise brain injury in the high-risk preterm infant. *Chiesi Foundation Onlus.* 2017-Ongoing. *Management centre: FIBHULP*
- **Pellicer Martínez A.** Salvaguardando el cerebro de nuestros niños más pequeños- ensayo clínico por iniciativa del investigador, pragmático, abierto, multinacional, aleatorizado fase III que evalúa el tratamiento basado en la monitorización con espectrometría cercana al infrarrojo versus tratamiento estándar en el niño prematuro. *Fundación Mutua Madrileña.* 2019-Ongoing. *Management centre: FIBHULP*
- **Sáenz de Pipaón Marcos M.** Colonización de gestantes por bacterias multirresistentes y transmisión perinatal en <32 semanas: prevalencia y morbilidad (). *Fundación de la Sociedad Española de Neonatología.* 2019-Ongoing. *Management centre: FIBHULP*
- **Sáenz de Pipaón Marcos M.** Desarrollo de fórmulas nutricionales biodisponibles (PID2020-119084RB-C21). *Agencia estatal de Investigación.* 2021-2024. *Management centre: FUAM*
- **Sáenz de Pipaón Marcos M.** Efecto de la suplementación precoz con ácido araquidónico y ácido docosahexanoico en la evolución de las concentraciones plasmáticas y eritrocitarias de DHA en recién nacidos prematuros: ensayo controlado aleatorizado. *Nestle España S. A.* 2016-Ongoing. *Management centre: FIBHULP*
- **Sáenz de Pipaón Marcos M.** Efecto de la suplementación temprana con ácido docosahexanoico y ácido araquidónico sobre la incidencia de displasia broncopulmonar en niños extremadamente prematuros. *European Society For Paediatric Gastroenterology, Hepatology and Nutrition.* 2020-Ongoing. *Management centre: FIBHULP*
- **Sáenz de Pipaón Marcos M.** Fórmulas nutricionales para el control del déficit de ácido docosahexanoico DHA y ácido araquidónico aa en niños extremadamente prematuros. *Fundación Ramón Areces.* 2021-Ongoing. *Management centre: FIBHULP*

- **Cabañas González F.** Primary Care interventions to prevent maternal and child chronic diseases of perinatal and developmental origin (RICORS). *ISCIII.* (31/12/2024). *FIBHULP*

Clinical trials

- **Pellicer Martínez A.** Estudio abierto y comparativo con tratamiento activo, de la seguridad y la eficacia extrapolada en pacientes pediátricos que requieren anticoagulación para el tratamiento de un acontecimiento tromboembólico venoso. **Type/Phase: III**
Sponsored by: Pfizer, S.L.U.
Signed date: 25/04/2023
- **Pellicer Martínez A.** Integrating families at neonatal intensive care units for empowering them as primary caregivers: the impact of the programme. **Sponsored by: Fundación Para La Investigación Biomedica Hospital Universitario La Paz**
Signed date: 21/02/2023
- **Saenz De Pipaon Marcos M.** A multi-center, double-blind, randomized, two-arm, parallel-group, placebo controlled study to assess the efficacy and safety of elgn-2112 on intestinal malabsorption in preterm infants. **Sponsored by: Elgan Pharma, Ltd**
Signed date: 22/05/2023

Patents and trademarks

- **Segovia Iñigo C, Montes Bueno MT, inventors; Segovia Iñigo C, assignee.** Positioning device for neonates (Utility model). *U201330102; 2013 January 31.*

Cibers and Retics

- **Bravo Laguna MC.** Perinatal Mental Health and Birth-Related Trauma: Maximising best practice and optimal outcomes. *EU.* (31/12/2023). *FIBHULP*



3.7.2 Molecular Hepatology

Publications:9 | Q1:3

COMPOSITION

Paloma Jara Vega.

Emérita Asistencial. Hospital Universitario La Paz

Loreta Hierro Llanillo.

Jefe de Servicio Hepatología Pediátrica. Hospital Universitario La Paz

- **Carmen Camarena Grande.** Médico Adjunto de Hepatología Pediátrica. Hospital Universitario La Paz
- **Ángela de la Vega Bueno.** Médico Adjunto de Hepatología Pediátrica. Hospital Universitario La Paz
- **Lorena Fernández Tomé.** Facultativo Especialista en Hepatología y Trasplante Hepática. Hospital Universitario La Paz
- **Esteban Frauca Remacha.** Jefe de Sección de Hepatología Pediátrica. Hospital Universitario La Paz
- **María Dolores Lledín Barbancho.** Facultativo Especialista en Hepatología y Trasplante Hepática. Hospital Universitario La Paz
- **Gema Muñoz Bartolo.** Médico Adjunto de Hepatología Pediátrica. Hospital Universitario La Paz
- **María Ángeles Pajares Tarancón.** Investigadora Científica. CSIC
- **Luiz Stark Aroeira.** Investigador Postdoctoral. Hospital Universitario La Paz
- **David Vicent López.** Investigador Senior (Contrato Miguel Servet - I2). Hospital Universitario La Paz

STRATEGIC OBJECTIVE

- Our research interest is focused on the study of the molecular mechanisms underlying the most severe paediatric liver disorders, namely cholestasis, which results from the impaired secretion of bile from the liver to the intestine.
- As such, it represents a clinical and biochemical syndrome that is produced by a wide variety of disease processes that affect the liver. Individuals with cholestasis manifest jaundice, severe itching, malabsorption of fats and lipidsoluble vitamins and, in many cases, progressive liver damage. These clinical manifestations are due to the accumulation in blood and tissues of substances normally secreted in the bile, such as bilirubin, bile acids, and cholesterol and to the absence of bile from the intestine.
- When manifested in early infancy, cholestasis is often life threatening and usually requires liver transplantation. Extrahepatic biliary atresia (EHBA), Alagille syndrome and progressive familial intrahepatic cholestasis (PFIC) constitute the main paediatric cholestatic disorders. EHBA is an enigmatic disease of unknown aetiology, characterised by a precocious and accelerated obstruction of the biliary tree. Alagille syndrome is associated with mutations in the Jag1 gene and is characterised by a paucity or absence of intrahepatic bile ducts. PFIC encompasses a heterogeneous group of autosomal recessive diseases that exhibit similar clinical features. These diseases are caused by mutations in proteins located in the canalicular membrane of the hepatocyte and in proteins involved in bile secretion, such as the bile salt export pump (BSEP; ABCB11), the phospholipid transport protein MDR3 (ABCB4) and the aminophospholipid translocase FIC1 (ATP8B1). These cholestatic disorders constitute the most common indication for liver transplantation in childhood.



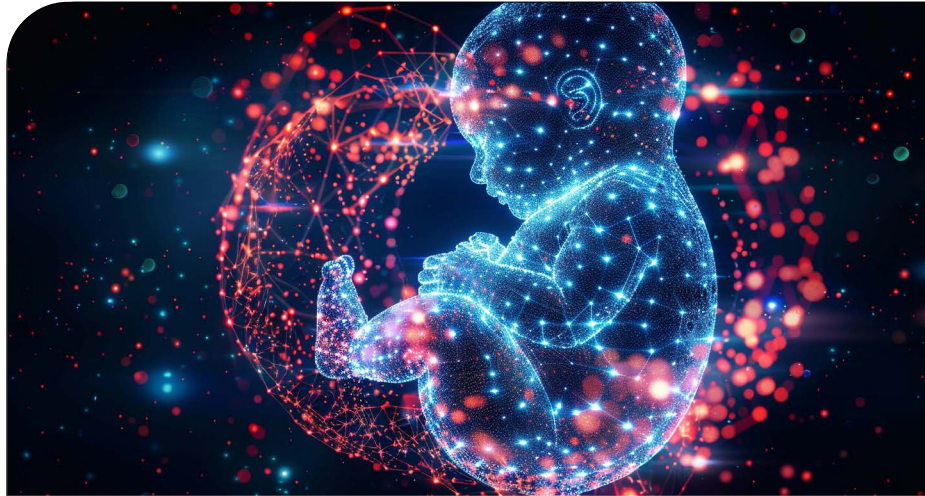
RESEARCH LINES

- Molecular basis of paediatric liver diseases
- Liver Pathobiology
- Biomarker identification

RESEARCH ACTIVITY

Publications

- **Delgado-Miguel C, Triana P, Miguel-Ferrero M, Díaz M, Hierro L, Jara P, López-Gutiérrez JC, Oliveros FH.** Mortality predictive factors in congenital hepatic hemangioma: a case-control study. *Eur J Pediatr.* 2023; 182(4): 1657-63. Article. IF: 3.0; Q1



- Donà D, Bravo-Gallego LY, Remacha EF, Cananzi M, Gastaldi A, Canizalez JT, Stephenne X, Lacaille F, Lindemans C, Calore E, Galea N, Benetti E, Nachbaur E, Sandes AR, Teixeira A, Ferreira S, Klaudel-Dreszler M, Ackermann O, Boyer O, Espinosa L, Guereta LG, Sciveres M, Fischler B, Schwerk N, Neland M, Nicastro E, Dello Strologo L, Toporski J, Vainumae I, Rascon J, Urbonas V, del Rosal T, López-Granados E, Perilongo G, Baker A, Vega PJ. Vaccination practices in pediatric transplantation: A survey among member centers of the European reference network TransplantChild. *Pediatr Transplant.* 2023; 27(7): e14589. Article. IF: 1.2; Q3
- Felzen A, van Wessel DBE, Gonzales E, Thompson RJ, Jankowska I, Shneider BL, Sokal E, Grammatikopoulos T, Kadaristiana A, Jacquemin E, Spraul A, Lipinski P, Czubkowski P, Rock N, Shagrani M, Broering D, Nicastro E, Kelly D, Nebbia G, Arnell H, Fischler B, Hulscher JBF, Serranti D, Arikan C, Polat E, Debray D, Lacaille F, Goncalves C, Hierro L, Bartolo GM, Mozer-Glassberg Y, Azaz A, Breceļj J, Dezsofi A, Calvo PL, Grabhorn E, Hartleif S, van der Woerd WJ, Kamath BM, Wang JS, Li LT, Durmaz Ö, Kerker N, Jorgensen MH, Fischer R, Jiménez-Rivera C, Alam S, Cananzi M, Laverdure N, Ferreira CT,

Guerrero FO, Wang H, Sency V, Kim KM, Chen HL, de Carvalho E, Fabre A, Bernabeu JQ, Zellos A, Alonso EM, Sokol RJ, Suchy EJ, Loomes KM, McKiernan PJ, Rosenthal P, Turmelle Y, Horslen S, Schwarz K, Bezerra JA, Wang K, Hansen BE, Verkade HJ. Genotype-phenotype relationships of truncating mutations, p.E297G and p.D482G in bile salt export pump deficiency. *JHEP Rep.* 2023; 5(2): 100626. Article. IF: 9.5; D1

- García-Sánchez P, Aguilar-Valero E, Sainz T, Calvo C, Iglesias I, Bueno D, Frauca E, Ramos-Boluda E, Alcolea-Sánchez A, García-Guereta L, Alonso-Melgar A, Esperón F, Mendez-Echevarria A. Immunocompromised children and young patients living with pets: gaps in knowledge to avoid zoonosis. *Transbound Emerg Dis.* 2023; 2023: 2151761. Article. IF: 3.5; Q2
- Gardin A, Ruiz M, Beime J, Cananzi M, Rathert M, Rohmer B, Grabhorn E, Almes M, Logarajah V, Pena-Quintana L, Casswall T, Darmelahn-Remil A, Reyes-Dominguez A, Barkaoui E, Hierro L, Baquero-Montoya C, Baumann U, Fischler B, Gonzales E, Davit-Spraul A, Laplanche S, Jacquemin E. $\Delta 4$ -3-oxo-5 β -reductase deficiency: favorable outcome in 16 patients treated with cholic acid. *Orphanet J Rare*

Dis. 2023; 18(1): 383. Article. IF: 3.4; Q2

- Goldschmidt I, Chichelnskiy E, Ruebsamen N, Jaeger VK, Karch A, D'Antiga L, Di Giorgio A, Nicastro E, Kelly DA, McLin V, Korff S, Debray D, Girard M, Hierro L, Klaudel-Dreszler M, Markiewicz-Kijewska M, Falk C, Baumann U. Diagnosing acute cellular rejection after paediatric liver transplantation-is there room for interleukin profiles?. *Children (Basel).* 2023; 10(1): 128. Article. IF: 2.0; Q2
- Lledín MD, Parrón-Pajares M, Morais A, Hernández-Oliveros F, Botella-Carretero JI, Hierro L. Impact of muscle mass on the prognosis of liver transplantation for infants with biliary atresia. *Front Pediatr.* 2023; 10: 1093880. Article. IF: 2.1; Q2
- Pérez-Luz S, Lalchandani J, Matamala N, Barroero MJ, Gil-Martín S, Ramos-Del Saz S, Varona S, Monzón S, Cuesta I, Justo I, Marcacuzco A, Hierro L, Garfia C, Gomez-Mariano G, Janciuskiene S, Martínez-Delgado B. Quantitative lipid profiling reveals major differences between liver organoids with normal pi*m and deficient pi*z variants of alpha-1-antitrypsin. *Int J Mol Sci.* 2023; 24(15): 12472. Article. IF: 4.9; Q1
- Vega MG, Andrade JD, Morais A, Frauca E, Bartolo GM, Lledín MD, Bergua A, Hierro L. Urea cycle disorders and indications for liver transplantation. *Front Pediatr.* 2023; 11: 1103757. Article. IF: 2.1; Q2

Research projectsA

- Hierro Llanillo L. Desarrollo de métodos de diagnóstico molecular de enfermedades hepáticas infantiles de carácter hereditario. Fundación ACS. 2005-Ongoing. *Managment centre: FIBHULP*
- Hierro Llanillo L. Diagnóstico molecular de enfermedades hepáticas infantiles de carácter hereditario (PI-426). Fundación ACS. 2012-Ongoing. *Managment centre: FIBHULP*
- Hierro Llanillo L. Estableciendo una base de datos como parte de la red europea de referen-

cia en enfermedades rara hepáticas. R-liver. UE. 2019-Ongoing. *Managment centre: FIBHULP*

- Hierro Llanillo L. Validación de marcadores genéticos y moleculares para el diagnóstico de atresia biliar (PI20/01496). ISCIII. 2021-2023. *Managment centre: FIBHULP*
- Jara Vega P. Estudio epidemiológico, observacional sobre el riesgo de desarrollo de síndrome linfoproliferativo en pacientes pediátricos trasplantados hepáticos, en el HULP. Roche Farma S. A. 2008-Ongoing. *Managment centre: FIBHULP*
- Jara Vega P. PaEdiatric Transplantation European Registry (PETER PI-4389). UE. 2019-2023. *Managment centre: FIBHULP*
- Romero M, Hierro Llanillo L. Optimization of spleen VCTE examinations with FibroScan. Echosens. 2022-Ongoing. *Managment centre: FIBHULP*
- Ruiz de Valbuena R, Hierro Llanillo L. A prospective and retrospective cohort study to refine and expand the knowledge on patients with chronic forms of Acid Sphingomyelinase Deficiency (ASMD) (Estudio PIR16183). Sanofi . 2021-. *Managment centre:*
- Vicent López D. Caracterización clínica del nuevo factor de riesgo cardiovascular trimetilamina-D-óxido en pacientes diabéticos obesos (). Sección de Endocrinología y Nutrición Severo Ochoa. 2015-Ongoing. *Managment centre: FIBHULP*
- Vicent López D. Contrato Miguel Servet Categoría C (CES06/007). ISCIII. 2008-2025. *Managment centre: FIBHULP*
- Jara Vega P. Support to Generic Services for the ERN TransplantChild (ICT 2372000). UE. 2021-2023. *Managment centre: FIBHULP*

Cibers and Retics

- Hierro Llanillo L. ERN on Hepatological diseases. (RARE-LIVER). EU. (31/12/2023). FIBHULP
- Jara Vega P. ERN on Transplantation in children. (TransplantChild). EU. (31/12/2023). FIBHULP



3.7.3 Maternal and Fetal Medicine Group

Publications:23 | **Q1:**9

COMPOSITION

José Luis Bartha Rasero.

Jefe de Servicio de Obstetricia y Ginecología. Hospital Universitario La Paz. Catedrático de Obstetricia y Ginecología. Universidad Autónoma de Madrid

- **Irene Bartha de las Peñas.** Investigador Clínico en Alergia Pediátrica. King's College de Londres and Guy's and St Thomas NHS Foundation Trust
- **Alejandra Abascal Saiz.** Facultativo Especialista de Área en Ginecología y Obstetricia. Hospital Universitario La Paz
- **Eugenia Antolín Alvarado.** Jefe de Sección de Obstetricia y Ginecología. Hospital Universitario La Paz. Profesor asociado. Universidad Autónoma de Madrid
- **Marta Cortés León.** Médico Especialista en Ginecología y Obstetricia. Hospital Universitario La Paz
- **Marcos Javier Cuerva González.** Facultativo Especialista de Área en Ginecología y Obstetricia. Hospital Universitario La Paz
- **María Amparo Gimeno Sanmartín.** Médico Especialista en Ginecología y Obstetricia. Hospital Universitario La Paz
- **María del Mar González Arlazón.** Facultativo Especialista de Área en Ginecología y Obstetricia. Hospital Universitario La Paz
- **María de la Calle Fernández-Miranda.** Jefa de Sección de Tocología de Alto Riesgo y Obstetricia Médica. Hospital Universitario La Paz. Profesora asociada. Universidad Autónoma de Madrid
- **María de la Cruz González Álvarez.** Facultativo Especialista de Área en Ginecología y Obstetricia. Hospital Universitario La Paz
- **Beatriz Herrero Ruiz.** Médico Adjunto de la Sección de Ecografía y Medicina Fetal. Hospital Universitario La Paz
- **Sara López Magallón.** Facultativo Especialista de Área en Ginecología y Obstetricia. Hospital Universitario La Paz
- **Francisco López Sánchez.** Jefe de Sección de Obstetricia y Ginecología. Hospital Universitario La Paz
- **Fernando Magdaleno Dans.** Jefe de Sección de Obstetricia y Ginecología. Hospital Universitario La Paz. Profesor asociado. Universidad Autónoma de Madrid
- **María Elena Martín Boado.** Facultativo Especialista de Área en Ginecología y Obstetricia. Hospital Universitario La Paz
- **Nuria Martínez Sánchez.** Facultativo Especialista de Área en Ginecología y Obstetricia. Hospital Universitario La Paz
- **Marta Luisa Muner Hernando.** Facultativo Especialista de Área en Ginecología y Obstetricia. Hospital Universitario La Paz
- **Inmaculada Orensanz Fernández.** Facultativo Especialista de Área en Ginecología y Obstetricia. Hospital Universitario La Paz
- **Roberto Rodríguez González.** Facultativo Especialista de Área en Ginecología y Obstetricia. Hospital Universitario La Paz
- **Sara Ruiz Martínez.** Investigadora Juan Rodés. Hospital Universitario La Paz
- **Laura Sotillo Mallo.** Facultativo Especialista de Área en Ginecología y Obstetricia. Hospital Universitario La Paz
- **Inmaculada Duyos Mateo.** Facultativo Especialista de Área en Ginecología y Obstetricia. Hospital Universitario La Paz



STRATEGIC OBJECTIVE

1. To evaluate the implication of placental energy metabolism in obstetric conditions
2. Finding new biomarkers in gestational diabetes mellitus and macrosomia
3. Find new biomarkers of fetal and perinatal neurological damage and establish new prevention strategies
4. New biomarkers in poor placentation
5. Pathophysiology and new lines of treatment of fetal heart damage in Anti-Ro positive women
6. Fetal therapy
7. Infectious diseases. Microbiota

RESEARCH LINES

1. Diabetes mellitus, obesity and metabolic syndrome in pregnancy. Energy metabolism in pregnancy
2. Poor placentation
3. Fetal Neurodevelopment
4. Inflammation, autoimmunity and pregnancy
5. Fetal Therapy
6. Infectious diseases. Microbiota



RESEARCH ACTIVITY

Doctoral theses

- **Duyos Mateo I.** Exitus de un gemelo en la gestación monocorial. Predicción de daño cerebral y resultados perinatales en el gemelo superviviente[dissertation]. *Madrid: UAM: 2023(03/11/2023). Director: de la Calle Fernández-Miranda M, Antolín Alvarado E.*
- **Hernández Alonso J.** Evaluación del impacto de la pandemia de COVID-19 en la mujer gestante. Análisis de la salud mental perinatal y ajuste psicológico[dissertation]. *UAM: Madrid: 2023(27/11/2023). Director: Armijo Suarez OM, de la Calle Fernández-Miranda M.*
- **Martín Palumbo G.** Relación entre factores angiogénicos y evaluación de la entrada vascular placentaria en el embarazo normal y patológico[dissertation]. *Madrid: UAM: 2023(27/09/2023). Director: Antolín Alvarado ME.*
- **Migdan CM.** Resultados perinatales en pacientes con cribado combinado de primer trimestre para aneuploidias patológico y cariotipo normal[dissertation]. *Madrid: UAM: 2023(24/02/2023). Director: Bartha Rasero JL, Lerma Puertas D.*

Publications

- **Abascal-Saiz A, Fuente-Luelmo E, Haro M, Fioravanti V, Antolín E, Ramos-Álvarez MP, Bartha JL.** decreased fatty acid oxidation gene expression in pre-eclampsia according to the onset and presence of intrauterine growth restriction. *Nutrients.* 2023; 15(18): 3877. Article. IF: 4.8; Q1
- **Barquiel B, Calvo M, Moreno-Domínguez O, Martínez-Sánchez N, Muner M, Bedate MF, Delgado M, López S, Hillman N, González N, de la Calle M, Bartha JL.** The PREDG study: A randomised controlled trial testing whether an educational intervention can prevent gestational weight gain in women with obesity. *Clin Nutr Espen.* 2023; 57: 266-71. Article. IF: 2.9; Q3
- **Bartha I, de la Fuente M, de la Calle M, Boado EM, Martínez-Sánchez N, Bartha JL.** The influence of maternal respiratory allergy on obstetrics and perinatal outcomes: A nested case-control study. *Int J Gynecol Obstet.* 2023; 161(2): 509-16. Article. IF: 2.6; Q2

- **Bartha I, de la Fuente M, Martínez-Sánchez N, de la Calle M, Boado EM, Bartha JL.** The influence of air pollution on gestational age at delivery and birthweight in patients with or without respiratory allergy: A nested case-control study. *Acta Obstet Gyn Scan.* 2023; 102(11): 1593-601. Article. IF: 3.5; Q1
- **Bartha I, Joumady I, Cuerva M, Bartha JL.** The effect of maternal obesity and lipid profile on first-trimester serum progesterone levels. *Amer J Obstet Gynecol Mfm.* 2023; 5(7): 100959. Article. IF: 3.8; Q1
- **Bebia Z, Reyes O, Jeanfreau R, Kantele A, De Leon RG, Sánchez MG, Banooni P, Gardener GJ, Rasero JLB, Pardiña MBE, Langley JM, Di Leo CM, Botelho-Nevers E, Buttery J, Laurichesse H, Madhi SA, García AM, Stanley T, Barjat T, Griffith R, Castrejón-Alba MM, de Heusch M, Dieussaert I, Hercor M, Lese P, Qian H, Tullio AN, Henry O.** Safety and immunogenicity of an investigational respiratory syncytial virus vaccine (rsvpref3) in mothers and their infants: a phase 2 randomized trial. *J Infect Dis.* 2023; 228(3): 299-310. Article. IF: 5.0; Q2

- **Chueca G, Illescas T, Sotillo L, Rodríguez R, Álvarez C, Hernández A, Bartha JL, Antolín E.** Uterine arteriovenous malformation: A diagnostic and therapeutic challenge. *Clin Invest Gynecol Obstet.* 2023; 50(1): 100813. Article. IF: 0.1; Q4
- **Cuerva MJ, Carbonell M, Boria F, Gil MM, de la Calle M, Bartha JL.** Influence on operative time of immediate skin-to-skin care in low-risk primary cesarean births for breech presentation: Retrospective cohort study. *Birth-Iss Perinat C.* 2023; 50(3): 571-77. Article. IF: 2.8; Q1
- **Cuerva MJ, de Santiago B, Cortés M, López F, Espinosa JA, Bartha JL.** Vacuum-assisted birth in maternal lateral posture versus lithotomy. A simulation study. *Eur J Obstet Gyn R B.* 2023; 290: 88-92. Article. IF: 2.1; Q2
- **Cuerva MJ, Rodríguez E, de Aguado MP, Gil MD, Rolle V, López F, Bartha JL.** Intrapartum ultrasound in maternal lateral versus semi-recumbent posture. A repeated measures study.



3.7 Maternal Infant Child and Youth Research Area

- Eur J Obstet Gyn R B. 2023; 285: 46-9. Article. IF: 2.1; Q2
- **de la Calle M, Rodríguez-Molino P, Gómez MPR, Baquero-Artigao F.** Cytomegalovirus seroprevalence in pregnant women in Madrid: First step for a systematic screening. *Enferm Infec Micr Cl.* 2023; 41(1): 55-6. Editorial Material. IF: 2.6; Q3
 - **Duyos I, Ordás P, Herrero B, Rodríguez R, Cabrero MJ, Fernández-Zubillaga A, Sebastian JBD, de la Calle M, Bartha JL, Antolín E.** Single fetal demise in monochorionic twins: How to predict cerebral injury in the survivor co-twin? *Acta Obstet Gyn Scan.* 2023; 102(8): 1125-34. Article. IF: 3.5; Q1
 - **Engels V, Medina M, Antolín E, Ros C, Bermejo C, Manzour N, Pelayo I, Amaro A, Martínez-Ten P, De-Guirior C, Rodríguez R, Sotillo L, Brotons I, de la Cuesta-benjumea R, Martínez O, Sancho J, Alcázar JL.** Factors associated with a post-procedure spontaneous pregnancy after a hysterostapingo-foam-sonography (hyfossy): results from a multicenter observational study. *Diagnostics (Basel).* 2023; 13(3): 504. Article. IF: 3.0; Q1
 - **González ER, Gómez AO, González MJC, Rasero JLB, Fernández-Miranda MD.** Induction of labour in twin pregnancies: Comparative study of oxytocin vs. dinoprostone. *Clin Invest Ginecol Obstet.* 2023; 50(2): 100847. Article. IF: 0.1; Q4
 - **Goya M, Miserachs M, Suy Franch A, Burgos J, de la Calle M, Brotons C, Castellanos M, Cortes Rico O, Diaz Rodríguez A, Elosua R, Freijo MM, González Fondado M, Gorostidi M, Grau M, Hernández Martínez AM, Lahoz C, Muñoz-Rivas N, Pallares-Carratala V, Pedro-Botet J, Rodilla E, Goya E, Royo Bordonada MA, Santamaria R, Torres Fonseca M, Velescu A, Zamora A, Armario P.** Documento de consenso de la Sociedad Española de Obstetricia y Ginecología (SEGO) y el Comité Español Interdisciplinario para la Prevención Vascul (CEIPV). Ventana de oportunidad: prevención del riesgo vascular en la mujer. Resultados adversos del embarazo y riesgo de enfermedad vascular. *Rev Esp Salud Publica.* 2023; 97: 156-69. Article. IF: 0.9; Q4
 - **Herrero-Martínez JM, Trigo E, Navarro M, García-Alcázar D, Carrillo I, Fernández-López T, Calderón-Moreno M, Millán-Pérez R, Cuadros J, Velasco M, García-Bujalance S, Lizasoain M, Martín-Rabadán P, Pérez-Ayala A, Flores-Chávez M.** Prevalence of chagas disease in latin american pregnant women in Madrid, Spain: A multicentre cross-sectional study from 2011 to 2016. *Trop Med Int Health.* 2023; 28(12): 912-22. Article. IF: 2.6; Q2
 - **Kampmann B, Madhi SA, Munjal I, Simoes EAF, Pahud BA, Llapur C, Baker J, Marc GP, Radley D, Shittu E, Glanternik J, Snaggs H, Baber J, Zachariah P, Barnabas SL, Fausett M, Adam T, Perreras N, Van Houten MA, Kantele A, Huang LM, Bont LJ, Otsuki T, Vargas SL, Gullam J, Tapiero B, Stein RT, Polack FP, Zar HJ, Staerke NB, Padilla MD, Richmond PC, Koury K, Schneider K, Kalinina EV, Cooper D, Jansen KU, Anderson AS, Swanson KA, Gruber WC, Gurtman A.** Bivalent prefusion f vaccine in pregnancy to prevent rsv illness in infants. *New Engl J Med.* 2023; 388(16): 1451-64. Article. IF: 96.2; D1
 - **López-Mendizábal L, Bartha JL, de León AR, Varea C.** Analysis of the caesarean section rate at the La Paz Maternal-Child University Hospital in Madrid (2010-2018) through the Robson classification. *Clin Invest Ginecol Obstet.* 2023; 50(4): 100904. Article. IF: 0.1; Q4
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 - **Silva-Fernández CS, de la Calle M, Arribas SM, Garrosa E, Ramiro-Cortijo D.** Factors associated with obstetric violence implicated in the development of postpartum depression and post-traumatic stress disorder: a systematic review. *Nurs Rep.* 2023; 13(4): 1553-76. Review. IF: 2.4; Q1
 - **Soriano-Ramos M, Esquivel-De la Fuente E, Vicent EA, de la Calle M, Baquero-Artigao F, Domínguez-Rodríguez S, Cabanes M, Gómez-Montes E, Goncá A, Valdés-Bango M, Viñuela-Benítez MC, Gutiérrez MMC, Saavedra-Lozano J, Pérez IC, Encinas B, Vilella LC, Martfnez MD, Tazarro A, Rodríguez-Molino P, Quiles EG, Alcázar DG, Burguillo AG, Folguera MD, Navarro D, Blázquez-Gamero D.** The role of the T-cell mediated immune response to Cytomegalovirus infection in intrauterine transmission. *Plos One.* 2023; 18(2): e0281341. Article. IF: 2.9; Q1
 - **Tosto V, Herrero B, Illescas T, Fernández-Miranda MD, Moreno-Sanz B, de Lucas R, Bartha JL, Antolín E.** (New) antenatal ultrasound signs of fetal junctional epidermolysis bullosa: A case report and systematic review of literature. *Eur J Obstet Gyn R B.* 2023; 290: 43-50. Review. IF: 2.1; Q2
 - **Velasco I, Vila L, Goya M, Oleaga A, de la Calle M, Santamaria EJ.** Spanish Society of Gynaecology and Obstetrics. Consensus document on the management of thyroid dysfunction during pregnancy. *Endocrinol Diabetes Nutr.* 2023; 70: 38-50. Article. IF: 1.8; Q4
 - **Bartha Rasero JL.** Validación de Nuevos Biomarcadores en Diabetes Gestacional de Inicio Tardío (PI23/01837). ISCIII. 2023-Ongoing. *Management centre: FIBHULP*
- #### Clinical trials
- **Bartha Rasero, José Luis.** Estudio de cohortes de fase 3b, no aleatorizado, abierto e internacional para describir la seguridad de las participantes que recibieron o la vacuna para inmunización materna rsvpref3 (cualquier dosis) o el placebo (grupo control) en los estudios rsv mat anteriores (rsv mat-001, rsv mat-004, rsv mat-010, rsv mat-011, rsv mat-009, rsv mat-012 y rsv mat-039), durante cualquier embarazo posterior a la vacunación con la vacuna rsvpref3 o el placebo.
Type/Phase: III
Sponsored by: Glaxosmithkline, S.A
Signed date: 14/02/2023
 - **Bartha Rasero, José Luis.** Peony study. estudio multicéntrico de cohortes histórico para caracterizar el tratamiento, la evolución clínica y el resultado de los embarazos en mujeres que han tenido un embarazo con ehm grave de aparición temprana.
Type/Phase: No EPA
Sponsored by: Janssen Cilag International Nv
Signed date: 03/01/2023
 - **Bartha Rasero, José Luis.** phase 3 randomized, placebo-controlled, double-blind, multicenter study to evaluate the efficacy and safety of nipo-calimab in pregnancies at risk for severe hemolytic disease of the fetus and newborn (hdfn) - azalea.
Type/Phase: III
Sponsored by: Janssen Research & Development, Llc
Signed date: 15/12/2023
- #### Research projects
- **Antolín Alvarado E.** Modelos predictivos de daño neurológico y riesgo cardiovascular mediante la integración de técnicas de imagen y biomarcadores en la gestación monocorial. *Biología de sistemas (PI19/00904).* ISCIII. 2020-2024. *Management centre: FIBHULP*
 - **Bartha Rasero JL.** Biología de sistemas para la búsqueda de marcadores precoces de placenta deficiente (PI19/00915). ISCIII. 2020-2024. *Management centre: FIBHULP*
 - **Bartha Rasero JL.** Implicación de la oxidación mitocondrial de ácidos grasos placentarios en la patogenesis y clínica de la preeclampsia. *Laboratorios Farmacéuticos Rovi S. A.* 2016-Ongoing. *Management centre: FIBHULP*
 - **Bartha Rasero JL.** Diagnóstico intraparto de la infección materna por estreptococo del grupo B. *Cepheid Iberia S.L.U.* 2023-Ongoing. *Management centre: FIBHULP*



3.7.4 Pediatric Respiratory, Systemic and Neurological Infections & Host Immune Response



Publications:48 | Q1:28

COMPOSITION

Cristina Calvo Rey.

Jefe de Sección del Servicio de Pediatría Hospitalaria, Enfermedades Infecciosas y Tropicales. Hospital Universitario La Paz

- **María Rosa Albañil Ballesteros.** Pediatra Titular. Centro de Salud de Cuzco. Atención Primaria Hospital Universitario La Paz
- **Sonia Alcolea Ruiz.** Investigadora Predoctoral. Hospital Universitario La Paz
- **María Mercedes Bueno Campaña.** Facultativo Especialista de Área en Pediatría. Hospital Fundación de Alcorcón
- **María Cabrerizo Sanz.** Científico titular de OPIs. Instituto de Salud Carlos III
- **Sara Camarero Serrano.** Ayudante de Investigación I+D+I. Instituto de Salud Carlos III
- **Inmaculada Casas Flecha.** Investigador Científico de OPIs. Instituto de Salud Carlos III
- **Teresa del Rosal Rabes.** Médico Adjunto de Pediatría Hospitalaria y Enfermedades Infecciosas y Tropicales. Hospital Universitario La Paz
- **María Luz García García.** Jefe de Servicio de Pediatría. Hospital Universitario Severo Ochoa
- **Paula García Sánchez.** Médico Adjunto en Servicio de Urgencias Pediátricas. Hospital Universitario La Paz
- **Carlos Grasa Lozano.** Contrato Río Hortega. Hospital Universitario La Paz
- **Jara Hurtado Gallego.** Investigadora Postdoctoral. CIBER
- **María de la Montaña Iglesias Caballero.** Técnica Superior Especializada de OPIs. Centro Nacional de Microbiología. Instituto de Salud Carlos III
- **Ana María Méndez Echevarría.** Facultativo Especialista de Área en Pediatría General. Hospital Universitario La Paz
- **Claudia Millán Longo.** Médica Adjuna en Servicio de Pediatría General e Infecciosa. Hospital Universitario La Paz
- **Mar Molinero Calamita.** Colaboradora I+D+I. Centro Nacional de Microbiología. Instituto de Salud Carlos III
- **Juan Francisco Pozo Sánchez.** Científico Titular de OPIs. Unidad de Virus Respiratorios y Gripe. Instituto de Salud Carlos III
- **Clara Udaondo Gascón.** Facultativo Especialista en Reumatología Pediátrica. Hospital Universitario La Paz

STRATEGIC OBJECTIVE

- Infectious diseases are the most frequent pathology in childhood. Our group is focused in the study of paediatric infections with special attention to those associated to viruses.
- The acute respiratory infections (ARIs) of lower respiratory tract are the most frequent infectious diseases in humans and these suppose at least 4 million of deaths yearly in the world. A high proportion of these infections are related with viral aetiology and particularly in children. In our country, the viral ARIs are one of the most frequent causes of hospitalization in children less than 2 years old. Using the metagenomics and applying an adapted method designed and developed for ARIs study, we will have achieved an increased knowledge of viral infections in hospitalized children of all ages, as well as in outpatients. Metagenomics could allow recognizing new viruses and also permits a deeper knowledge of traditional respiratory virus groups. Any new technological tool and its application to respiratory infection will mean an improvement in the diagnosis and monitoring of these types of infections and their immediate use is specified for resolving alerts in public health associated with respiratory viral infections is like the case of MERS-CoV, avian flu, or other influenza pandemics. The pandemic caused by SARS-CoV-2 and the COVID-19 disease in childhood has occupied a large part of the research of our group since its appearance. We are also interested in the study of the immunological response of the infants to the viral infections, and the mechanisms that allow develop recurrent wheezing, or asthma (the most frequent chronic disease in children).
- Emerging viral infections have also an important role in the pathology in childhood. Recently picornaviruses, mainly human parechovirus and enterovirus are causing outbreaks and several neurological infections, morbidity and mortality. They were associated with a wide range of pathologies, from febrile syndrome to respiratory, neurological or systemic diseases. In newborns, these infections can be severe, even fatal. Surveillance of these polio-like diseases is a public health concern and it is one of our group objectives.
- Finally, to study viral infections in high risk group of children (newborn, chronic lung diseases, immunodeficiencies, oncologic patients, rheumatic diseases...) is also a priority in our group. Emerging areas of research in our group are zoonosis and invasive fungal infections in high risk children.

RESEARCH LINES

- Respiratory viral infections in healthy and high risk children (newborn, chronic lung diseases, immunodeficiencies, oncologic patients...). Torqueto virus in immunocompromised children.. Viral metagenomic methods applied to the severe infections of the lower respiratory tract. SARS-CoV-2 infections in children. Applying of new technologies as echography to value risk conditions in viral infections.
- Immune response of the children and interleukins profile in infants with respiratory viral infections and correlation with the development of recurrent wheezing in the first years of life. Role of microbiome.
- Detection and characterization of enterovirus (EV) and parechovirus (PeV) systemic and neurological infections in children. Neurological development in children with EV and PeV infections.
- Infections related with locomotor system. Osteoarticular infections. Infections in children with rheumatic diseases. Kawasaki disease.
- Emerging infections in high risk children: zoonosis and invasive fungal infections.



RESEARCH ACTIVITY

Doctoral Theses

- Alonso López P. Evolución pulmonar, cardiológica, ponderoestatural y neurológica de los adolescentes prematuros moderados y tardíos en comparación con los recién nacidos a término[dissertation]. Villanueva de la Cañada. Madrid: UAX: 2023(07/06/2023). Director: García García ML.
- García Ezquiaga J. Prevalencia e incidencia de alergia alimentaria en población española[dissertation]. Villanueva de la Cañada. Madrid: UAX: 2023(13/06/2023). Director: García García ML.
- Udaondo Gascón C. Infecciones en niños con Artritis idiopática juvenil (AIJ) y comparación con niños sanos[dissertation]. Madrid: UAM: 2023(31/03/2023). Director: Calvo Rey.

Final Degree Theses

- Andrés Blanco L. Violencia sexual en adolescentes, ¿cuestión de género?[dissertation]. Madrid: UAM: 2023(01/06/2023). Director: Echevarría AM, Sainz Costa T.
- del Rey G. Virus y sus reservorios: murciélagos[dissertation]. Madrid: Universidad Complutense Madrid: 2023(01/06/2023). Director: Casas Flechas I, Iglesias-Caballero M.

Publications

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- Bravo-Queipo-de-Llano B, Bonet D, del Rosal T, Cámara C, de Valbuena MR, Pérez A, Grasa CD, Méndez-Echevarría A. A challenging differential diagnosis in a patient with autosomal dominant STAT3 deficiency. *Pediatr Pulm*. 2023; 58(2): 585-91. Article. IF: 2.7; Q1
- Bravo-Queipo-de-Llano B, García LS, Casas I, Pozo F, La Banda L, Alcolea S, Atucha J, Sánchez-León R, Pellicer A, Calvo C. Surveillance of viral respiratory infections in the neonatal intensive care unit-evolution in the last 5 years. *Pathogens*. 2023; 12(5): 644. Article. IF: 3.3; Q2
- Calvo C. Changes in the epidemiology of infections in children. Is there an immune debt? Only for respiratory viruses? *An Pediatr*. 2023; 98(3): 155-6. Editorial Material. IF: 1.5; Q2
- Casado-Fernández G, Corona M, Torres M, Saez Adolfo J, Ramos-Martín F, Manzanares M, Vigon L, Mateos E, Pozo F, Casas I, García-Gutiérrez V, Rodríguez-Mora S, Coiras M. Sustained cytotoxic response of peripheral blood mononuclear cells from unvaccinated individuals admitted to the ICU due to critical COVID-19 is essential to avoid a fatal outcome. *Int J Env Res Pub He*. 2023; 20(3): 1947. Article. Not indexed
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Broderick C, D'Souza G, Keren I, Nijman RG, Tremoulet A, Munblit D, Ulloa-Gutiérrez R, Carter MJ, Ramnarayan P, De T, Hoggart C, Whittaker E, Herberg JA, Kaforou M, Cunningham AJ, Blyuss O, Levin M. Immunoglobulin, glucocorticoid, or combination therapy for multisystem inflammatory syndrome in children: a propensity-weighted cohort study. *Lancet Rheumatol*. 2023; 5(4): E184-99. Article. IF: 15.0; D1

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- Fernández-García MD, Faye M, Díez-Fuertes F, Moreno-Docón A, Chirlaque-López MD, Faye O, Cabrerizo M. Metagenomic sequencing, molecular characterization, and Bayesian phylogenetics of imported type 2 vaccine-derived poliovirus, Spain, 2021. *Front Cell Infect Mi*. 2023; 13: 1168355. Article. IF: 4.6; Q2
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- J, Calvo C.** Antibiotic utilization in hospitalized children with bronchiolitis: a prospective study investigating clinical and epidemiological characteristics at a secondary hospital in Madrid (2004-2022). *Pathogens*. 2023; 12(12): 1397. Article. IF: 3.3; Q2
- **García-García ML, Pérez-Arenas E, Pérez-Hernández P, Falces-Romero I, Ruiz S, Pozo F, Casas I, Calvo C.** Human metapneumovirus infections during COVID-19 pandemic, Spain. *Emerg Infect Dis*. 2023; 29(4): 850-2. Letter. IF: 7.2; Q1
 - **García-García ML, Sastre B, Arroyas M, Beato M, Alonso P, Rodrigo-Muñoz JM, del Pozo V, Casas I, Calvo C.** Nasal TSLP and periostin in infants with severe bronchiolitis and risk of asthma at 4 years of age. *Resp Res*. 2023; 24(1): 26. Article. IF: 4.7; Q1
 - **García-Sánchez P, Aguilar-Valero E, Sainz T, Calvo C, Iglesias I, Bueno D, Frauca E, Ramos-Boluda E, Alcolea-Sánchez A, García-Gueta L, Alonso-Melgar A, Esperón F, Méndez-Echevarría A.** Immunocompromised children and young patients living with pets: gaps in knowledge to avoid zoonosis. *Transbound Emerg Dis*. 2023; 2023: 2151761. Article. IF: 3.5; Q2
 - **Garulo DC, Núñez-Cuadros E, Lovillo M, Calzada-Hernández J, Martín S, Silveira L, Cruz MJ, Tagarro A, Rueda RM, López A, Aritziturri M, Calvo C.** Position statement on infection screening, prophylaxis, and vaccination in pediatric patients with rheumatic diseases and immunosuppressive therapies, part 2: infection prophylaxis. *Eur J Pediatr*. 2023; 182(9): 4271-84. Article. IF: 3.0; Q1
 - **Gómez S, Mora C, de Suso DL, Pellitero SE, Aragón P, Parrón M, Bartolomé-Benito M, Sanz-Santaefemia FJ, Méndez-Echevarría A.** Acute suppurative thyroiditis in children: clinical decision-making. *Pediatr Infect Dis J*. 2023; 42(10): E384-88. Article. IF: 2.9; Q3
 - **González-Bertolín I, Bernardos GB, Suárez LG, Espín IM, Aguilar CB, López RL, Calvo C.** Blood analysis for screening of electrolyte and kidney function alterations in patients with febrile urinary tract infection. *Acta Paediatr*. 2023; 112(10): 2202-9. Article. IF: 2.4; Q1
 - **González-Bertolín I, Bernardos GB, Suárez LG, López RL, Sánchez PG, Gascón PB, Calvo C.** Hyponatremia and other potential markers of ultrasound abnormalities after a first febrile urinary tract infection in children. *Eur J Pediatr*. 2023; 182(11): 4867-74. Article. IF: 3.0; Q1
 - **Grasa C, Monteagudo-Vilavedra E, Pérez-Arenas E, Falces-Romero I, del Castillo YM, Schüffelmann-Gutiérrez C, del Rosal T, Méndez-Echevarría A, Baquero-Artigao F, Santoveña AZ, Fernández PS, Sainz T, Calvo C.** Adenovirus infection in hematopoietic and solid organ paediatric transplant recipients: treatment, outcomes, and use of cidofovir. *Microorganisms*. 2023; 11(7): 1750. Article. IF: 4.1; Q2
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3.7 Maternal Infant Child and Youth Research Area

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 - **Bueno Campaña M.** Fortalecimiento de la detección temprana de IRAs mediante herramientas innovadoras en zonas rurales de Guatemala en el contexto de COVID-19. (2020/PRYC/001192). Agencia Española de Cooperación Internacional al Desarrollo. 2021-2023. *Management centre: HUFA*
 - **Cabrerizo Sanz M.** Investigación de las infecciones neurológicas graves en niños causadas por enterovirus emergentes en España: EV-A71 y EV-D68 (PI18CIII/00017). ISCIII. 2018-2023. *Management centre: Centro Nacional de Microbiología*
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 - **Calvo Rey C.** Colonización por staphylococcus aureus resistente a meticilina en niños sanos de la comunidad (Estudio COSACO). Estudio multicéntrico de ámbito nacional. Fundación SEIP. 2018-Ongoing. *Management centre: FIBHULP*
 - **Calvo Rey C.** Explorando la epidemiología del Sars-Cov-2 en un entorno de alto riesgo para caracterizar la dinámica de transmisión entre los contactos del hogar, centrándose en el papel de los niños y las mascotas (Estudio Sanicov): un estudio de cohorte prospectivo. Merck Sharp and Dohme de España S.A. 2020-2023. *Management centre: FIBHULP*
 - **Calvo Rey C.** Highly efficient technology for clean and safe air: development of advanced air purifiers to inactivate pathogens in aerosols. INIA. 2022-Ongoing. *Management centre: FIBHULP*
 - **Calvo Rey C.** Impacto de la pandemia COVID-19 en las infecciones respiratorias virales, respuesta inmune y microbiota en el primer año de vida incluyendo recién nacidos prematuros (PI21/00377). ISCIII. 2022-Ongoing. *Management centre: FIBHULP*
 - **Calvo Rey C.** Impacto del covid-19 materno en la respuesta inmune de los niños (). Fundación de la Asociación Española de Pediatría. 2021-Ongoing. *Management centre: FIBHULP*
 - **Calvo Rey C.** Infecciones en niños con artritis idiopática juvenil. Fundación SEIP. 2017-2023. *Management centre: FIBHULP*
 - **Calvo Rey C.** Infecciones invasoras por *Streptococcus pyogenes* en niños y adultos: evolución y factores de riesgo microbiológicos, clínicos, genéticos y respuesta inmune (IM23/INFE3/3). CIBERINFEC. 2023-Ongoing. *Management centre: CIBERINFEC*
 - **Calvo Rey C.** Infecciones osteoarticulares en pediatría. Estudio prospectivo multicéntrico (). Fundación de la Asociación Española de Pediatría. 2017-Ongoing. *Management centre: FIBHULP*
 - **Calvo Rey C.** Infecciones respiratorias virales en recién nacidos de muy bajo peso. Fundación Neumomadrid. 2017-Ongoing. *Management centre: FIBHULP*
 - **Casas Flecha I.** Infección respiratoria aguda en niños tras 2 años de pandemia de SARS-CoV-2: virus y respuesta inmune (PI21CIII/00019). AE-CI-ISCIII. 2022-2024. *Management centre: Centro Nacional de Microbiología*
 - **Casas Flecha I.** Integración de la información genómica de SARS-CoV-2 y estudio del comportamiento antigénico de las nuevas variantes y linajes. (COVIDSEQ-UNESPA). Unión Española de Entidades Aseguradoras y Reaseguradoras. 2022-2024. *Management centre: Centro Nacional de Microbiología*
 - **del Rosal Rabés T.** Aplicación de las técnicas moleculares al estudio etiológico de la neumonía atípica o indeterminada en niños hospitalizados. A.E.Pediatría. 2019-2023. *Management centre: FIBHULP*
 - **del Rosal Rabés T.** Infecciones por virus respiratorios y células NK en vías respiratorias en niños receptores de trasplante de progenitores hematopoyéticos. Estudio prospectivo. European Society of Pediatric Infectious Diseases. 2017-Ongoing. *Management centre: FIBHULP*



3.7 Maternal Infant Child and Youth Research Area



- **del Rosal Rabés T.** Streptococcus pneumoniae colonization in immunocompromised Spanish children and adolescents: a multicenter study. Merck Sharp and Dohme de España S.A. 2023-Ongoing. *Management centre: FIBHULP*
- **del Rosal Rabés T.** Torque teno virus (ttv) como potencial marcador de reconstitución inmune y complicaciones en niños sometidos a trasplante alogénico de progenitores hematopoyéticos (tph). FIBHULP. 2022-Ongoing. *Management centre: FIBHULP*
- **García García ML.** Influencia de la microbiota y de la respuesta inmune en la gravedad de la bronquiolitis aguda y en el desarrollo posterior de asma. (Beca SEPAR 2021). SEPAR. 2021-2023. *Management centre: Fundación Puerta de Hierro*
- **Gianquinto C, Calvo Rey C.** SARS-coV2 variants Evaluation in pRegnancy and paeDiatric cohorts. Project acronym (Project 101045989). EU Horizon . 2021-Ongoing. *Management centre: PENTA , FIBHULP*
- **Grasa Lozano CD.** A multicenter study of carbapenem-resistant or carbapenemase-producing gram-negative bacteremia in pediatrics. European Society for Paediatric Infectious Diseases. 2022-Ongoing. *Management centre: FIBHULP*
- **Grasa Lozano CD.** Capacitación de profesionales sanitarios en el manejo de la infección fúngica invasiva en pediatría (GLD21/13382). Gilead Science S.L. 2022-2023. *Management centre: SEIMC*
- **Grasa Lozano CD.** Estudio de infecciones por bacterias resistentes a carbapenémicos en pediatría - CARBA-PED. Fundación SEIP . 2022-Ongoing. *Management centre: FIBHULP*
- **Grasa Lozano CD.** Perfect. estudio de infección fúngica invasiva en pediatría. Gilead Science S.L. 2021-Ongoing. *Management centre: FIBHULP*
- **Méndez Echecarría AM.** Colonización por s.aureus resistente a meticilina en niños sanos de la comunidad (Estudio Cosaco): estudio multicéntrico nacional (P118/00372). ISCIII. 2019-2022. *Management centre: FIBHULP*
- **Méndez Echecarría AM.** Niños inmunodeprimidos y mascotas. ¿Por qué, cómo, cuándo...? Recomendaciones basadas en evidencias para pacientes inmunodeprimidos y sus mascotas. Fundación Mapfre. 2022-2023. *Management centre: FIBHULP*
- **Oteo J, Calvo Rey C.** La medicina de precisión contra la resistencia a antimicrobianos: Proyecto MePRAM. (PMP22/00092). ISCIII. 2023-Ongoing. *Management centre: CIBERINFEC*
- **Udaondo Gascón C.** Banco de imágenes de capilaroscopias en población pediátrica. Sociedad Española de Reumatología Pediátrica. 2019-Ongoing. *Management centre: FIBHULP*
- **Udaondo Gascón C.** Contrato Río Hortega (CM21/00012). ISCIII. 2022-2023. *Management centre: FIBHULP*
- **Calvo Rey C.** Estudio multicéntrico, abierto, ciego para el evaluador y aleatorizado para evaluar la seguridad y la tolerabilidad de una dosis intravenosa única de oritavancina frente al tratamiento habitual de sujetos pediátricos con infecciones bacterianas agudas de la piel y de la estructura de la piel. *Type/Phase: II*
Sponsored by: Melinta Therapeutics Inc
Signed date: 22/02/2023
- **Calvo Rey C.** Inmunogenicidad y seguridad de la vacuna antigripal tetravalente recombinante (riv4) en niños y adolescentes de 9 a 17 años y adultos de 18 a 49 años. *Type/Phase: III*
Sponsored by: Sanofi Pasteur Inc
Signed date: 11/01/2023
- **Calvo Rey C.** Open-label, multi-centre, non-inferiority study of safety and immunogenicity of bimerxv® as heterologous booster for the prevention of coronavirus disease 2019 (covid-19) in adolescents from 12 years to less than 18 years of age. *Type/Phase: IIb*
Sponsored by: Hipra Scientific, S.L.U
Signed date: 03/05/2023
- **del Rosal Rabés T.** Estudio de fase II, aleatorizado, abierto y multicéntrico para evaluar la reactividad, seguridad e inmunogenicidad de la vacuna pediátrica candidata de subunidades de herpes zóster (ped-hz/su) de gsk tras su administración intramuscular con una pauta de dos dosis a niños inmunodeprimidos receptores de trasplante renal de 1-17 años de edad.. *Type/Phase: II*
Sponsored by: Glaxosmithkline Biologicals S.A
Signed date: 14/04/2023
- **Méndez Echevarría AM.** Estudio abierto de fase 2/3 con un solo grupo para evaluar la seguridad, la farmacocinética y la eficacia de obeldesivir en participantes pediátricos con covid-19. *Type/Phase: II*
Sponsored by: Gilead Sciences Inc
Signed date: 04/09/2023

Cibers and Retics

- **Calvo Rey C.** Centro de Investigación Biomédica en Red en Enfermedades Infecciosas. (CIBERINFEC). ISCIII. (31/12/2024). FIBHULP
- **Casas Flecha I.** Red de Laboratorios Españoles de secuenciación Genómica de SARS-CoV-2. (RELECOV). EU. (31/12/2023). ISCIII

Clinical trials

- **Calvo Rey C.** An interventional, phase 1b, randomized, double-blind, sponsor open, placebo-controlled, multi-center, dose-finding study to evaluate safety, tolerability and pharmacokinetics of sisanatovir in pediatric participants up to age 60 months with respiratory syncytial virus (rsv) lower respiratory tract infection (lrti). *Type/Phase: I*
Sponsored by: Pfizer Inc.
Signed date: 17/10/2023
- **Calvo Rey C.** Estudio de fase II, aleatorizado, doble ciego, controlado con placebo y de 2 partes, para evaluar pautas de tratamiento de edp-938 en pacientes de 28 días a 24 meses de edad con infección por el virus respiratorio sincitial (vrs). *Type/Phase: II*
Sponsored by: Enanta Pharmaceuticals, Inc
Signed date: 16/06/2023



3.7.5 Pediatric Systemic Infections; HIV, Tuberculosis, Imported and Emergent Diseases



Publications:24 | Q1:8

COMPOSITION

Talía Sainz Costa.

Facultativo Especialista de Área en Pediatría. Hospital Universitario La Paz. Profesora Asociada. Universidad Autónoma de Madrid

- **Jorge Atucha Margolles.** Técnico de Laboratorio. FIBHULP
- **Fernando Baquero Artigao.** Facultativo Especialista de Área de Pediatría. Hospital Universitario La Paz. Profesor Colaborador. Universidad Complutense de Madrid
- **Blanco Bravo Queipo de Llano.** Facultativo Especialista de Área de Pediatría. Hospital Universitario La Paz
- **Jorge Bustamante Amador.** Investigador Predoctoral. Hospital Universitario La Paz
- **Francisco José Climent Alcalá.** Facultativo Especialista de Área de Pediatría. Unidad de Patología Compleja. Hospital Universitario La Paz. Colaborador docente. Universidad Autónoma de Madrid

- **Lucía Escolano Taravillo.** Investigador Predoctoral. Hospital Universitario La Paz
- **Luis Escosa García.** Facultativo Especialista de Área en Pediatría. Hospital Universitario La Paz
- **Jaime Delgado Pérez.** Investigador Predoctoral. Hospital Universitario La Paz
- **Miguel García Boyano.** Investigador Predoctoral. Hospital Universitario La Paz
- **Marta García Fernández de Villalta.** Facultativo Especialista de Área de Pediatría. Hospital Universitario La Paz. Colaborador Clínico Docente. Universidad Autónoma de Madrid
- **María Milagros García López de Hortelano.** Médico Adjunto de Pediatría Hospitalaria y Enfermedades Infecciosas y Tropicales. Hospital Universitario La Paz. Colaborador Clínico Docente. Universidad Autónoma de Madrid
- **Isabel Mellado Sola.** Médico Interno Residente. Hospital Universitario La Paz
- **María Pérez Pascual.** Médica Adjunta en Pediatría. Hospital Universitario La Paz
- **Roi Piñeiro Pérez.** Jefe Asociado del Servicio de Pediatría. Hospital General de Villalba
- **Paula Rodríguez Molino.** Contrato Río Hortega. Hospital Universitario La Paz
- **Germán Vallejo Palma.** Investigador Predoctoral. Fundación GESIDA

STRATEGIC OBJECTIVE

1. Vertically acquired HIV infection in children: Comorbidities, biomarkers, HIV reservoir, new therapeutic approaches.
2. Epidemiology of Paediatric Tuberculosis in Spain: molecular epidemiology of drug resistant strains, new diagnostic tools and new drugs for TB: Pharmacodynamics in children and TB-drugs Off-label use in paediatrics.
3. Congenital infections: burden of disease, prompt diagnosis and in-utero and postnatal management, host immune response.
4. Epidemiology of imported and emergent diseases in children: Identification and management of emergent outbreaks. Immuno-pathogenesis, preventive measures and management. Covid-19 in children
5. Immunization strategies in children: immune response in high risk patient's vaccine effectiveness and barriers.
6. Social Determinants of Health in Pediatrics
7. Infection and immunity: microbiome at the crossroad of immunity and allergy
8. Health-care associated Infections. Resistant bacteria and antimicrobial stewardship / Infecciones asociadas con la asistencia sanitaria. Resistencias a antimicrobianos y programas de optimización de antimicrobianos

RESEARCH LINES

- Vertically acquired HIV infection in children
 - Immuno-pathogenesis: Immune-activation, inflammation and biomarkers
 - Epidemiology, immuno-virological factors
 - Comorbidities, long term follow-up, cardiovascular risk, bone disorders, metabolic abnormalities, neurocognitive impairment, renal dysfunction.
 - Antiretroviral treatment: new drugs, resistances, dosage, toxicity in children, simplification strategies.
 - HIV eradication: barriers, HIV reservoir, new antiretroviral drugs and other strategies to achieve HIV replication control.
 - Gut Microbiota and bacterial translocation intestinal as modulating factors for inflammation and Immune-activation in HIV-infected children.
 - Transition to adult care: barriers, strategies to maintain adherence to care.
- Epidemiology of paediatric Tuberculosis (TB).
 - Epidemiology of paediatric TB. paediatric cases as a sentinel for burden of diseases.
 - Molecular Epidemiology of paediatric TB: resistant strains.
 - Immuno-pathogenesis: New diagnostic tools in special Populations: HIV-infected, ID patients
 - Management of critical situations. Neonatal TB, multidrug resistant and extra-pulmonary TB.
- Omics for the diagnosis of pediatric TB
 - New fixed-dosed combinations. Off label drugs in children. Pharmacodynamic and pharmacokinetic.
- Congenital infectious diseases
 - Congenital Citomegalovirus and Toxoplasma infections: diagnostic barriers, prognostic factors, new therapeutic approaches.
 - CHAGAS disease and congenital TB: diagnostic barriers, prognostic factors, pharmacokinetics in newborns and new drugs.



- Epidemiology of imported and emergent diseases in children
 - Paediatric International Outbreaks: Epidemiology and public health impact: Zika. Rabies. Dengue. Chikungunya. Haemorrhagic fevers, Mers-co.
 - Imported diseases in Spain: epidemiology and special populations: adopted, migrant, refugees, travelers and ID children. Tropical and parasitic infections in children.
 - COVID-19 disease in children: epidemiology, diagnostic markers, treatment.
- Immunization strategies in children, including high risk patients
 - Immunization and vaccine response in special populations: immunocompromised children, transplant recipients, chronic patients, HIV-infected, migrants.
 - Vaccine immunogenicity: barriers in paediatric populations.
 - New challenges in vaccinology
- Microbiome in pediatric infectious diseases
 - Microbiome-related biomarkers in food allergy and intolerances
 - Microbiome-related biomarkers in childhood TB and other respiratory infections
 - Social Determinants of Health in Pediatrics
 - The burden of chronic disease in childhood
 - Health-care associated Infections.
 - The burden of antimicrobial resistance
 - Antimicrobial stewardship in pediatrics

RESEARCH ACTIVITY

Publications

- **Baquero-Artigao F, del Rosal T, Falcón-Neyra L, Ferreras-Antolín L, Gómez-Pastrana D, Hernanz-Lobo A, Méndez-Echevarría A, Noguera-Julían A, Sánchez MTP, Rodríguez-Molino P, Piñeiro-Pérez R, Santiago-García B, Soriano-Arandes A.** Update on the diagnosis and treatment of tuberculosis. *An Pediatr.* 2023; 98(6): 460-9. Article. IF: 1.5; Q2
- **Capilla-Miranda A, Plaza-López D, García-Clemente P, Baquero-Artigao F.** Intermittent bladder irrigation with liposomal amphotericin B for the treatment of fluconazole-resistant *Mycobacterium guilliermondii* cystitis in an immunosuppressed adolescent. *Enferm Infec Micr Cl.* 2023; 41(4): 253-4. Letter. IF: 2.6; Q3
- **Cercenado E, Rodríguez-Baño J, Alfonso JL, Calvo E, Escosa L, Fernández-Polo A, García-Rodríguez J, Garnacho J, Gil-Navarro MV, Grau S, Gudiol C, Horcajada JP, Larrosa N, Martínez C, Molina J, Nuvials X, Oliver A, Pano-Pardo JR, Pérez-Rodríguez MT, Ramírez P, Rey-Biel P, Vidal P, Retamar-Gentil P.** Anti-

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- **de la Calle M, Rodríguez-Molino P, Gómez MPR, Baquero-Artigao F.** Cytomegalovirus seroprevalence in pregnant women in Madrid: First step for a systematic screening. *Enferm Infec Micr Cl.* 2023; 41(1): 55-6. Editorial Material. IF: 2.6; Q3

- **García-Espinosa L, del Rosal T, Quintana L, Maseda R, Grasa C, Falces-Romero I, Menéndez-Suso JJ, Pérez-Conde I, Méndez-Echevarría A, Santos FJA, Alonso LA, de Lucas R, Calvo C, Baquero-Artigao F.** Bloodstream infection in children with epidermolysis bullosa. *Pediatr Infect Dis J.* 2023; 42(6): 510-4. Article. IF: 2.9; Q3
- **García-Sánchez P, Aguilar-Valero E, Sainz T, Calvo C, Iglesias I, Bueno D, Frauca E, Ramos-Boluda E, Alcolea-Sánchez A, García-Guereta L, Alonso-Melgar A, Esperón F, Mendez-Echevarria A.** Immunocompromised children and young patients living with pets: gaps in knowledge to avoid zoonosis. *Transbound Emerg Dis.* 2023; 2023: 2151761. Article. IF: 3.5; Q2
- **Grasa C, Monteagudo-Vilavedra E, Pérez-Arenas E, Falces-Romero I, del Castillo YM, Schüffelmann-Gutiérrez C, del Rosal T, Méndez-Echevarría A, Baquero-Artigao F, Santoveña AZ, Fernández PS, Sainz T, Calvo C.** Adenovirus infection in hematopoietic and solid organ paediatric transplant recipients: treatment, outcomes, and use of cidofovir. *Microorganisms.* 2023; 11(7): 1750. Article. IF: 4.1; Q2
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- **Herraiz JL, Freijo C, Camacho J, Muñoz M, González R, Alonso-Roca R, Álvarez-Troncoso J, Beltrán-Romero LM, Bernabeu-Wittel M, Blancas R, Calvo-Cebrián A, Campo-Li-**

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- **Lobo AH, Sánchez AB, Escolano L, Muñoz SP, Gerig N, Sainz T, Peña MJM, Hortelano MGL.** International adoption of children with special needs in Spain. *Children (Basel).* 2023; 10(4): 690. Article. IF: 2.0; Q2
- **López-Ramos MG, Vinent J, Aarnoutse R, Colbers A, Velasco-Arnaiz E, Martorell L, Falcón-Neyra L, Neth O, Prieto L, Guillén S, Baquero-Artigao F, Méndez-Echevarría A, Gómez-Pastrana D, Jiménez AB, Lahoz R, Ramos-Amador JT, Soriano-Arandes A, Santiago B, Farré R, Fortuny C, Soy D, Noguera-Julian A.** Adequacy of the 10 mg/kg daily dose of anti-tuberculosis drug isoniazid in infants under 6 months of age. *Antibiotics (Basel).* 2023; 12(2): 272. Article. IF: 4.3; Q1
- **Martín DL, Pérez RP, Campos LM, Álvarez JA, Cabrera TD, Huerta IJ, Khodayar-Pardo P, Castellanos PL, Baquero-Artigao F.** Update of the consensus document on the aetiology, diagnosis and treatment of acute otitis media and sinusitis. *An Pediatr.* 2023; 98(5): 362-372. Article. IF: 1.5; Q2
- **Mellado-Sola I, Rodríguez-Molino P, Armas EA, López JN, Falces-Romero I, Rey CC, Lozano CG, Mellado MJ, López-Hortelano MG, Sainz T.** Impact of coronavirus pandemic on tuberculosis and other imported diseases screening among migrant minors in Spain. *Trop Med Infect Dis.* 2023; 8(1): 28. Article. IF: 2.8; Q2



3.7 Maternal Infant Child and Youth Research Area

- **Permuy C, Ruiz-Azcárate J, Sampedro M, Jiménez C, Baquero-Artigao F, Calvo C, Méndez-Echevarría A.** Usefulness of daptomycin lock therapy in children with catheter-related bacteremia after failed vancomycin lock therapy. *Ann Clin Microb Anti.* 2023; 22(1): 48. Article. IF: 4.6; Q1
- **Pintado V, Ruiz-Garbajosa P, Aguilera-Alonso D, Baquero-Artigao F, Boug G, Cantón R, Grau S, Gutiérrez-Gutiérrez B, Larrosa N, Machuca I, Martínez LM, Montero MM, Morte-Romea E, Oliver A, Paño-Pardo JR, Sorlí L.** Executive summary of the consensus document of the Spanish Society of Infectious Diseases and Clinical Microbiology (SEIMC) on the diagnosis and antimicrobial treatment of infections due to carbapenem-resistant Gram-negative bacteria. *Enferm Infec Micr Cl.* 2023; 41(6): 360-70. Editorial Material. IF: 2.6; Q3
- **Rodríguez-Molino P, Sola IM, López JGD, Baquero-Artigao F, Díaz-Almirón M, Moreno-Pérez D, Calvo C, Escosa-García L.** Duration of antibiotic therapy among paediatricians: A national survey of current clinical practice in Spain. *Int J Antimicrob Ag.* 2023; 62(1): 106805. Article. IF: 4.9; Q1
- **Ron R, Moreno E, Martínez-Sanz J, Brañas F, Sainz T, Moreno S, Serrano-Villar S.** CD4/CD8 ratio during human immunodeficiency virus (HIV) treatment: time for routine monitoring? *Clin Infect Dis.* 2023; 76(9): 1688-96. Review. IF: 8.2; D1
- **Sánchez PG, Iglesias I, Falces-Romero I, Serrano-Villar M, Calvo C, Alcolea S, Sainz T, Méndez-Echevarría A.** Balancing the risks and benefits of pet ownership in pediatric transplant recipients. *Transplantation.* 2023; 107(4): 855-66. Review. IF: 5.3; Q1
- **Soriano-Ramos M, Esquivel-De la Fuente E, Vicent EA, de la Calle M, Baquero-Artigao F, Domínguez-Rodríguez S, Cabanes M, Gómez-Montes E, Goncá A, Valdés-Bango M, Viñuela-Benítez MC, Gutiérrez MMC, Saave-**

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- **Tarancón-Díez L, Péraire J, de Ory SJ, Guirras AI, Pérez AV, Gavilán C, Bustillo-Alonso M, Navarro ML, Viladés C, Vidal F, Rull A, Muñoz-Fernández MA.** Transient viral rebound in children with perinatally acquired hiv-1 induces a unique soluble immunometabolic signature associated with decreased CD4/CD8 Ratio. *J Pediatr Infect Dis Soc.* 2023; 12(3): 143-51. Article. IF: 2.5; Q3
- **Úbeda M, Maza MD, Delgado P, Horndler L, Abia D, García-Bermejo L, Serrano-Villar S, Calvo C, Bastolla U, Sainz T, Fresno M.** Diversity of immune responses in children highly exposed to SARS-CoV-2. *Front Immunol.* 2023; 14: 1105237. Article. IF: 5.7; Q1
- **Vázquez-Pérez A, Velo C, Escosa L, García-López T, Bernardino JI, Valencia E, Mican R, Mellado MJ, Sainz T.** Mental health in children, adolescents, and youths living with perinatally acquired hiv: at the crossroads of psychosocial determinants of health. *Children (Basel).* 2023; 10(2): 405. Article. IF: 2.0; Q2

Research projects

- **Escosa García L.** Estudio de infecciones por bacterias resistentes a carbapenémicos en pediatría - CARBA-PED. Fundación SEIP. 2022-Ongoing. *Managment centre: FIBHULP*
- **Mellado Peña MJ.** Efecto de una intervención nutricional inmunomoduladora sobre la microbiota, translocación bacteriana, inflamación/activación inmune y respuesta a vacunas en la infección por el VIH en niños. Estudio piloto Pediabiota (P113/ 00422). European Society of Pediatric

Infectious Diseases. 2014-Ongoing. *Managment centre: FIBHULP*

- **Rodríguez Molino P.** Contrato Río Hortega (CM21/00174). ISCIII. 2022-2024. *Managment centre: FIBHULP*
- **Rodríguez Molino P.** Estudio de la respuesta vacunal en muestras de sangre seca en población pediátrica (DRIVE study (PI4888)). European Society of Pediatric Infectious Diseases. 2021-ongoing. *Managment centre: FIBHULP*
- **Rodríguez Molino P.** Impacto del covid-19 materno en la respuesta inmune de los niños. Fundación de la Asociación Española de Pediatría. 2021-Ongoing. *Managment centre: FIBHULP*
- **Sainz Costa T.** Aplicación de técnicas ómicas para el diagnóstico de tuberculosis en niños y adolescentes: CHILD-TB OMICS (PI20/01490). ISCIII. 2021-2023. *Managment centre: FIBHULP*
- **Sainz Costa T.** Capacitación de personal sanitario en VIH y ETS en adolescentes (GLD17/0135). Gilead SA. 2017-ongoing. *Managment centre: SEIMC-Gesida*
- **Sainz Costa T.** Ensayo clínico fase II, randomizado, de quinacina frente a metronidazol en giardiasis resistente en niños: QUIN4kids (ICI22/00065). ISCIII. 2023-2026. *Managment centre: FIBHULP*
- **Sainz Costa T.** Proyecto EPIKIDS: envejecimiento epigenético en niños que viven con el VIH y niños expuestos intraútero al VIH/TAR (GLD23/00074 TALIA SAINZ). Gilead Sciences S.L. 2023-2025. *Managment centre: FIBHULP*
- **Sainz Costa T.** Torquetenovirus como marcador inmunológico en niños con infección por el vih (GLD/00090). Gilead Sciences S.L. 2022-Ongoing. *Managment centre: FIBHULP*
- **Sainz Costa T.** Utilidad de la ecografía torácica en la indicación de ventilación no invasiva en la bronquiolitis aguda del lactante hospitalizado. Estudio de cohorte (PI2525). European Society of Pediatric Infectious Diseases. 2017-Ongoing. *Managment centre: FIBHULP*

Clinical trials

- **Baquero Artigao F.** Estudio en fase IIA, multicéntrico, aleatorizado, con enmascaramiento para el observador, de 2 grupos para investigar la farmacocinética, la seguridad, la tolerabilidad y la eficacia de aztreonam-avibactam por vía intravenosa ± metronidazol en comparación con el mejor tratamiento disponible (mtd) en participantes pediátricos de entre 9 meses y 18 años de edad con infecciones graves por bacterias gramnegativas incluidas infecciones intrabdominales complicadas.
Type/Phase: Ila
Sponsored by: Pfizer Inc
Signed date: 25/01/2023
- **Baquero Artigao F.** Estudio de fase 3, aleatorizado y doble ciego para evaluar la seguridad, latolerabilidad y la inmunogenicidad de v116 en niños y adolescentes con un mayor riesgo de enfermedadneumocócica.
Type/Phase: III
Sponsored by: Merck Sharp & Dohme Llc
Signed date: 12/12/2023

Patents and trademarks

- **Mellado MJ, Piñero R, authors; ASOCIACION ESPAÑOLA DE PEDIATRIA (AEPED), assignee.** Brand name: PEDIAMÉCUM; ESM 3079824; 2013 June13.





3.7.6 Translational Research in Pediatric Oncology, Hematopoietic Transplantation and Cell Therapy

Publications:24 | Q1:14

COMPOSITION

Antonio Pérez Martínez.

Facultativo Especialista de Área en Pediatría, Oncología y Hematología. Hospital Universitario La Paz

- **Cristina Aguirre Pórtoles.** Investigadora Predoctoral. Project Manager. FIBHULP
- **Saturnino Barrena Delfa.** Facultativo Especialista de Cirugía Pediátrica. Hospital Universitario La Paz
- **Halin Bareke.** Investigadora Postdoctoral. FIBHULP
- **David Bueno Sánchez.** Facultativo Especialista de Área en Pediatría, Oncología y Hematología. Hospital Universitario La Paz
- **Adela Escudero López.** Facultativo Especialista de Área en Genética. Hospital Universitario La Paz
- **Mikel Fernández Artaco.** Médico Interno Residente en Hematología y Hemoterapia. Hospital Universitario La Paz
- **Berta González Martínez.** Facultativo Especialista de Área en Pediatría. Hospital Universitario La Paz
- **Pilar Guerra García.** Facultativo Especialista de Área en Pediatría, Oncología y Hematología. Hospital Universitario La Paz
- **Elisa Izquierdo Delgado.** Investigadora Postdoctoral. FIBHULP
- **Manuel Izquierdo Pastor.** Investigador Científico CSIC. IIB "Alberto Sols"
- **Adriana Mañas Núñez.** Investigador Posdoctoral. FIBHULP
- **Carla Martín Cortázar.** Investigadora Postdoctoral. FIBHULP
- **Laura Martín Fernández.** Asistente Ejecutiva. FIBHULP
- **Isabel Martínez Romera.** Facultativo Especialista de Área en Pediatría. Hospital Universitario La Paz
- **Carmen Mestre Durán.** Investigadora Predoctoral. FIBHULP



- **Antonio Jesús Muñoz Serrano.** Facultativo Especialista de Área en Cirugía Pediátrica. Hospital Universitario La Paz
- **Alfonso Navarro Zapata.** Investigador Predoctoral. Hospital Universitario La Paz
- **Gema Pérez Chacón.** Investigadora Senior. IIB "Alberto Sols"
- **Pedro María Rubio Aparicio.** Facultativo Especialista de Área en Pediatría, Oncología y Hematología. Hospital Universitario La Paz
- **Beatriz Ruz Caracuel.** Investigadora Bioinformática. Hospital Universitario La Paz
- **Javier Ruiz Navarro.** Investigador Predoctoral. IIB "Alberto Sols"
- **Sonsoles San Román Pacheco.** Facultativo Especialista de Área en Pediatría, Oncología y Hematología. Hospital Universitario La Paz
- **Clara María Venegas Mascaró.** Investigadora Predoctoral. FIBHULP
- **Juan Manuel Zapata Hernández.** Científico Titular. IIB "Alberto Sols"

RESEARCH LINES

- Analysis of solid/hematological tumors samples to determine their susceptibility to cell therapy, at functional, protein expression and genetic level.
- Cell therapy with activated NK cells in childhood cancer.
- Hematopoietic progenitor transplantation as a platform for cell therapy.
- Cell therapy with memory T lymphocytes as adoptive immunotherapy in transplantation of haematopoietic progenitors.
- Optimization of cell therapy by the generation of an NKG2D antigenic chimeric receptor (NKG2DCAR). Evaluation of its specificity, persistence and activity (in vitro and in vivo) for the treatment of childhood cancer.
- Optimization of CART cell therapy using nanotechnology and epigenetic regulators
- Induction of immunological tolerance in solid organ transplantation through the induction of hematopoietic mixed chimerism by cell therapy.
- Development of academic clinical trials and collaborations with the pharmaceutical industry as a strategy for the development of new therapies more effective and with fewer side effects in childhood cancer.
- Cell therapy with cytokine induced-memory like NK cells for pediatric solid tumors.
- Cell therapy with memory T lymphocytes from COVID-19 convalescent donors as an innovative therapy for COVID-19.

STRATEGIC OBJECTIVE

- Our research program focuses on the molecular and immunological characterization of childhood cancer; the development of cell therapies, primarily through the susceptibility of tumor cells to Natural Killer cells; and the optimization of hematopoietic stem cells transplantation.



RESEARCH ACTIVITY

Doctoral theses

- **Gasior Kabat M.** Transplantation with CD45RA+ Cell Purging and Adoptive Immunotherapy with CD45RO+ T Lymphocytes in Paediatric Patients with Malignant and Non-Malignant Haematological pathologies[dissertation]. *Madrid: UAM: 2023(17/10/2023). Director: Pérez Martínez A.*
- **Gómez García LM.** Prognostic factors with impact on survival in pediatric patients with acute myeloblastic leukemia and myelodysplastic syndrome undergoing hematopoietic stem cell transplantation.[dissertation]. *Madrid: UAM: 2023(04/10/2023). Director: Pérez Martínez A.*

Publications

- **Al-Akioui-Sanz K, Pascual-Miguel B, Díaz-Almirón M, Mestre-Durán C, Navarro-Zapata A, Clares-Villa L, Martín-Cortázar C, Vicario JL,**

Moreno MA, Balas A, De Paz R, Minguillón J, Pérez-Martínez A, Ferreras C. Donor selection for adoptive cell therapy with CD45RA-memory T cells for patients with coronavirus disease 2019, and dexamethasone and interleukin-15 effects on the phenotype, proliferation and interferon gamma release. *Cytotherapy.* 2023; 25(3): 330-40. Article. IF: 3.7; Q2

- **Averbuch D, de la Cámara R, Tridello G, Kne-lange NS, Bykova TA, Ifversen M, Dobsinska V, Ayas M, Hamidieh AA, Pichler H, Pérez-Martínez A, Cesaro S, Sundin M, Badell I, Bader P, Johansson JE, Mirci-Danicar O, Sedlacek P, Paillard C, Gibson B, Lawson S, Kroeger N, Corbacioglu S, Mikulska M, Piñana JL, Styczynski J, Ljungman P.** Risk factors for a severe disease course in children with SARS-COV-2 infection following hematopoietic cell transplantation in the pre-Omicron period: a prospective multinational Infectious Disease Working Party from the European Society for

Blood and Marrow Transplantation group (EBMT) and the Spanish Group of Hematopoietic Stem Cell Transplantation (GETH) study. *Bone Marrow Transpl.* 2023; 58(5): 558-66. Article. IF: 4.5; Q1

- **Bareke H, Ibáñez-Navarro A, Guerra-García P, Pérez CG, Rubio-Aparicio P, de Sabando DPL, Sastre-Urgelles A, Ortiz-Cruz EJ, Pérez-Martínez A.** Prospects and advances in adoptive natural killer cell therapy for unmet therapeutic needs in pediatric bone sarcomas. *Int J Mol Sci.* 2023; 24(9): 8324. Review. IF: 4.9; Q1
- **Galán V, Beléndez C, Echecopar C, Estival P, Sissini L, Olivas R, Bueno D, Molina B, Fuentes C, Regueiro A, Benítez I, Plaza M, Margarit A, Rifón J, Pascual A, Palomo P, Urtasun A, Fuster JL, Fuster L, de Heredia CD, Navarro JMF, González-Vicent M, Ruz B, Pérez-Martínez A.** Treosulfan-based conditioning regimen in pediatric hematopoietic stem cell transplantation: a retrospective analysis on behalf of the Spanish group for hematopoietic transplantation and cellular therapy

(GETH-TC). *Transplant Cell Ther.* 2023; 29(11): 702.e1-11. Article. IF: 3.6; Q2

- **García-Solís B, van den Rym AD, Martínez-Martínez L, Franco T, Pérez-Caraballo JJ, Markle J, Cubillos-Zapata C, Marín A, Recio MJ, Regueiro JR, Navarro-Zapata A, Mestre-Durán C, Ferreras C, Cotázar CM, Mena R, de la Calle-fabregat C, López-Lera A, Arquero MF, Pérez-Martínez A, López-Collazo E, Sánchez-Ramón S, Casanova JL, Martínez-Barricarte R, de la Calle-Martín O, de Diego RP.** Inherited human ezrin deficiency impairs adaptive immunity. *J Allergy Clin Immunol.* 2023; 152(4): 997-1009. Article. IF: 11.4; D1
- **Gazeau N, Liang EC, Wu Q, Voutsinas JM, Barba P, Iacoboni G, Kwon M, Ortega JLR, López-Corral L, Hernani R, Ortiz-Maldonado V, Martínez-Cibrián N, Martínez AP, Maziarz RT, Williamson S, Nemecek ER, Shadman M, Cowan AJ, Green DJ, Kimble E, Hirayama A, Maloney DG, Turtle CJ, Gauthier J.** Anakinra for refractory cytokine release



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- syndrome or immune effector cell-associated neurotoxicity syndrome after chimeric antigen receptor t cell therapy. *Transplant Cell Ther.* 2023; 29(7): 430-7. Article. IF: 3.6; Q2
- **Glez-Vaz J, Azpilikueta A, Ochoa MC, Olivera I, Gomis G, Cirella A, Luri-Rey C, Álvarez M, Pérez-Gracia JL, Ciordia S, Eguren-Santamaria I, Alexandru R, Berraondo P, de Andrea C, Teijeira A, Corrales F, Zapata JM, Melero I.** CD137 (4-1BB) requires physically associated cIAPs for signal transduction and antitumor effects. *Sci Adv.* 2023; 9(33): eadf6692. Article. IF: 11.7; D1
 - **Gómez-Vecino A, Corchado-Cobos R, Blanco-Gómez A, García-Sancha N, Castillo-Lliva S, Martín-García A, Mendiburu-Eliçabe M, Prieto C, Ruiz-Pinto S, Pita G, Velasco-Ruiz A, Patino-Alonso C, Galindo-Villardón P, Vera-Pedrosa ML, Jalife J, Mao JH, de Plasencia GM, Castellanos-Martín A, Sáez-Freire MD, Fraile-Martín S, Rodrigues-Teixeira T, García-Macías C, Galvis-Jiménez JM, García-Sánchez A, Isidoro-García M, Fuentes M, García-Cenador MB, García-Criado EJ, García-Hernández JL, Hernández-García MA, Cruz-Hernández JJ, Rodríguez-Sánchez CA, García-Sancho AM, Pérez-López E, Pérez-Martínez A, Gutiérrez-Larraya F, Cartón AJ, García-Sáenz JA, Patiño-García A, Martín M, Alonso-Gordoa T, Vulsteke C, Croes L, Hatse S, Van Brussel T, Lambrechts D, Wildiers H, Chang H, Holgado-Madruga M, González-Neira A, Sánchez PL, Losada JP.** Intermediate molecular phenotypes to identify genetic markers of anthracycline-induced cardiotoxicity risk. *Cells.* 2023; 12(15): 1956. Article. IF: 5.1; Q2
 - **Gonzaga A, Andreu E, Hernández-Blasco LM, Meseguer R, Al-Akioui-Sanz K, Soria-Juan B, Sanjuan-Giménez JC, Ferreras C, Tejedo JR, López-Lluch G, Goterris R, Maciá L, Sempere-Ortells JM, Hmadcha A, Borobia A, Vicario JL, Bonora A, Aguilar-Gallardo C, Poveda JL, Arbona C, Alenda C, Tarín F, Marco FM, Merino E, Jaime F, Ferreres J, Figueira JC, Cañada-Illana C, Querol S, Guerreiro M, Eguizabal C, Martín-Quirós A, Robles-Marhuenda A, Pérez-Martínez A, Solano C, Soria B.** Rationale for combined therapies in severe-to-critical COVID-19 patients. *Front Immunol.* 2023; 14: 1232472. Review. IF: 5.7; Q1
 - **Ibáñez-Navarro M, Fernández A, Escudero A, Esteso G, Campos-Silva C, Navarro-Aguadero MA, Leivas A, Caracuel BR, Rodríguez-Antolín C, Ortiz A, Navarro-Zapata A, Mestre-Durán C, Izquierdo M, Balaguer-Pérez M, Ferreras C, Martínez-López J, Valés-Gómez M, Pérez-Martínez A, Fernández L.** NKG2D-CAR memory T cells target pediatric T-cell acute lymphoblastic leukemia in vitro and in vivo but fail to eliminate leukemia initiating cells. *Front Immunol.* 2023; 14: 1187665. Article. IF: 5.7; Q1
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3.7 Maternal Infant Child and Youth Research Area

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Research projects

- **Izquierdo Delgado EP.** Utilidad clínica de la biopsia líquida en tumores cerebrales pediátricos, para mejorar el diagnóstico, la estratificación y el seguimiento de los pacientes (PI21/00376). ISCI. 2022-2024. *Management centre: FIBHULP*
- **Mañas Núñez A.** IronKiller_Joining the forces of Natural Killer Cells and Ferroptosis to treat Refractory Neuroblastoma. UE. 2023-2025. *Management centre: FIBHULP*
- **Minguillon Pedreño J.** Desarrollo de una terapia CAR-T específica para la enfermedad rara: leucemia mielomonocítica juvenil. Fundación Leucemia y Linfoma. 2022-Ongoing. *Management centre: FIBHULP*
- **Pérez Martínez A.** Academic approach using CAR-T in hematological malignancies with unmet medical needs in children and AYA: feasibility, safety and efficacy study (ReALL_CAR-T) (PI22/01226). ISCI. 2023-2025. *Management centre: FIBHULP*
- **Pérez Martínez A.** Análisis genético, transcriptómico y proteómico para identificar antígenos diana de terapia CAR-T en leucemia mielomonocítica juvenil. Fundación Cris Contra el Cáncer. 2021-Ongoing. *Management centre: FIBHULP*
- **Pérez Martínez A.** Aproximación académica mediante CAR-T en hemopatías malignas con necesidad médica no cubiertas en niños y aya: estudio de viabilidad, seguridad y eficacia (ReALL_CAR-T) (PI22/01226). ISCI. 2023-2025. *Management centre: FIBHULP*
- **Pérez Martínez A.** Braintruck: turning CAR-T therapy into iil18 truck as treatment for pediatric central nervous system tumors. Fundación Cris Contra el Cáncer. 2022-Ongoing. *Management centre: FIBHULP*
- **Pérez Martínez A.** Diseño del receptor antigénico quimérico NKG2D (CAR-NKG2D) como terapia celular en los sarcomas infantiles. Ong Otromundoesposible. 2019-Ongoing. *Management centre: FIBHULP*
- **Pérez Martínez A.** Ensayo clínico en fase I memoria expresando un receptor quimérico antigénico con especificidad nkg2d en niños, adolescentes y adultos jóvenes con sarcoma avanzado. A phase I trial of memory T cells expressing an anti-nkg2d chimeric antigen receptor in children, adolescents and young adults with advanced sarcoma. Fundación Asociación Española Contra el Cáncer. 2019-Ongoing. *Management centre: FIBHULP*
- **Pérez Martínez A.** Ensayo clínico en fase I memoria expresando un receptor quimérico antigénico con especificidad NKG2D en niños, adolescentes y adultos jóvenes con sarcoma avanzado. A phase I trial of memory T cells expressing an anti-NKG2D chimeric antigen receptor in ch. Fundación Asociación Española contra el Cáncer. 2019-2023. *Management centre: FIBHULP*
- **Pérez Martínez A.** Ensayo clínico fase I/II, multicéntrico abierto, de infusión de células NK activadas para el tratamiento de niños, adolescentes y adultos jóvenes con sarcomas. estudio sankoma. Fundación la Sonrisa de Alex. 2017-Ongoing. *Management centre: FIBHULP*
- **Pérez Martínez A.** Ensayo clínico fase II de infusión intratumoral/intraventricular de células CART-NKG2D o NKIL15 en niños, adolescentes y adultos jóvenes con tumores de alto grado recurrentes/refractarios del sistema nervioso central (CINK-CAR) (IC19/00052). ISCI. 2020-2025. *Management centre: FIBHULP*
- **Pérez Martínez A.** Entrenamiento cognitivo a través del juego tecnológico para mejorar los efectos cognitivos relacionados con el tratamiento del cáncer infantil (winners o super-vivientes). Fundación Juegaterapia. 2022-Ongoing. *Management centre: FIBHULP*
- **Pérez Martínez A.** Estudio mediante tecnología de alto rendimiento de la predisposición hereditaria al cáncer infantil. Fundación Cris Contra el Cáncer. 2017-Ongoing. *Management centre: FIBHULP*
- **Pérez Martínez A.** Genetic, transcriptomic and proteomic analysis for the identification of target antigens for CAR-T therapy in juvenile myelomonocytic leukemia (CART-JMML). Fundación Cris Contra el Cáncer. 2022-Ongoing. *Management centre: FIBHULP*
- **Pérez Martínez A.** Implementación de una escala pediátrica de valoración de alerta temprana en pacientes pediátricos hospitalizados con patología hemato-oncológica y trasplante de progenitores hematopoyéticos como plan de mejora de la calidad y seguridad asistencial. Fundación Aladina. 2020-Ongoing. *Management centre: FIBHULP*
- **Pérez Martínez A.** Implementing magnetic targeting of nano-guided immune cells (IMAGINE). Fight Kids Cancer-European Cancer Foundation. 2021-Ongoing. *Management centre: FIBHULP*
- **Pérez Martínez A.** Infusión de células natural killer aloreactivas o estimuladas post trasplante haploidético de progenitores hematopoyéticos en pacientes pediátricos con neoplasias hematológicas (PHINK) (PI18/01301). ISCI. 2019-2023. *Management centre: FIBHULP*
- **Pérez Martínez A.** Inmunoterapia en neoblastomas pediátricos: tratamiento dirigido a las células tumorales iniciadoras de la metástasis. Fundación Cris Contra el Cáncer. 2019-Ongoing. *Management centre: FIBHULP*
- **Pérez Martínez A.** Inmunoterapia en sarcomas: combinación del anticuerpo anti-CD44 y la terapia celular NK. Fundación la Sonrisa de Alex. 2016-Ongoing. *Management centre: FIBHULP*
- **Pérez Martínez A.** Inmunovaxer-CM. Regulación de la respuesta inflamatoria y dinámica de la inmunidad en COVID-19 y inmunocomprometidos de diferentes poblaciones de riesgo. New therapeutic approaches. Fondo Europeo de Desarrollo Regional. 2022-Ongoing. *Management centre: FIBHULP*
- **Pérez Martínez A.** Memory-like NK cells: a new therapy for Ewing sarcoma (MEMO4ewing). Fundación Cris Contra el Cáncer. 2022-Ongoing. *Management centre: FIBHULP*
- **Pérez Martínez A.** Nueva Generación de Inmunoterapias STAb y CART Multidianas (Next Generation CART MAD) (S2022/BMD-7225). CM. 2023-2026. *Management centre: FIBHULP*
- **Pérez Martínez A.** Optimización diagnóstica y terapéutica del cáncer infantil mediante su caracterización genética avanzada utilizando tecnología de alto rendimiento. Proyecto: caracterización molecular avanzada de la leucemia linfoblástica aguda en pediatría. Fundación Asociación Española contra el Cáncer. 2022-Ongoing. *Management centre: FIBHULP*
- **Pérez Martínez A.** Receptor antigénico quimérico nkg2d para el tratamiento de pacientes pediátricos con leucemia aguda y leucemia mielomonocítica juvenil: validación de escala clínica y primer estudio de seguridad en pacientes. Fundación Cris Contra el Cáncer. 2019-Ongoing. *Management centre: FIBHULP*
- **Pérez Martínez A.** Sehop-Pencil Study Personalised Medicine for Cancer in Children in Spain (PMP21/00073). ISCI. 2022-2025. *Management centre: FIBHULP*
- **Pérez Martínez A.** Unidad de investigación y de terapias avanzadas en hematología infantil. Fundación Cris Contra el Cáncer. 2016-Ongoing. *Management centre: FIBHULP*
- **Rubio Aparicio PM.** Actualización y renovación de la actividad en el servicio de oncología



3.7 Maternal Infant Child and Youth Research Area

pediátrica del Hospital Universitario La Paz. Varios. 2012-Ongoing. *Management centre: FIBHULP*

Cibers and Retics

- **Pérez Martínez A.** RICORS - Terapias avanzadas. ISCIH. (31/12/2024). FIBHULP

Clinical trials

- **Bueno Sánchez D.** Ensayo de fase II, aleatorizado, sin enmascaramiento, controlado y multicéntrico del tratamiento de primera línea con células mesenquimales estromales mc0518 en comparación con el mejor tratamiento disponible en participantes pediátricos con enfermedad de injerto contra huésped aguda refractaria a esteroides después del trasplante alogénico de células madre (ensayo balder).
Type/Phase: II
Sponsored by: Medac Gesellschaft Für Klinische Spezialpräparate Gmbh
Signed date: 21/11/2023
- **Bueno Sánchez D.** Estudio de fase III, abierto, de un solo grupo y con dosis repetidas, para evaluar la seguridad y tolerabilidad, la farmacocinética y la actividad antiviral de maribavir para el tratamiento de la infección por el citomegalovirus (cmv) en niños y adolescentes que han recibido un trasplante de células madre hematopoyéticas (hsct) o un trasplante de órgano sólido (tos).
Type/Phase: III
Sponsored by: Takeda Development Center Americas
Signed date: 16/10/2023
- **González Martínez B.** Ensayo clínico abierto, aleatorizado sobre teicoplanina como profilaxis antiinfecciosa en pacientes pediátricos con leucemia mielóide aguda.
Type/Phase: III
Sponsored by: Princess Máxima Center For Pediatric Oncology
Signed date: 24/03/2023

- **González Martínez B.** Estudio fase 2 de la infusión de linfocitos t diferenciados autólogos de sangre periférica expandidos y transducidos con un lentivirus para expresar un receptor antigénico quimérico con especificidad anti-cd19 (a3b1) conjugado con las regiones coestimuladas.
Type/Phase: II
Sponsored by: Fundacion Sant Joan De Deu
Signed date: 04/05/2023
- **González Martínez B.** Estudio prospectivo, aleatorizado, abierto, en fase II para evaluar la superioridad de inotuzumab ozogamicina en monoterapia frente a allr3 para el tratamiento de inducción de la leucemia linfoblástica aguda infantil de precursores de linfocitos b en primera recidiva de alto riesgo.
Type/Phase: II
Sponsored by: Pfizer Inc
Signed date: 18/01/2023
- **González Martínez B.** Seguimiento a largo plazo de pacientes tratados con la terapia celular cart dirigida a cd19 basada en vectores lentivirales.
Type/Phase: II
Sponsored by: Novartis Farmaceutica, S.A.
Signed date: 10/08/2023
- **Guerra García P.** Estudio en fase I/II de la seguridad, tolerabilidad, farmacocinética y eficacia preliminar de relatlimab más nivolumab en participantes pediátricos y adultos jóvenes con linfoma de hodgkin clásico y linfoma no hodgkin recurrentes o resistentes.
Type/Phase: I
Sponsored by: Bristol-Myers Squibb International Corporation (Bmsic)
Signed date: 22/05/2023
- **Guerra García P.** Fase IV, randomized, open, parallel groups clinical trial for evaluating the early stop of antibiotic treatment in febrile neutropenic oncohematological paediatric patients (estop-study).
Type/Phase: IV

Sponsored by: Fundacio Hospital Vall D'Hebron
Signed date: 15/05/2023

- **Pérez Martínez A.** Ensayo fase I de células t de memoria que expresan un receptor de antígeno quimérico anti-nkg2d en niños, adolescentes y adultos jóvenes con sarcoma avanzado.
Type/Phase: I
Sponsored by: Pérez Martínez Antonio
Signed date: 05/12/2023
- **Pérez Martínez A.** Estudio de seguimiento a largo plazo para participantes de estudios intervencionistas financiados por kite tratados con células genomodificadas.
Type/Phase: II
Sponsored by: Kite Pharma, Inc
Signed date: 15/09/2023
- **Pérez Martínez A.** Estudio en fase 1, multicéntrico y sin enmascaramiento para evaluar la farmacocinética, seguridad y tolerabilidad de una dosis única intravenosa de acetato de rezafungin en sujetos pediátricos desde su nacimiento hasta <18 años de edad que estén recibiendo antifúngicos sistémicos como profilaxis para infección fúngica invasiva o para tratar una posible o confirmada infección fúngica.
Type/Phase: I
Sponsored by: Mundipharma Research Gmbh & Co Kg
Signed date: 20/04/2023
- **Pérez Martínez A.** Impacto del desbalance del metaboloma y microbioma intestinales de receptores de trasplante hematopoyético en el desarrollo de enfermedad injerto contra huésped aguda.
Type/Phase: EPA-SP
Sponsored by: Fundacion Publica Andaluza Para La Gestion De La Investigacion En Salud De Sevilla
Signed date: 05/01/2023
- **Pérez Martínez A.** Investigación prospectiva del sur de Europa sobre el cáncer y la nutrición

infantil (epickids) southern european prospective investigation into childhood cancer and nutrition (epickids).

Type/Phase: No EPA
Sponsored by: Pérez Martínez Antonio
Signed date: 16/10/2023

- **Rubio Aparicio PM.** HR-nbl2: high-risk neuroblastoma study 2.0 of siop-europeneuroblastoma/siopen randomized, international and multicentric phase 3 study that evaluates and compares 2 treatment strategies in 3 therapeutic phases (induction, high-dose chemotherapy and radiotherapy) for patients with high-risk neuroblastoma.
Type/Phase: III
Sponsored by: Instituto Investigacion Sanitaria H La Fe
Itcc Office. Institute Gustave Roussy
Signed date: 10/08/2023



3.7.7 Congenital Malformations and Transplantation



Publications:51 | Q1:17

COMPOSITION

Francisco Hernández Oliveros.

Facultativo Especialista de Área en Cirugía Pediátrica. Hospital Universitario La Paz

- **Maria Virginia Amesty Morello.** Médico Adjunto en Cirugía Pediátrica. Hospital Universitario La Paz
- **Ane Miren Andrés Moreno.** Facultativo Especialista de Área en Cirugía Pediátrica. Hospital Universitario La Paz. Pediatría Profesor Asociado. Universidad Autónoma de Madrid
- **Sara Cabezuelo Ballesterro.** Facultativo Especialista de Área en Anestesiología. Hospital Universitario La Paz
- **Carlos de la Torre Ramos.** Médico Adjunto en Cirugía Pediátrica. Hospital Universitario La Paz
- **Carlos Delgado Miguel.** Facultativo Especialista de Área en Cirugía Pediátrica. FIBHULP
- **José Luis Encinas Hernández.** Facultativo Especialista de Área en Cirugía Pediátrica. Hospital Universitario Infantil La Paz
- **Álvaro González Rocafort.** Facultativo Especialista de Cirugía Cardiovascular. Hospital Universitario Infantil La Paz

- **Juan Carlos López Gutiérrez.** Jefe de Servicio de Cirugía Pediátrica. Hospital Universitario Infantil La Paz
- **María Nieves Moreno.** Facultativo Especialista de Área en Oftalmología. Hospital Universitario La Paz
- **Susana Noval Martín.** Facultativo Especialista de Área en Oftalmología. Hospital Universitario La Paz
- **Jesús Peralta Calvo.** Facultativo Especialista de Área en Oftalmología Infantil. Hospital Universitario La Paz
- **Esther Ramos Boluda.** Jefe de Sección. Unidad de Rehabilitación y Trasplante Intestinal. Hospital Universitario La Paz
- **Fernando Reinoso Barbero.** Jefe de Servicio de Anestesiología y Reanimación Infantil. Hospital Universitario La Paz
- **Alba Sánchez Galán.** Facultativo Especialista de Cirugía Pediátrica. Hospital Universitario La Paz
- **Javier Serradilla Rodríguez.** Facultativo Especialista en Cirugía Pediátrica. Hospital Universitario La Paz
- **Paloma Triana Junco.** Facultativo Especialista de Área en Cirugía Pediátrica. Hospital Universitario La Paz
- **María Teresa Vallejo Cremades.** Jefe de Laboratorio Inmunohisto-química (Contrato de Estabilización de Técnicos de Apoyo). FIBHULP
- **Alejandra Vilanova Sánchez.** Facultativo Especialista en Cirugía Pediátrica. Hospital Universitario La Paz

STRATEGIC OBJECTIVE

- Paediatric surgical specialities are extremely complex due to the wide spectrum of diseases included in their scope. Many of the problems are related to rare diseases and their treatment frequently requires complex procedures.
- Clinical care of paediatric surgical patients is a long-term task that requires a wide knowledge of the pathology and multidisciplinary committees. Surgical corrections usually consist of multi-step procedures, some of them in the neonatal period while others might be required in young adults.
- This line is therefore characterized by an unusually large spectrum since it encompasses the study of the cellular and molecular mechanisms leading to malformations, the biology of the malformed fetus and embryo, the prenatal chances for intervention on the malformations, and the postnatal operative and perioperative surgical and anesthetic management, including complex procedures as transplantation.

RESEARCH LINES

- Anesthesia, pain management and perioperative intensive care: To develop new procedures for improving safety and efficacy in anesthetic procedures, and to investigate the multiple problems of pain management and anaesthesia support.
- Vascular anomalies: To investigate genetic and molecular mechanisms involved in the pathogenesis of vascular anomalies, and to evaluate new targeted therapies
- Cardiovascular surgery: To assess different organ perfusion devices and to develop new strategies for graft perfusion.
- Congenital malformations: To gain knowledge on the cellular and molecular mechanisms of malformations using animal models, organ and cell cultures and eventually genetically engineered animals.
- Ophthalmologic pathology: To investigate genetic and molecular mechanisms involved in the pathogenesis of ocular malformations and ocular rare diseases.
- Transplantation: To investigate new strategies for graft tolerance/avoidance of rejection and to analyze the impact of donation after circulatory death with normothermic reperfusion in pediatric transplantation. Additionally, the management of the conditions leading to organ failure would be included in our topics, like intestinal rehabilitation (intestinal transplantation), liver tumours (liver transplantation) and severe uropathies (renal transplantation).

RESEARCH ACTIVITY

Doctoral theses

- **Roca Cabau MA.** Evolución del tratamiento del retinoblastoma en las últimas décadas en un hospital terciario español.[dissertation]. *Madrid: UAM: 2023(05/07/2023). Director: Peralta Calvo J.*
- **Triana Junco P.** Sirolimus en el tratamiento de anomalías vasculares[dissertation]. *Madrid: UAM: 2023(21/06/2023). Director: López Gutiérrez JC*



Publications

- **Abate JC, Lausada N, Dezillio LV, Moreira J, Marinoff II, Compagnucci MMF, Moreno AMA, Largo C, Rumbo M, Oliveros FH, Romanin D, Stringa P.** When less is more: Experimental Bishop-Koop technique for reduction in the use of laboratory animals for intestinal pathophysiological studies. *Lab Anim-Uk.* 2023; 57(4): 443-54. Article. IF: 1.3; Q2
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- **Andrés Moreno AM, Ramos Boluda E, Hernández Oliveros F.** Pediatric intestinal failure: an update. *Cir Pediatr.* 2023; 36(3): 97-109. Article. Not indexed
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3.7 Maternal Infant Child and Youth Research Area

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 - Triana P, López-Gutiérrez JC. Activity of a TIE2 inhibitor (rebastinib) in a patient with a life-threatening cervicofacial venous malformation. *Pediatr Blood Cancer.* 2023; 70(8): e30404. Article. IF: 2.4; Q2
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 - Velayos M, Serradilla J, Estefanía-Fernández K, Muñoz-Serrano A J, Ramírez Amoros C, San Basilio Berenguer M C, Vilanova-Sánchez A, López-Santamaría M V, Hernández-Oliveros F. Sequential teratoma in pediatric patients: causation or coincidence? *Cir Pediatr.* 2023; 36(1): 40-3. Article. Not indexed
- FIBHULP. 2022-Ongoing. *Managment centre: FIBHULP*
- Hernández Oliveros F. Prevención del rechazo mediante transferencia adoptiva de linfocitos T regulatorios en un modelo experimental de trasplante intestinal (PI21/01332). ISCI. 2022-2024. *Managment centre:*
 - Hernández Oliveros F. Programa clínico-experimental de donación pediátrica en asistolia controlada. Fundación Mutua Madrileña. 2019-Ongoing. *Managment centre: FIBHULP*
 - Hernández Oliveros F. Trasplantapp: la primera red de comunicación para niños y adolescentes trasplantados. Fundación Mapfre. 2020-Ongoing. *Managment centre: FIBHULP*
 - López Gutiérrez JC. Estudio genético, clínico e inmunohistoquímico de la osteolisis en pacientes nf. Fundación Proyecto Neurofibromatosis. 2021-2023. *Managment centre: FIBHULP*
 - Nieves Moreno M. Estrategia para el diagnóstico integral del nistagmus: estudio de función visual, pronóstico y genético. En busca de biomarcadores. Varios Financiadores. 2023-. *Managment centre: FIBHULP*
- #### Clinical trials
- López Gutiérrez JC. EPIK-L1. A two-stage double-blind, randomized, placebo-controlled study to assess the efficacy, safety and pharmacokinetics of alpelisib in pediatric and adult patients with lymphatic malformations associated with a PIK-3CA mutation.
Type/Phase: II
Sponsored by: Novartis Pharma Services
Signed date: 28/11/2023.
- #### Patents and trademarks
- Hernández Oliveros F, Nana Gómez Mayoral N, Raya González L, Guijarro Fernández E, authors; FIBHULP, HePA, U-TAD, Guijarro Fernández E, assignees. Trademark name:VTR Virtual Transplant Reality; CM18.000.131;2018 December 14.



3.7.8 Research in Endometriosis



Publications:18 | Q1:5

COMPOSITION

Alicia Hernández Gutiérrez.

Facultativo Especialista de Área en Ginecología y Obstetricia. Unidad de Ginecología Oncológica. Hospital Universitario La Paz. Profesor Asociado. Universidad Autónoma de Madrid

- **Pedro N. Barri Soldevilla.** Director del Departamento de Obstetricia, Ginecología y Reproducción Humana. Fundación Dexeus Mujer
- **Covadonga Álvarez López.** Facultativo Especialista de Área en Ginecología y Obstetricia. Hospital Universitario La Paz
- **Mario Álvarez Maestro.** Facultativo Especialista de Área en Urología. Hospital Universitario La Paz
- **Martina Aida Angelés Fité.** Ginecóloga especialista en Oncología. Institut Universitaire Du Cancer De Toulouse
- **Ónica María Armijo Suárez.** Facultativo Especialista de Área en Ginecología y Obstetricia. Unidad de Reproducción Asistida. Hospital Universitario La Paz
- **Myriam García Segovia.** Médico Adjunto en Ginecología. Hospital Universitario La Paz
- **Juan Antonio García Velasco.** Director Médico. IVI - RMA
- **Silvia Iniesta Pérez.** Ginecóloga especialista en Reproducción. Hospital Ruber Internacional
- **Ana López Carrasco.** Facultativo Especialista de Área en Ginecología y Obstetricia. Hospital Universitario La Paz
- **Alejandra Martínez Rodríguez-Marin.** Subdirector del Departamento de Oncología Quirúrgica. Institut Universitaire du Cancer de Toulouse
- **Blanca Martínez Serrano.** Facultativo Especialista de Área en Anestesiología. Hospital Universitario La Paz
- **Cristina Redondo Guisasaola.** Facultativo Especialista de Área en Ginecología y Obstetricia. Hospital Universitario La Paz
- **Violeta Romero Camacho.** Facultativo Especialista de Área en Ginecología y Obstetricia. Hospital Universitario La Paz
- **Patricia Isabel Salas Bolivar.** Facultativo Especialista de Área en Ginecología y Obstetricia. Hospital Universitario La Paz
- **Emanuela Spagnolo.** Facultativo Especialista de Área en Ginecología y Obstetricia. Hospital Universitario La Paz

STRATEGIC OBJECTIVE

- Endometriosis is a debilitating gynaecological disease, responsible of pain and infertility with consequent worsening of women's quality of life. The prevalence is estimated on 10% of the fertile age women, with an impact on quality of life and reproductive health. Despite its high prevalence and the great scientific activity generated around this disease, we are facing a problem whose etiology remains unknown. Although it is a chronic illness, which begins to cause symptoms very early in a large number of cases, there is still no predictive marker of the disease, no method of early diagnosis, or any way to modify its clinical course, which is highly variable, producing great uncertainty in affected women. Despite of great advances have been made in the treatment of the disease from a global perspective that included women's fertility and pain control, there is still no etiological treatment or any form of cure.
- The endometriosis research group is committed to the following objectives in the next 5 years: to develop a scientific project for FIS 2023, to encourage young researchers, to organize a Master's Degree in Laparoscopy and Endometriosis, to increase the number of final degree projects and final master's projects, to improve the training of gynecological specialty trainee and promote internships abroad, to write publications of the results of our ongoing projects (mainly FIS 2020), to design a website for the HULP- Endometriosis group and to announce monthly workshops of patients with doctors and professionals from the Endometriosis Unit. We also set ourselves the challenge of recognizing the Endometriosis Unit-CSUR (National reference Unit) and promoting gender equality in research and innovation.
- The strategies proposed to achieve these objectives are as follows: Participation in the FIBHULP "Mentor Program", to promote collaboration between senior researcher and junior researcher to carry out research projects, congresses communication, to enable specialist trainee and junior gynecologists to perform the "Winner Project", (an educational program for Endoscopic Gynecological Surgery with 3 levels of progression), to encourage collaboration with providers in the endoscopic sector such as Storz, Olympus and Striker. In addition, we have support from IdiPaz Biostatistics and IdiPaz Biobank (PT20 / 00004) integrated into the National Network of Biobanks of Spain, technical assistance from the HULP Computer and Bioengineering Service, as well as active collaboration with national associations of patients and announcement of events in "La Paz Informa".
- Moreover, the Endometriosis Unit of Hospital La Paz has numerous strategic alliances, at the national level (Hospital Clínic of Barcelona, Hospital General of Valencia, Clínica Dexeus Barcelona) and also internationally (Oncopole -Oncology Institute of Toulouse (France), University Hospital of Bologna (Italy), University Hospital of Liège (Belgium), University Hospital of Siena (Italy), University Hospital of Malmö (Stockholm)).



RESEARCH LINES

- Investigation of immunological and molecular factors involved in the pathogenesis of endometriosis.
- Investigation of biomarkers to predict the risk of endometriosis malignant transformation. Our objective is to identify a panel of immune system markers and specific genetic mutations to predict endometriosis patients at increased risk of developing ovarian cancer and to identify factors that allow the use of immunotherapy in this type of cancer. In both pathologies (endometriosis and ovarian cancer), the dysfunction of the immune system favours the progression of the disease. In February 2021, the Endometriosis Group received a Health Research Fund by Health Research Institut Carlos III for the project: "Molecular and immunological factors with predictive value in endometriosis associated ovarian cancer".
- Research of new non-hormonal drugs to control symptoms and disease progression.
- Clinical research and new technologies: the advantages of Fluorescence Guided Surgery (FGS). In our operating rooms (Hospital Maternal, HULP) we use modern technology that allows real-time visualization of certain anatomical structures and helps the surgeon to reduce intraoperative stress and improve performance. Recently, the intraoperative use of indocyanine green (ICG) has shown advantages in intestinal surgery for endometriosis. ICG is a dye that is injected intravenously and rapidly reaches the blood vessels of the abdominal organs and allows the emission of fluorescence in the spectral range of the infrared ray. In this way, the vascularization of the colorectal anastomosis can be assessed after bowel resection in patients with endometriosis. We are currently investigating the use of a macromolecule linked to ICG that allows the dye to remain longer in vascularized tissues (rectum), and with a single injection at the start of surgery. This technique is also useful for delimiting endometriotic nodules before removing them.
- Clinical research focusing on the early diagnosis of endometriosis in adolescent patients (European Multicentre Project: Erasmus Project).



RESEARCH ACTIVITY

Doctoral theses

- **Angelès Fité MA.** Papel de la cirugía en el cáncer de ovario avanzado[dissertation]. *UAM: Madrid: 2023(04/12/2023).* Director: *Hernández Gutiérrez MA.*
- **Boldó Roda A.** Análisis y resultados en el cambio del paradigma del tratamiento de cancer de ovario avanzado[dissertation]. *Universitat de Valencia: Valencia: 2023(23/12/2023).* Director: *Domingo del Pozo S, Hernández Gutiérrez A.*
- **Hernández Alonso J.** Evaluación del impacto de la pandemia de COVID-19 en la mujer gestante. Análisis de la salud mental perinatal y ajuste psicológico[dissertation]. *UAM: Madrid: 2023(27/11/2023).* Director: *Armijo Suarez OM, de la Calle Fernández-Miranda M.*

Final Degree Theses

- **González B.** Diseño y desarrollo de una plataforma para la monitorización y acompañamiento de personas con endometriosis. [dissertation]. *Madrid: Universidad Politécnica de Madrid: 2023(12/07/2023).* Director: *Hernández Gutiérrez MA.*

Publications

- **Alonso-Espías M, Alonso-García M, García-Pineda V, Gracia M, Siegrist J, Diestro MD, Hernández A, Zapardiel I.** Beyond bladder dysfunction: assessing the full impact of radical hysterectomy on cervical cancer patients. *Eur J Gynaecol Oncol.* 2023; 44(6): 60-6. Article. IF: 0.5; Q4
- **Alonso-Espías M, Gorostidi M, Gracia M, García-Pineda V, Diestro MD, Siegrist J,**

Hernández A, Zapardiel I. Role of adjuvant radiotherapy in patients with cervical cancer undergoing radical hysterectomy. *J Pers Med.* 2023; 13(10): 1486. Article. IF: 3.0; Q2

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- **Berenguer M, Vergara M, Almohalla C, Hernández A, Blanco S, Testillano M, Girona E, Casado M, García M, Catalina MV, Muñoz C, Gutiérrez ML, Molina E, Romero M, Otero A, Hernández-Alsina T, Bernal-Monterde V, Lorente S, Masnou H, Bonet L, Soto S, Gisbert**

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- **de las Casas SG, Spagnolo E, Di Saverio S, Álvarez-Gallego M, Carrasco AL, López MC, Cobos ST, Campo CF, Gutiérrez AH, Migueláñez**



3.7 Maternal Infant Child and Youth Research Area

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- **Dell'Oglio P, Tappero S, Panunzio A, Antonelli A, Salvador D, Xylinas E, Álvarez-Maestro M, Hurle R, Salas RS, Colomer A, Simone G, Hendricksen K, Peroni A, Lonati C, Olivero A, RouprOt M, Roumiguié M, Soria F, Umari P, D'Andrea D, Terrone C, Galfano A, Moschini M, Di Trapani E.** Age represents the main driver of surgical decision making in patients candidate to radical cystectomy. *J Surg Oncol.* 2023; 128(1): 142-54. Article. IF: 2.0; Q3
 - **García-Pineda V, Hernández A, Garrido-Mallach S, Rodríguez-González E, Alonso-Espias M, Gracia M, Arnedo R, Zapardiel I.** Sentinel lymph node impact on the quality of life of patients with endometrial cancer. *J Pers Med.* 2023; 13(5): 847. Article. IF: 3.0; Q2
 - **Gracia M, Rodríguez E, Diestro MD, Spagnolo E, García V, Siegrist J, Pérez Y, Zapardiel I, Hernández A.** Impact of the Covid-19 pandemic on the management of gynecologic cancer: a Spanish survey. *Observational, multicenter study. BMC Womens Health.* 2023; 23(1): 488. Article. IF: 2.4; Q2
 - **Hernández A, Sanz A, Spagnolo E, López A, Jorge PM, Iniesta S, Rodríguez E, Prada SF, Ramiro-Cortijo D.** Impact of ovarian endometrioma and surgery on reproductive outcomes: a single-center spanish cohort study. *Biomedicines.* 2023; 11(3): 844. Article. IF: 3.9; Q2
 - **Mendiola M, Heredia-Soto V, Ruz-Caracuel I, Baillo A, Ramon-Patino JL, Escudero FJ, Miguel M, Peláez-García A, Hernández A, Feliu J, Hardisson D, Redondo A.** Comparison of methods for testing mismatch repair status in endometrial cancer. *Int J Mol Sci.* 2023; 24(19): 14468. Article. IF: 4.9; Q1
 - **Quevedo IC, García IC, Gracia M, García-Pineda V, Alonso-Espias M, Siegrist J, Diestro MD, Hernández A, Zapardiel I.** Personalized sentinel node mapping in endometrial cancer by the indocyanine green implementation as single tracer: a case control study. *J Pers Med.* 2023; 13(2): 170. Article. IF: 3.0; Q2
 - **Raimondo D, Raffone A, Virgilio A, Ferla S, Maletta M, Neola D, Travaglino A, Paradisi R, Hernández A, Spagnolo E, García-Pineda V, Lenzi J, Guida M, Casadio P, Seracchioli R.** Molecular signature of endometrial cancer with coexistent adenomyosis: a multicentric exploratory analysis. *Cancers (Basel).* 2023; 15(21): 5208. Article. IF: 4.5; Q1
 - **Raimondo D, Raffone A, Aru Anna C, Giorgi M, Giaquinto I, Spagnolo E, Travaglino A, Galatolo Federico A, Cimino M G, Cosimo A, Lenzi J, Centini G, Lazzeri L, Mollo A, Seracchioli R, Casadio P.** Application of deep learning model in the sonographic diagnosis of uterine adenomyosis. *Int J Env Res Pub He.* 2023; 20(3): 1724. Article. Not indexed
 - **Sánchez-Méndez JI, Horstmann M, Méndez N, Frias L, Moreno E, Yébenes L, Roca MJ, Hernández A, Martí C.** Surgical interest of an accurate real-world prediction of primary systemic therapy response in her2 breast cancers. *Cancers (Basel).* 2023; 15(10): 2757. Article. IF: 4.5; Q1
 - **Spagnolo E, Martínez A, Mascarós-Martínez A, Mari-Alexandre J, Carbonell M, González-Cantó E, Pena-Burgos EM, Mc Cormack BA, Tomás-Pérez S, Gilabert-Estellés J, López-Carrasco A, Hidalgo P, Angeles MA, Redondo A, Gallego A, Hernández A.** Evaluation of Immune Infiltrates in Ovarian Endometriosis and Endometriosis-Associated Ovarian Cancer: Relationship with Histological and Clinical Features. *Int J Mol Sci.* 2023; 24(15): 12083. Article. IF: 4.9; Q1
 - **Yebes A, Toribio-Vázquez C, Martínez-Pérez S, Quesada-Olarte JM, Rodríguez-Serrano A, Álvarez-Maestro M, Martínez-Piñeiro L.** Prostatitis: A Review. *Curr Urol Rep.* 2023; 24(5): 241-51. Review. IF: 2.5; Q2
 - **Zhao HD, Liu K, Giannakopoulos S, Yuruk E, De Naeyer G, Álvarez-Maestro M, Ng CF, Laguna P, de la Rosette J, Teoh JYC.** Impact of previous malignancy at diagnosis on oncological outcomes of upper tract urothelial carcinoma. *BMC Urol.* 2023; 23(1): 49. Article. IF: 1.7; Q3
- Research projects**
- **Hernández Gutiérrez A.** Factores inmunológicos en la transformación maligna de la endometriosis. FIBHULP. 2018-Ongoing. Management centre: FIBHULP
 - **Hernández Gutiérrez A.** Identificación de factores inmunológicos y moleculares con valor pronóstico en cáncer de ovario asociado a endometriosis e implicados en el potencial de malignización de la endometriosis (PI20/01368). FIBHULP. 2021-2023. Management centre: FIBHULP
 - **Hernández Gutiérrez A.** Implementación de técnicas basadas en "deep learning" para medir la intensidad del verde de indocianina en la cirugía de la endometriosis con resección intestinal. FIBHULP. 2022-Ongoing. Management centre: FIBHULP
 - **Hernández Gutiérrez A.** Dinamización de Ciencia Disruptiva en Predictores de Enfermedades Tumoraes Infecciosas y Hereditarias como base de la Medicina Personalizada (FORT23/00006). ISCIII. 2022-2024. Management centre: FIBHULP
- Clinical trials**
- **Álvarez Maestro M.** Estudio clínico de fase 2b para evaluar la eficacia y seguridad de tar-200 en combinación con cetrelimab, tar-200 solo o cetrelimab solo en participantes con cáncer de vejiga no músculo-invasivo (cvnmi) de alto riesgo que no responde a la terapia del bacil. **Type/Phase: IIb**
Sponsored by: Janssen Cilag International Nv
Signed date: 30/05/2023
 - **Álvarez Maestro M.** Estudio fase 3, abierto, multicéntrico, aleatorizado para evaluar la eficacia y seguridad de tar-200 en combinación con cetrelimab frente al bacilo de calmette y guérin (bcg) intravesical en pacientes con cáncer de vejiga no músculo-invasivo de alto riesgo (hr-nmibc) sin tratamiento previo con el bcg. **Type/Phase: III**
Sponsored by: Janssen Cilag International Nv Janssen Inc
Signed date: 10/05/2023
- **López Carrasco A.** Estudio prospectivo para evaluar el efecto de un probiótico sobre la composición de la microbiota y la inflamación en mujeres con endometriosis. **Type/Phase:**
Sponsored by: Chemo Research S.L
Signed date: 13/06/2023
 - **Armijo Suárez OM.** Insemination in patients with polycystic ovary syndrome: gestation rates using two stimulation patterns: letrozole vs gonadotropins. **Type/Phase: III**
Sponsored by: Armijo Suárez Ónica María
Signed date: 03/11/2023
 - **Iniesta Pérez S.** Estudio aleatorizado, doble ciego, controlado con placebo para confirmar el efecto positivo de fertibiome® (lilgactobacillus salivarius ps11610) sobre la microbiota del tracto genital femenino en parejas o mujeres con problemas de fertilidad. **Type/Phase: Producto Sanitario Sponsored by: Probi-search, S.L.**
Signed date: 11/12/2023
- Patents and trademarks**
- **Hernández A, López A, Spagnolo E,** authors; FIBHULP, assignees; Brand name: EndoPaz: 018876162. 2023 May 17, 2023 September 27





3.7.9 Research on Comprehensive Care for Transplanted Children and Adolescents

Publications:3 | Q1:2

COMPOSITION

María Jesús Pascau González-Garzón.

Supervisora de Enfermería. Hospital Universitario La Paz

Luz Yadira Bravo Gallego.

Medical Advisor. FIBHULP

- **María Teresa Álvarez Gómez.** Supervisora de Enfermería de Servicio de Hemato-oncología pediátrica y Trasplante de Progenitores Hematopoyéticos (TPH). Hospital Universitario La Paz
- **Almudena Alonso Márquez.** Supervisora de Enfermería Unidad de Pediatría Compleja y Rehabilitación intestinal. Hospital Universitario La Paz
- **Mercedes Hermosilla Mínguez.** Supervisora de Enfermería Unidad de Trasplante Pediátrico de Órgano Sólido. Hospital Universitario La Paz
- **Carlos Martín Saborido.** Vocal Asesor. Ministerio de Sanidad y Consumo
- **Paloma Martínez Campos.** Enfermera pediátrica en Consulta de Seguimiento y Transición de niño y adolescente trasplantado. Hospital Universitario La Paz
- **Miriam Muñoz Berges.** Enfermera Especialista en Pediatría. Hospital Universitario Infanta Sofía
- **Antonia Polo Lucero.** Enfermera Especialista en Pediatría. Hospital Universitario La Paz
- **Guillermo Manuel Sibón Sancho.** Enfermero pediátrico en Unidad de Enfermedades Minoritarias Infantiles (UMI) y Cirugía Pediátrica. Hospital Universitario La Paz

STRATEGIC OBJECTIVE

- Paediatric Solid Organ Transplantation (SOT) and Haematopoietic Stem Cell Transplantation (HSCT) have dramatically changed the life expectancy of many children by providing treatment to them, who would otherwise have not survived. Worldwide, nearly 150,000 SOT1 and 80,000 HSCT are performed annually. Paediatric transplantation constitutes about 10% of the total for SOT and 20% of the total for HSCT. Between 2012 and 2016, 7,741 SOT and 14,717 HSCT were performed on children in the European Union (EU), and the number of PTs performed worldwide continues to increase.
- Paediatric SOT & HSCT replaces end-stage disease with a more sustainable chronic disease state, which enables youth to reach adulthood.³ However, although transplantation can improve personal health outcomes, it can also be associated with long-term side effects that require continuous monitoring and care. Post-transplant follow-up care aims to prevent rejection and transplant-related complications, so that each person can achieve a life expectancy and quality of life (QoL) similar to healthy peers.
- The "Research on comprehensive care for transplanted children and adolescents" group arises from the need to cover gaps in knowledge about the comprehensive care of children and adolescents who receive transplants in the paediatric age.
- The group will be focus on the research of three specific topics:
 1. Transition and transfer of adolescents and young adults (AYAs) living with a transplant to adult clinics: clinical and psychosocial impact. Transition is a gradual, multifaceted, active, and purposeful process involving many important steps and key checkpoints. The process comprises three phases: (1) transition planning and preparation, (2) transfer of care, and (3) integration into adult health care. Each of these phases has unique barriers to success and opportunities for improvement.
 2. Quality of life (QoL) in paediatric transplant setting: patient reported outcomes and experience measures (PROMs and PREMs).
 3. Innovation in health education for transplanted children and adolescents and their parents/caregivers/family: evaluation of programs and validation of tools and questionnaires.

RESEARCH LINES

- Transition and transfer of adolescent and young adult paediatric transplant recipients to adult care: clinical and psychosocial impact.
- Quality of life in paediatric transplantation: outcome measures and patient/family reported experiences (PROMs and PREMs).
- Innovation in health education for transplanted children and adolescents and their parents/caregivers/family: evaluation of programmes and validation of tools and questionnaires.



RESEARCH ACTIVITY

Publications

- **Donà D, Bravo-Gallego LY, Remacha EF, Cananzi M, Gastaldi A, Canizalez JT, Stephenne X, Lacaille F, Lindemans C, Calore E, Galea N, Benetti E, Nachbaur E, Sandes AR, Teixeira A, Ferreira S, Klaudel-Dreszler M, Ackermann O, Boyer O, Espinosa L, Guereta LG, Sciveres M, Fischler B, Schwerk N, Neland M, Nicastro E, Dello Strologo L, Toporski J, Vainumae I, Rascon J, Urbonas V, del Rosal T, López-Granados E, Perilongo G, Baker A, Vega PJ.** Vaccination practices in pediatric transplantation: A survey among member centers of the European reference network TransplantChild. *Pediatr Transplant.* 2023; 27(7): e14589. Article. IF: 1.2; Q3
- **Molina LD, Gallego LYB, Nozal P, Soto-Serrano Y, Martínez-Feito A, Reche-Yebra K, González-Torrey A, de la Cámara RCM, Gianelli C, Cámara C, González-García J, González-Muñoz M, Rodríguez-Pena R, Granados EL.** Detection of specific RBD+ IgG+ memory B cells by flow cytometry in healthcare workers and patients with inborn errors of immunity after BNT162b2 mRNA COVID-19 vaccination. *Front Immunol.* 2023; 14: 1136308. Article. IF: 5.7; Q1
- **del Pino-Molina L, Bravo Gallego LY, Soto Serrano Y, Reche Yebra K, Marty Lobo J, González Martínez B, Bravo García-Morato M, Rodríguez Pena R, van der Burg M, López Granados E.** Research-based flow cytometry assays for pathogenic assessment in the human B-cell biology of gene variants revealed in the diagnosis of inborn errors of immunity: a Bruton's tyrosine kinase case-study. *Front Immunol.* 2023; 14: 1095123. Article. IF: 5.7; Q1



3.7.10 Food Oxidative Stress and Cardiovascular Health*

COMPOSITION

Silvia M.
 Arribas Rodríguez. Catedrática de Fisiología Cardiovascular. Universidad Autónoma de Madrid

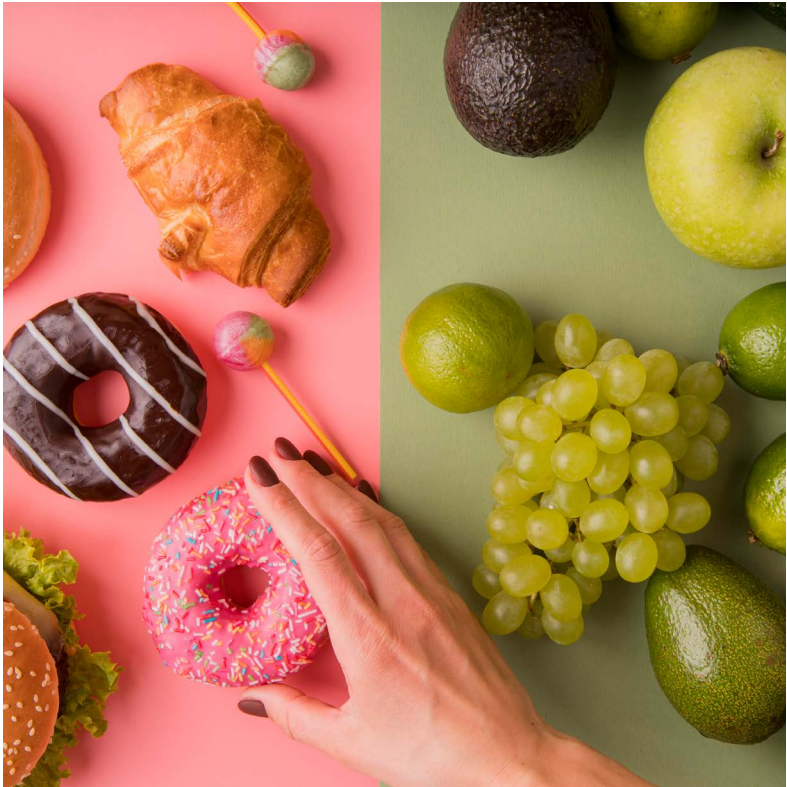
- Yolanda Aguilera Gutiérrez. Profesora Titular. Universidad Autónoma de Madrid
- Alicia Gil Ramírez. Profesora Ayudante Doctor. Universidad Autónoma de Madrid
- Álvaro Llorente Berzal. Profesor Ayudante Doctor. Universidad Autónoma de Madrid
- María Ángeles Martín Cabrejas. Catedrática en Química Agrícola y Bromatología. Universidad Autónoma de Madrid
- María Martín Trueba. Investigadora Predoctoral. Universidad Autónoma de Madrid
- David Ramiro Cortijo. Profesor Ayudante Doctor. Universidad Autónoma de Madrid
- Pilar Rodríguez Rodríguez. Técnico de Laboratorio. Universidad Autónoma de Madrid
- Santiago Ruvira Hernando. Investigadora Predoctoral. Universidad Autónoma de Madrid

STRATEGIC OBJECTIVE

- To evaluate the impact of low birth weight and prematurity on cardiometabolic health with a follow-up strategy, analyzing the modulatory effect of lifestyle.
- To study the physiological mechanisms implicated in the association between risk factors and cardiometabolic programming, using animal models of prematurity and intrauterine growth restriction and dietary interventions.
- To assess the influence of sociocultural factors on women health during pregnancy and lactation, and the modulation of biological variables by lifestyle.
- Promotion of healthy habits during pregnancy and lactation.
- To extract and characterize healthy bioactive components from food by-products and to design ingredients and supplements to improve cardiometabolic health.
- To carry out intervention trials in healthy subjects with the designed ingredients, evaluating its anti-inflammatory and antioxidants properties and health effect.

RESEARCH LINES

- Relationship between nutrition and fetal and postnatal programming of cardiometabolic disease. Involvement of oxidative stress and inflammation
- Impact of prematurity on cardiometabolic health.
- Development of new functional ingredients from food by-products focused on cardiometabolic health.
- Study of food ingredient bioactivity, bioavailability and impact on cardiometabolic health.
- Analysis of breastmilk bioactive components and its relationship with maternal and infant health.



*Group recently created, december 2023



3.8 Multidisciplinary Research in Healthy Aging Area

Documents: 54 | Originals: 46 | D1: 2 | Q1: 21

Area coordinator: Rocío Menéndez Colino

coordinadorevejecimiento@idipaz.es

RESEARCH GROUPS

3.8.1 Aging and Fragility in the Elderly - **Rocío Menéndez Colino**

3.8.2 Frailty and Healthy Aging - **Leocadio Rodríguez Mañas**

3.8.3 Frailty, Multimorbidity Patterns and Mortality in the Elderly Population Residing in the Community - **Miguel Ángel Salinero Fort**



3.8 Multidisciplinary Research in Healthy Aging Area

Strategic Objectives	Development forecast for the coming years:	Actions
<p>The Multidisciplinary Research in Healthy Aging is a recently created area and is made up of three groups. Its main initial mission is to identify synergies between IdiPAZ research groups with professionals or research groups in the field of primary care and health care with the aim of establishing joint interdisciplinary and competitive projects. It also aims to promote the development of training activities aimed at primary care and health care professionals</p>	Increase the quality of the Area's group publications	Promoting quality and impact publishing
	Ensure generational change in the leadership of projects and groups in the area.	Include junior profiles in the groups and consider transition projects
	Improving the success rate in competitive calls for proposals	Increasing the submission rate to competitive calls for proposals and Increase the use of the Institution's resources and platforms for project applications (Mentor Programme, PAIN Platform, Innovation Support Unit, etc.).
	Implementing gender-sensitive analysis of results	Define studies that consider the gender dimension of pathologies in both patients and models.

HIGH IMPACT PUBLICATIONS

Angulo J, Fernández A, Sevilleja-Ortiz A, Sánchez-Ferrer A, Rodríguez-Mañas L, **El Assar M**. Upregulation of orai channels contributes to aging-related vascular alterations in rat coronary arteries. *Int J Mol Sci.* 2023; 24(17): 13402. Article. IF: 4,9; Q1

Cobo A, Rodríguez-Laso A, Villalba-Mora E, Pérez-Rodríguez R, **Rodríguez-Mañas L**. Frailty detection in older adults via fractal analysis of acceleration signals from wrist-worn sensors. *Health Inf Sci Syst.* 2023; 11(1): 29. Article. IF: 4,7; Q1

Checa-López M, Rodríguez-Laso A, Carnicero JA, Solano-Jaurrieta JJ, Obermans OS, Sinclair A, Landi F, Scuteri A, Álvarez-Bustos A, Sepúlveda-Loyola W, **Rodríguez-Mañas L**. Differential utility of various frailty diagnostic tools in non-geriatric hospital departments of several countries: A longitudinal study. *Eur J Clin Invest.* 2023; 53(7): e13979. Article. IF: 4,4; Q1

Rodríguez-Laso A, García-García EJ, **Rodríguez-Mañas L**. The ICOPE intrinsic capacity screening tool: measurement structure and predictive validity of dependence and hospitalization. *J Nutr Health Aging.* 2023; 27(10): 808-16. Article. IF: 4,3; Q1.

Rodríguez-Laso A, García-García EJ, **Rodríguez-Mañas L**. Predictors of maintained transitions between robustness and prefrailty in community-dwelling older spaniards. *J Am Med Dir Assoc.* 2023; 24(1): 57-64. Article. IF: 4,2; Q2

Scientific Events by Multidisciplinary Research in Healthy Aging

- **01/12/2023** 4ª Jornada de Geriatría Transversal



3.8.1 Aging and Fragility in the Elderly

Publications:15 | Q1:1

COMPOSITION

Rocío Menéndez Colino.

Facultativo Especialista de Área en Geriátria.
Hospital de Cantoblanco - Hospital Universitario La Paz

- **Francesca Argentina.** Facultativo Especialista en Geriátria. Hospital Universitario La Paz
- **Patricia Ysabel Condoꝛhuamán Alvarado.** Facultativo Especialista de Área en Geriátria. Hospital Universitario La Paz
- **Victoria María Déniz González.** Enfermera Especialista en Geriátria. Hospital Universitario La Paz
- **Javier Gómez Pavón.** Jefe de Servicio de Geriátria y de Cuidados Paliativos. Hospital Central Cruz Roja San José y Santa Adela
- **Silvia Martín Martín.** Enfermera Especialista en Geriátria. FIBHULP
- **Ana Merello de Miguel.** Facultativo Especialista de Área en Geriátria. Hospital Universitario La Paz
- **Raquel Ramírez Martín.** Facultativo Especialista de Área en Geriátria. Hospital Universitario La Paz
- **Paola Pastora Reinoso Párraga.** Facultativo Especialista de Área en Geriátria. Hospital Universitario La Paz
- **Peggy Paola Ríos Germán.** Médico Interno Residente en Geriátria. Hospital Universitario La Paz
- **María del Pilar Sáez López.** Facultativo Especialista de Área en Geriátria. Complejo Asistencial de Ávila



STRATEGIC OBJECTIVE

- To promote and improve the quality of hospital geriatric care
- Progress in the cross-speciality geriatrics
- Point of care ultrasonography in the management of diseases in the older patient

RESEARCH LINES

- Coordination of the National Registry of Hip Fractures: a multicenter observational study including patients from 75 Spanish hospitals with an acute fragility hip fracture. The registry collects data from the acute hospital phase and a one-month follow-up from about 80 Spanish hospitals.
- Study of the influence of frailty in the implantation of transcatheter aortic valve. Multicenter project that includes data from five Spanish hospitals
- Cross-speciality Geriatrics: Co-management of old patients diagnosed of cancer in collaboration with the General Surgery, Medical and Radioterapeutic Oncology, Urology and Vascular Surgery Departments of the La Paz Hospital.
- Observational study of the evolution of old patients affected of a traumatic intracranial hemorrhage, in collaboration with the Neurosurgery Department of the La Paz Hospital.
- Point of care ultrasound sonography



RESEARCH ACTIVITY

Doctoral theses

- **Condorhuamán Alvarado PY.** Utilidad de los indicadores de calidad del Registro Nacional de Fracturas de Cadera para mejorar la atención de los pacientes con fractura de cadera en España [dissertation]. Madrid: UAM: (29/06/2023). Director: Gutiérrez Misis A, González Montalvo JI

Publications

- **Boixareu CB, Ojeda-Thies C, Valtueña AG, Veloz BAC, Lázaro MG, Castellanos LN, Matas RQ, Campelo PG, Vicente AR, González-Montalvo JI, Sáez-López P.** Clinical and demographic characteristics of centenarians versus other age groups over 75 years with hip fractures. *Clin Interv Aging.* 2023; 18: 441-51. Article. IF: 3.5; Q2
- **Castillo-Vásquez KC, Cervino Camino S, Condorhuamán-Alvarado PY, Morales Mena GI.** Myositis in an older patient: About a case. *Rev Esp Geriatr Gerontol.* 2023; 58(4): 101355. Letter. Not indexed

- **Castillo-Vásquez KC, Condorhuamán Alvarado PY, Zúñiga Bartolome C, Reinoso-Parraga PP.** Complex regional syndrome in the right tarsus of spontaneous onset. A disabling pathology. *Rev Esp Geriatr Gerontol.* 2023; 58(3): 173-4. Letter. Not indexed
- **Cristofori G, Aguado-Ortego R, Gómez-Pavón J.** The concept and practical management of frailty in neurology. *Rev Neurologia.* 2023; 76(10): 327-36. Review. IF: 0.8; Q4
- **Cristofori G, González Becerra M, Sánchez Osorio LM, Gómez Pavón J.** Utility and safety of direct admission to acute geriatric unit after Nursing Home Geriatric Team assessment. *Rev Esp Geriatr Gerontol.* 2023; 58(6): 101388. Article. Not indexed
- **Delgado-Lima AH, Bouhaben J, Martínez-Zujeros S, Pallardo-Rodil B, Gómez-Pavón J, Delgado-Losada ML.** Could olfactory identification be a prognostic factor in detecting cognitive impairment risk in the elderly? *Geroscience.* 2023; 45(3): 2011-25. Article. IF: 5.3; Q1

- **Flores MM, López MC, Gómez-Pavón J.** The impact of the first pandemic waves of COVID-19 in older people with dementia. *Aten Prim.* 2023; 55(6): 102622. Article. IF: 1.8; Q2
- **Hormigo-Sánchez AI, López-García A, Mahillo-Fernández I, Askari E, Morillo D, Pérez-Saez MA, Riesco M, Urrutia C, Martínez-Peromingo FJ, Córdoba R, González-Montalvo JI.** Frailty assessment to individualize treatment in older patients with lymphoma. *Eur Geriatr Med.* 2023; 14(6): 1393-402. Article. IF: 3.5; Q2
- **Jaramillo-Hidalgo J, Quezada-Feijoo M, Ramos M, Toro R, Gómez-Pavón J, Ayala-Muñoz R.** Prevalence of transthyretin cardiac amyloidosis in elderly patients diagnosed with heart failure. *Rev Esp Geriatr Gerontol.* 2023; 58(1): 41852-. Article. Not indexed
- **Jiménez EL, Álvarez MN, Martín RR, Bouzón CA, Andrés MSA, Boixareu CB, Brañas F, Colino RM, Muñana EA, López MC, Jiménez CG, Rodríguez PP, Ibáñez MA, Brolen BV, Oliva J, Longobardo LMP, Córcoles RA, Zamora EBC, Jiménez EG, Rizos LR, Céspedes AA, Socorro CRH, Abizanda P.** Sarcopenia measured by ultrasound in hospitalized older adults (ECOSARC): multi-centre, prospective observational study protocol. *BMC Geriatr.* 2023; 23(1): 163. Article. IF: 3.4; Q2
- **Pilotto A, Custodero C, Palmer K, Sánchez-García EM, Topinkova E, Polidor MC.** A multidimensional approach to older patients during COVID-19 pandemic: a position paper of the Special Interest Group on Comprehensive Geriatric Assessment of the European Geriatric Medicine Society (EuGMS). *Eur Geriatr Med.* 2023; 14(1): 33-41. Article. IF: 3.5; Q2
- **Reinoso Parraga PP, Vilches-Moraga A.** Point of care ultrasound (POCUS) in the evaluation of an older frail adult: Case report. *Rev Esp Geriatr Gerontol.* 2023; 58(6): 101373. Article. Not indexed
- **Reinoso Parraga PP, Vilches-Moraga A.** Is a point of care ultrasound (POCUS) useful for the evaluation of blood volume and alveolar-interstitial syndrome in older patients? Series of

- cases. *Rev Esp Geriatr Gerontol.* 2023; 58(3): 167-9. Article. Not indexed
- **Romero Pisonero E, Saez-López P, González Montalvo JI, Cancio Trujillo JM, Rodríguez González MC, Martínez Almazan E.** Functional recovery units state in orthogeriatrics according to data from the National Registry of Hip Fracture. *Rev Esp Geriatr Gerontol.* 2023; 58(4): 101375. Article. Not indexed
- **Sáez-López P, Pérez Fernández E, Arredondo Provecho AB.** Impact of the restriction of family visits due to the pandemic on the clinical evolution of the hospitalized geriatric patient. *Rev Esp Geriatr Gerontol.* 2023; 58(2): 108-14. Review. Not indexed

Research projects

- **Menéndez Colino R.** Impacto de una intervención multidisciplinaria en el pronóstico de pacientes frágiles con estenosis aórtica severa sintomática: ensayo randomizado. (P19/01010). ISCIII. 2020-2023. *Management centre: FIBHULP*
- **González Montalvo JI.** Geriatría transversal: detección y manejo de la fragilidad en pacientes adultos mayores con patología quirúrgica. Varios. 2019-Ongoing. *Management centre: FIBHULP*
- **González Montalvo JI.** Prevención secundaria de fracturas por fragilidad: descripción del tipo de pacientes y del funcionamiento de una fracture liaison service en pacientes con fractura de cadera tratados en un Servicio de Ortopediátrica. Amgen S. A. 2019-Ongoing. *Management centre: FIBHULP*
- **González Montalvo JI.** Proyecto del registro nacional de fracturas de cadera por fragilidad en el anciano. Amgen S. A. 2017-Ongoing. *Management centre: FIBHULP*
- **González Montalvo JI.** Registro nacional de fracturas de cadera estudio RNFC. Fundación Mutua Madrileña. 2018-Ongoing. *Management centre: FIBHULP*



3.8.2 Frailty and Healthy Aging

Publications:19 | Q1:11

COMPOSITION

Leocadio Rodríguez Mañas.

Jefe Servicio de Geriátria. Hospital Universitario de Getafe

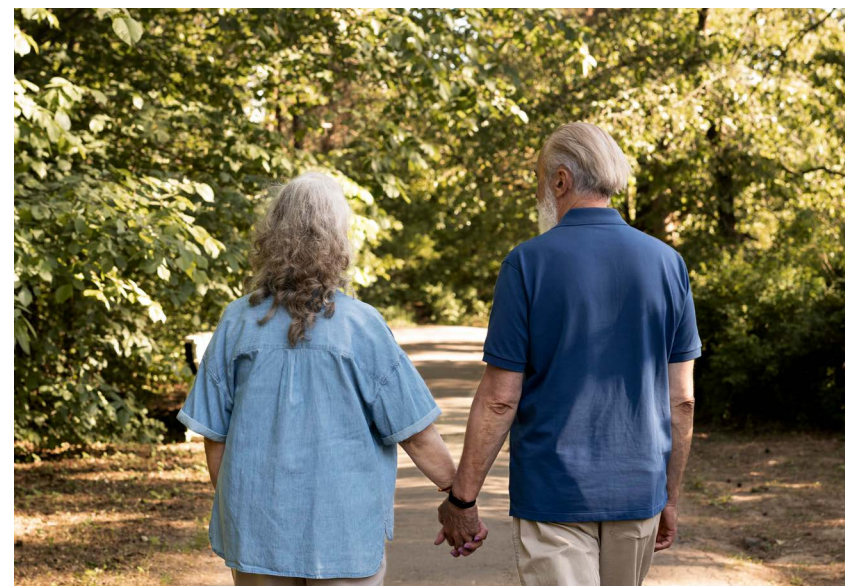
- **David Bernal López.** Gestor de proyectos europeos de investigación. Fundación de investigación Biomédica del Hospital Universitario de Getafe
- **José Antonio Carnicero Carreño.** Data Manager. Investigador Senior. Fundación de investigación Biomédica del Hospital Universitario de Getafe
- **Betty Davies Urizar.** Médico Adjunto en Geriátria. Hospital Universitario de Getafe
- **Mariam El Assar de la Fuente.** Investigadora Senior. Fundación de investigación Biomédica del Hospital Universitario de Getafe
- **Patricia Laosa Zafra.** Investigador Postdoctoral. Fundación de investigación Biomédica del Hospital Universitario de Getafe
- **Laura Pedraza Sepúlveda.** Farmacóloga Clínica. Fundación de investigación Biomédica del Hospital Universitario de Getafe
- **Laura Rivero Álvarez.** Gestora de Proyectos Europeos de Investigación. Hospital Universitario de Getafe
- **Patricia Sosa Callejas.** Investigadora Postdoctoral. Fundación de investigación Biomédica del Hospital Universitario de Getafe

STRATEGIC OBJECTIVE

- This research area, has been developed along the last 25 years by our group, with outstanding contributions to several aspects of the field, ranging from basic science (endothelial function, role of lab and image biomarkers, magnetoencephalography, musculoskeletal function...) to clinical and epidemiological research, raising data that have allowed to promote technological devices (platform to detect, treat and monitor functional decline in a non-obtrusive way) and leading to the creation of a technological SME (MG Biomed)

RESEARCH LINES

- Endothelial dysfunction associated with aging, diabetes and obesity.
- Clinical aspects of frailty.
- New Technologies Applied to Frailty, functional decline and Healthy Aging.



RESEARCH ACTIVITY

Doctoral theses

- **Caballero Mora MA.** Papel de la marcha y equilibrio en sujetos ancianos (70-79 años) y muy ancianos (>80 años)[dissertation]. Madrid: UE: 2023(12/04/2023). Director: Rodríguez Mañas L.

Publications

- **Alonso-Mencia J, Castro-Rodríguez M, Herrero-Pinilla B, Alonso-Weber JM, Rodríguez-Mañas L, Pérez-Rodríguez R.** ADELA: a conversational virtual assistant to prevent delirium in hospitalized older persons. J Supercomput. 2023; 79(15): 17670-90. Article. IF: 2.5; Q2

- **Angulo J, Fernández A, Sevilleja-Ortiz A, Sánchez-Ferrer A, Rodríguez-Mañas L, El Assar M.** Upregulation of orai channels contributes to aging-related vascular alterations in rat coronary arteries. Int J Mol Sci. 2023; 24(17): 13402. Article. IF: 4.9; Q1
- **Araya-Quintanilla F, Sepulveda-Loyola W, Cuyul-Vásquez I, Álvarez-Bustos A, Gutiérrez-Espinoza H, Probst VS, Camp PG, Rodríguez-Mañas L.** Recommendations and effects of rehabilitation programs in older adults after hospitalization for covid-19 a scoping review. Am J Phys Med Rehab. 2023; 102(7): 653-9. Review. IF: 2.2; Q1



- **Bourdel-Marchasson I, Maggi S, Abdelhafiz A, Bellary S, Demurtas J, Forbes A, Ivory P, Rodríguez-Manas L, Sieber C, Strandberg T, Tessier D, Vergara I, Veronese N, Zeyfang A, Christiaens A, Sinclair A.** Essential steps in primary care management of older people with Type 2 diabetes: an executive summary on behalf of the European geriatric medicine society (EUGMS) and the European diabetes working party for older people (EDWPOP) collaboration. *Aging Clin Exp Res.* 2023; 35(11): 2279-91. Article. IF: 3.4; Q2
 - **Calvani R, Picca A, Rodríguez-Mañas L, Tosato M, Coelho HJC, Biancolillo A, Laosa O, Gervasoni J, Primiano A, Santucci L, Giampaoli O, Bourdel-Marchasson I, Regueme SC, Sinclair AJ, Urbani A, Landi F, Gambassi G, Marini F, Marzetti E.** Amino acid profiles in older adults with frailty: secondary analysis from metabofrail and BIOSPHERE Studies. *Metabolites.* 2023; 13(4): 542. Article. IF: 3.4; Q2
 - **Checa-López M, Rodríguez-Laso A, Carnicero JA, Solano-Jaurrieta JJ, Obermans OS, Sinclair A, Landi F, Scuteri A, Álvarez-Bustos A, Sepúlveda-Loyola W, Rodríguez-Manas L.** Differential utility of various frailty diagnostic tools in non-geriatric hospital departments of several countries: A longitudinal study. *Eur J Clin Invest.* 2023; 53(7): e13979. Article. IF: 4.4; Q1
 - **Cobo A, Rodríguez-Laso A, Villalba-Mora E, Pérez-Rodríguez R, Rodríguez-Mañas L.** Frailty detection in older adults via fractal analysis of acceleration signals from wrist-worn sensors. *Health Inf Sci Syst.* 2023; 11(1): 29. Article. IF: 4.7; Q1
 - **Fougère B, Morley JE, Arai H, Bauer JM, Bernabei R, Cherubini A, Dong B, Martini FC, Flicker L, Merchant RA, Manas LR, Woo J, Velas B.** Precision medicine: The future management of geriatric conditions. *J Nutr Health Aging.* 2023; 27(12): 1292-5. Article. IF: 4.3; Q1
 - **Henning T, Kochlik B, Ara I, González-Gross M, Fiorillo E, Marongiu M, Cucca F, Rodríguez-Artalejo F, Carreno JAC, Rodríguez-Mañas L, Grune T, Weber D.** Patterns of dietary blood markers are related to frailty status in the FRAILOMIC validation phase. *Nutrients.* 2023; 15(5): 1142. Article. IF: 4.8; Q1
 - **Millet A, Madrid A, Alonso-Weber JM, Rodríguez-Mañas L, Pérez-Rodríguez R.** Machine learning techniques applied to the development of a fall risk index for older adults. *IEEE Access.* 2023; 11: 84795-809. Article. IF: 3.4; Q2
 - **Moral C, Pérez-Rodríguez R, Villalba-Mora E, Barrio-Cortes J, Ferre X, Rodríguez-Mañas L.** Integrated health system to assess and manage frailty in community dwelling: Co-design and usability evaluation. *Digit Health.* 2023; 9: 20552076231181200. Article. IF: 2.9; Q2
 - **Rodríguez-Laso A, García-García FJ, Rodríguez-Mañas L.** Predictors of maintained transitions between robustness and prefrailty in community-dwelling older spaniards. *J Am Med Dir Assoc.* 2023; 24(1): 57-64. Article. IF: 4.2; Q2
 - **Rodríguez-Laso A, García-García FJ, Rodríguez-Mañas L.** The ICOPE intrinsic capacity screening tool: measurement structure and predictive validity of dependence and hospitalization. *J Nutr Health Aging.* 2023; 27(10): 808-16. Article. IF: 4.3; Q1
 - **Rodríguez-Mañas L, Gallego CC.** Frailty in older adults. *J Nutr Health Aging.* 2023; 27(10): 924-5. Editorial Material. IF: 4.3; Q1
 - **Rodríguez-Mañas L, Murray R, Glencorse C, Sulo S.** Good nutrition across the lifespan is foundational for healthy aging and sustainable development. *Front Nutr.* 2023; 9: 1113060. Article. IF: 4.0; Q2
 - **Rodríguez-Sánchez I, Mañas LR.** COVID in older people: Some answers, new questions. *J Nutr Health Aging.* 2023; 27(2): 79-80. Editorial Material. IF: 4.3; Q1
 - **Sepúlveda-Loyola W, Carnicero JA, Álvarez-Bustos A, Probst VS, García-García FJ, Rodríguez-Mañas L.** Pulmonary function is associated with frailty, hospitalization and mortality in older people: 5-year follow-up. *Heart Lung.* 2023; 59: 88-94. Article. IF: 2.4; Q2
 - **Verdú-Soriano J, Casado-Díaz A, de Cristino-Espinar M, Luna-Morales S, Dios-Guerra C, Moreno-Moreno P, Dorado G, Quesada-Gómez JM, Rodríguez-Mañas L, Lázaro-Martínez JL.** Hard-to-heal wound healing: superiority of hydrogel EHO-85 (Containing Olea europaea Leaf Extract) vs. a standard hydrogel. A randomized controlled trial. *Gels.* 2023; 9(12): 962. Article. IF: 5.0; Q1
 - **Verdú-Soriano J, de Cristino-Espinar M, Luna-Morales S, Dios-Guerra C, Casado-Díaz A, Quesada-Gómez JM, Dorado G, Berenguer-Pérez M, Vilchez S, Esquena J, Rodríguez-Mañas L, Lázaro-Martínez JL.** EHO-85, Novel amorphous antioxidant hydrogel, containing olea europaea leaf extract-rheological properties, and superiority over a standard hydrogel in accelerating early wound healing: a randomized controlled trial. *Pharmaceutics.* 2023; 15(7): 1925. Article. IF: 4.9; Q1
- Research projects**
- **Rodríguez Mañas L .** Dual effects of insulin resistance on frailty status, disability and death: proof of concept and risk models building project PI20/00977 (PI20/00977). ISCIII. 2021-2023. *Management centre: FIBHUG*
 - **Rodríguez Mañas L .** Papel de nuevos biomarcadores pronósticos de recuperación funcional tras deterioro catastrófico y no catastrófico en personas mayores vulnerables: Biomarc-RF (PI23/00877). ISCIII. 2024-2026. *Management centre: IdiPAZ*
 - **Rodríguez Mañas L .** ActiveUP: Dimensión Científica y clínica PID2019-108408RB-C22 (). Agencia Estatal De Investigación. Retos de la Sociedad 2019.. 2021-2023. *Management centre: FIBHUG*
 - **Olga Laosa Zafra.** Ecosistema computacional con apoyo motivacional y evaluación funcional para un programa autónomo de ejercicio para un envejecimiento saludable. MOTIVA (PID2022-140214OA-C22). Agencia Estatal de Investigación (Proyectos generación de conocimiento 2022). 2023-2026. *Management centre: FIBHUG/UPM*
 - **Rodríguez Mañas L .** DIABFRAIL-LATAM: Adaptación de un programa de intervención ya contrastado en personas mayores con diabetes y fragilidad en América Latina (278803-2). 7 ° Programa Mar-
- co HEALTH.2011.2.2.2-1-1 HEALTH.2011.2.4.3. 2019-2024. *Management centre: CIBER-FIBHUG*
- **Rodríguez Mañas L.** Gestión predictiva, personalizada, preventiva y participativa (4P) de la fragilidad y la multimorbilidad para la transición digital de la economía de los cuidados- MIRATAR (TED2021-132149B-C41). Agencia Estatal De Investigación. Proyectos de Transición Ecológica y Transición Digital. 2023-2024. *Management centre: FIBHUG/Universidad Castilla la Mancha/Universidad Carlos III*
 - **Rodríguez Mañas L .** VITAL modelos predictivos para extender la vida independiente de los Adultos mayores (). Fundación FRANCISCO SORRIA MELGUIZO. 2021-2023. *Management centre: FIBHUG*
 - **Rodríguez Mañas L .** Ecosistema INTEGRA-CAM: Sistema de monitorización domiciliaria para prevención y tratamiento de la fragilidad (). FEDER/Ministerio de Ciencia e Innovación . 2021-2023. *Management centre: FIBAP*
 - **Rodríguez Mañas L .** Asistente virtual para la prevención del delirium en personas mayores hospitalizadas. ADELA (). Fundación Mapfre. 2022-2023. *Management centre: FIBHUG*
 - **Rodríguez Mañas L .** Papel de la disfunción MITOcondrial en la relación entre multimorbilidad crónica y deterioro FUNCional en ancianos. El Proyecto MITOFUN (). Fundación FRANCISCO SORIA MELGUIZO. 2021-2023. *Management centre: FIBHUG*
- Cibers and Retics**
- **CB16/10/00464 Rodríguez Mañas L.** Centro de Investigación Biomédica en Red en Fragilidad y Envejecimiento Saludable. (CIBERFES). ISCIII. (31/12/2023). FIBHULP



3.8.3 Frailty, Multimorbidity Patterns and Mortality in the Elderly Population Residing in the Community

Publications:17 | Q1:8

COMPOSITION

Miguel Ángel Salinero Fort.

Responsable Gestión Conocimiento. Consejería Sanidad

- **Beatriz Álvarez Embarba.** Enfermera. Escuela Universitaria de Enfermería Cruz Roja Española
- **Navid Behzadi Koochani.** Facultativo Especialista de Área en Medicina Familiar y Comunitaria. Atención Primaria
- **Juan Cárdenas Valladolid.** Enfermero. Atención Primaria
- **Enrique Carrillo de Santa Pau.** Biólogo. Fundación IMDEA Alimentación
- **María Victoria Castell Alcalá.** Facultativo Especialista de Área en Medicina Familiar y Comunitaria. Atención Primaria
- **Teresa Gijón Conde.** Profesora Honoraria. Universidad Autónoma de Madrid
- **Paloma Gómez Campelo.** Subdirectora Técnica de IdiPAZ. Investigadora Postdoctoral. FIBHULP
- **Alicia Gutiérrez Misis.** Profesor Ayudante Doctor. Universidad Autónoma de Madrid
- **Víctor Iriarte Campo.** Investigador predoctoral. Atención Primaria
- **Paula Reguerio Toribio.** Facultativo Especialista de Área en Medicina Familiar y Comunitaria. Atención Primaria
- **Antonio Ruiz García.** Director de Centro de Atención Primaria. Atención Primaria
- **Francisco Javier San Andrés Rebollo.** Facultativo Especialista de Área en Medicina Familiar y Comunitaria. Atención Primaria
- **Belén Taulero Escalera.** Investigadora Predoctoral. Atención Primaria
- **Pilar Vich Pérez.** Facultativo Especialista de Área en Medicina Familiar y Comunitaria. Atención Primaria

STRATEGIC OBJECTIVE

- The group's research focuses on the morbidity and mortality risks of elderly patients in the community setting, with particular attention to the study of modifiable factors such as nutrition, alcohol consumption, smoking, inappropriate use of drugs, lack of therapeutic adherence, sedentary lifestyle, and vulnerability to climate change. In addition, classic factors such as hypertension, diabetes, obesity/overweight, hypercholesterolemia, multimorbidity, and suboptimal control of blood pressure, glucose, and LDL cholesterol. Furthermore, the study of the factors that delay urgent/emergent attention of time-dependent pathologies (*). All with a perspective of gender and vulnerability across the life course.
- (*) Those emergency diseases in which the diagnostic or therapeutic delay negatively influences the process's evolution and prognosis since its morbidity and mortality are directly related to the delay in starting treatment.



RESEARCH LINES

- Effect of Glycemic Variability on morbidity and mortality
- Effect of Arterial Hypertension Variability on morbidity and mortality
- Predictive model of morbidity and mortality in elderly patients residing in the community
- Predictive model of morbidity and mortality in patients with type 2 diabetes mellitus
- Effect of product of fasting glucose and triglyceride (TyG index), on incident Type 2 Diabetes Mellitus.
- Sex differences in preventive medicine.
- Incidence of mortality in adult patients diagnosed with epilepsy in the community of Madrid: EPILEPSIE-Madrid retrospective cohort.
- Mortality Rates and causes of death in patients with Type 2 Diabetes: An Analysis of MADIABETES Cohort (Spain)
- Metabolomics, genomics and nutrition for personalized medicine of cardiovascular disease (OMIC-CARD)
- LADA-type diabetes: development and validation of a high-risk score for use in Primary Care.

RESEARCH ACTIVITY

Doctoral theses

- **Condorhuamán Alvarado PY.** Utilidad de los indicadores de calidad del registro nacional de fracturas de cadera para mejorar la atención de los pacientes con fractura de cadera en España[dissertation]. *Madrid: UAM: 2023(29/06/2023). Director: Gutiérrez Misis A, González Montalvo JI.*
- **Moral Cuesta D.** Prevención secundaria de fracturas de cadera por fragilidad: descripción del tipo de pacientes y del funcionamiento de una fracture liaison service desde el ingreso en una unidad de ortogeriatría[dissertation]. *Madrid: UAM: 2023(05/05/2023). Director: Gutiérrez Misis A, Martínez Velilla N.*



Master theses

- **González Baños E.** Impacto de las partículas volcánicas en patologías respiratorias. Una revisión sistemática. [dissertation]. *Madrid: Universidad Camilo José Cela: 2023(30/06/2023).* Director: *Behzadi Koochani N*
- **Lezcano Fernández E.** Impacto socioeconómico de la guerra de Ucrania en la población vulnerable por discapacidad. Estudio observacional [dissertation]. *Madrid: Universidad Camilo José Cela: 2023(30/06/2023).* Director: *Behzadi Koochani N.*
- **López Molina VM.** Estudio de la relación entre el microbioma intestinal, los alimentos ultraprocesados y la calidad de la dieta mediante métodos bioinformáticos. [dissertation]. *Madrid: UAM: 2023(20/02/2023).* Director: *Carrillo de Santa Pau E, Marcos LJ.*

Final Degree Theses

- **Barrau Arnedillo J.** Prevalencia de caídas y factores asociado en mayores de 64 años [dissertation]. MADRID: UAM: 2023(30/06/2023). Director: *Castell Alcalá MV.*

Publications

- **Boixareu CB, Ojeda-Thies C, Valtueña AG, Veloz BAC, Lázaro MG, Castellanos LN, Matas RQ, Campelo PG, Vicente AR, González-Montalvo JI, Sáez-López P.** Clinical and demographic characteristics of centenarians versus other age groups over 75 years with hip fractures. *Clin Interv Aging.* 2023; 18: 441-51. Article. IF: 3.5; Q2
- **Caballero FF, Lana A, Struijk EA, Arias-Fernández L, Cárdenas-Valladolid J, Salinero-Fort MA, Banegas JR, Rodríguez-Artalejo F, López-García E.** Multimorbidity patterns in older adults: the role of social variables and lifestyle behaviors. *Gerontology.* 2023; 69(6): 716-27. Article. IF: 3.1; Q3
- **Caballero FF, Lana A, Struijk EA, Arias-Fernández L, Yébenes-Briones H, Cárdenas-Valladolid J, Salinero-Fort MA, Banegas JR, Rodríguez-Artalejo F, López-García E.** Prospective association between plasma concentrations of fatty acids and other lipids, and multimorbidity in older adults. *J Gerontol A-Biol.* 2023; 78(10): 1763-70. Article. IF: 4.3; Q1
- **Caballero FF, Lana A, Struijk EA, Arias-Fernández L, Yébenes-Briones H, Cárdenas-Valladolid J, Sa-**

- linero-Fort MA, Banegas JR, Rodríguez-Artalejo F, López-García E.** Prospective association between plasma amino acids and multimorbidity in older adults. *J Gerontol A-Biol.* 2023; 78(4): 637-44. Article. IF: 4.3; Q1
- **de Burgos-Lunar C, del Cura-González I, Cárdenas-Valladolid J, Gómez-Campelo P, Abánades-Herranz JC, López-de Andrés A, Sotos-Prieto M, Iriarte-Campo V, Salinero-Fort MA.** Real-world data in primary care: validation of diagnosis of atrial fibrillation in primary care electronic medical records and estimated prevalence among consulting patients'. *BMC Prim Care.* 2023; 24(1): 4. Article. IF: 2.0; Q2
- **de Burgos-Lunar C, del Cura-González I, Cárdenas-Valladolid J, Gómez-Campelo P, Abánades-Herranz JC, López-de Andrés A, Sotos-Prieto M, Iriarte-Campo V, Fuentes-Rodríguez CY, Gómez-Coronado R, Salinero-Fort MA.** Validation of diagnosis of acute myocardial infarction and stroke in electronic medical records: a primary care cross-sectional study in Madrid, Spain (the e-MAD-VEVA Study). *BMJ Open.* 2023; 13(6): e068938. Article. IF: 2.4; Q1
- **D'Elia D, Truu J, Lahti L, Berland M, Papoutsoglou G, Ceci M, Zomer A, Lopes MB, Ibrahim E, Gruca A, Nechyporenko A, Frohme M, Klammsteiner T, Pau ECD, Marcos-Zambrano LJ, Hron K, Pio G, Simeon A, Suharoschi R, Moreno-Indias I, Temko A, Nedyalkova M, Apostol ES, Truica CO, Shigdel R, Telalovic JH, Bongcam-Rudloff E, Przymus P, Jordamovic NB, Falquet L, Tarazona S, Sampri A, Isola G, Pérez-Serrano D, Trajkovic V, Klucar L, Loncar-Turukalo T, Havulinna AS, Jansen C, Bertelsen RJ, Claesson MJ.** Advancing microbiome research with machine learning: key findings from the ML4Microbiome COST action. *Front Microbiol.* 2023; 14: 1257002. Article. IF: 4.0; Q2
- **García S, Ordoñez S, López-Molina VM, Lacruz-Pleguezuelos B, de Santa Pau EC, Marcos-Zambrano LJ.** Citizen science helps to raise awareness about gut microbiome health in people at risk of developing non-communicable diseases. *Gut Microbes.* 2023; 15(1): 2241207. Article. IF: 12.2; D1
- **Lacruz-Pleguezuelos B, Piette O, Garranzo M, Pérez-Serrano D, Milesevíc J, Espinosa-Salinas I, de Molina AR, Laguna T, de Santa Pau EC.** FoodDrugs: a comprehensive food-drug interactions database with text documents and transcriptional data. *Database-Oxford.* 2023; 2023: baad075. Article. IF: 3.4; Q1

- **Lahoz C, Salinero-Fort MA, Cardenas J, Rodríguez-Artalejo F, Diaz-Almirón M, Vich-Pérez P, San Andrés-Rebollo FJ, Vicente I, Mostaza JM.** HDL-cholesterol concentration and risk of SARS-CoV-2 infection in people over 75 years of age: a cohort with half a million participants from the Community of Madrid. *Hipertens Riesgo Vasc.* 2023; 40(2): 75-84. Article. IF: 1.2; Q3
- **Marcos-Zambrano LJ, López-Molina VM, Bakir-Gungor B, Frohme M, Karadzovic-Hadziabdic K, Klammsteiner T, Ibrahim E, Lahti L, Loncar-Turukalo T, Dharmo X, Simeon A, Nechyporenko A, Pio G, Przymus P, Sampri A, Trajkovic V, Lacruz-Pleguezuelos B, Aasmets O, Araujo R, Anagnostopoulos I, Aydemir Ö, Berland M, Calle ML, Ceci M, Duman H, Gundogdu A, Havulinna AS, Bra KHNK, Kalluci E, Karav S, Lode D, Lopes MB, May P, Nap B, Nedyalkova M, Paciência I, Pasic L, Pujolassos M, Shigdel R, Susin A, Thiele I, Truica CO, Wilmes P, Yilmaz E, Yousef M, Claesson MJ, Truu J, Pau ECD.** A toolbox of machine learning software to support microbiome analysis. *Front Microbiol.* 2023; 14: 1250806. Review. IF: 4.0; Q2
- **Maroto-Rodríguez J, Ortolá R, Carballo-Casla A, Iriarte-Campo V, Salinero-Fort M, Rodríguez-Artalejo F, Sotos-Prieto M.** Association between a mediterranean lifestyle and Type 2 diabetes incidence: a prospective UK biobank study. *Cardiovasc Diabetol.* 2023; 22(1): 271. Article. IF: 8.5; D1
- **Ponce-Blandón JA, Romero-Castillo R, Rodríguez-Leal L, González-Hervías R, Velarde-García JF, Álvarez-Embarba B.** A Multicenter study about the population treated in the respiratory triage stations deployed by the red cross during the COVID-19 Pandemic. *Int J Env Res Pub He.* 2023; 20(1): 313. Article. Not indexed
- **Romero-Tapiador S, Lacruz-Pleguezuelos B, Tosolana R, Freixer G, Daza R, Fernández-Díaz CM, Aguilar-Aguilar E, Fernández-Cabezas J, Cruz-Gil S, Molina S, Crespo MC, Laguna T, Marcos-Zambrano LJ, Vera-Rodríguez R, Fierrez J, de Molina AR, Ortega-García J, Espinosa-Salinas I, Morales A, Pau ECD.** AI4FoodDB: a database for personalized e-Health nutrition and lifestyle through wearable devices and artificial intelligence. *Database-Oxford.* 2023; 2023: baad049. Article. IF: 3.4; Q1
- **Solorzano J, Pau ECD, Laguna T, Busturia A.** A genome-wide computational approach to define microRNA-Polycomb/trithorax gene regulatory circuits in *Drosophila*. *Dev Biol.* 2023; 495: 63-75. Article. IF: 2.5; Q2

- **Velarde-García JF, Álvarez-Embarba B, Moro-Tejedor MN, Rodríguez-Leal L, Arrogante O, Alvarado-Zambrano MG, Pérez-Corrales J, Palacios-Ceña D.** Barriers and facilitators to the learning and acquisition of research competencies among nursing students through active methodologies: a qualitative study using reflective writing. *Healthcare (Basel).* 2023; 11(8): 1078. Article. IF: 2.4; Q2
- **Vich-Pérez P, Abánades-Herranz JC, Mora-Navarro G, Carrasco-Sayalero AM, Salinero-Fort MA, Sevilla-Machuca I, Sanz-Pascual M, Hernández-Cañizares CA, De Burgos-Lunar C.** Development and validation of a clinical score for identifying patients with high risk of latent autoimmune adult diabetes (LADA): The LADA primary care-protocol study. *Plos One.* 2023; 18(2): e0281657. Article. IF: 2.9; Q1

Research projects

- **Gómez Campelo P.** Registro nacional de fracturas de cadera estudio RNFC. Fundación Mutua Madrileña. 2018-Ongoing. *Managment centre: FIBHULP*
- **Behzadi Koochani N.** Harmonization and pre-standardization of equipment, training and tactical coordinated procedures for first aid vehicles deployment on European multi victim disasters (H2020-101020676). UE. 2021-2023. *Managment centre: Indra Sistemas*
- **Salinero-Fort MA.** Metabólica, genómica y nutrición para la medicina personalizada de la enfermedad cardiovascular (OMIC-CARD) (PMP21/00093). ISCIII (AES). 2021-2024. *Managment centre: UAM*

Cibers and Retics

- **Salinero-Fort MA.** Red de Investigación en Cronidad, Atención Primaria y Promoción de la Salud. (RICAPPS). ISCIII. (31/12/2023). FIBAP
- **Castell Alcalá V.** Rede de Investigación en Cronidad, Atención Primaria y Promoción de la Salud. (RICAPPS). ISCIII. (31/12/2023). FIBAP
- **Gómez Campelo P.** Plataforma de bio banco y biomodelos (organoides) del Instituto de Investigación Sanitaria del Hospital Universitario La Paz PT20/00004. ISCIII. (31/12/2024). FIBHULP

4 Associated clinicians

4.1 Angiology and Vascular Surgery Group

4.2 Clinical Analysis Service Group

4.3 Endocrinology and Nutrition Group

4.4 Nutrinvest Group

4.5 Ophtalmology Group

4.6 Pediatric Nephrology Group

4.7 Urology Group





4.1 Angiology and Vascular Surgery Group



Publications:6 | Q1:1

Group Leader

Alvaro Fernández Heredero

Composition

- Leticia Cuervo Vidal
- Elena Marín Manzano
- Israel Leblic Ramírez

RESEARCH AREAS

Surgery, transplantation and health technology

RESEARCH ACTIVITY

Doctoral Theses

- **Leblic Ramírez I.** Diseño, implantación y resultados de un equipo multidisciplinar de accesos vasculares para hemodiálisis [dissertation]. Madrid: UAM: (24/11/2023). Director: Selgas Gutiérrez R, Riera del Moral LF.

Publications

- **Angulo JDZ, Labrador ML, Álvarez AES, Calvo AC, Prieto AFF, Heredero AF.** Carotid axis repair with autologous vein graft due to recurrent post-tonsillectomy bleeding in a child. *Angiologia.* 2023; 75(4): 268-72. Article. IF: 0.1; Q4
- **Delgado-Miguel C, Marín E, Oliveros FH.** Coeliac trunk aneurysm repair with aorto-hepatic biosynthetic bypass in a paediatric patient.

- **Eur J Vasc Endovasc.** 2023; 66(1): 150. Editorial Material. IF: 5.7; Q1
- **Jiménez VM, Ruiz TH, Zamora JM, Angulo JZ, Rodríguez NAC, Heredero AF.** Conservative management of iatrogenic vena cava pseudoaneurysm. *Angiologia.* 2023; 75(1): 43-6. Article. IF: 0.1; Q4
- **Jiménez-Román R, Salazar-Álvarez AE, Moral LF.** Ambulatory surgery for chronic venous insufficiency using radiofrequency thermoablation: quality and satisfaction. *Cir Cir.* 2023; 91(5): 672-7. Article. IF: 0.5; Q4
- **Mondragón-Zamora J, Mendieta-Azcona C, Marín-Manzano E, Hernández-Ruiz T, Zafra-Angulo JD, Martínez-Turégano B, Morillo-Jiménez V, Fernández-Heredero A.** Pediatrics' acute arterial ischemia associated with arterial catheterization. *Rev Mex Angiol.* 2023; 51(1): 10-5. Article. Not indexed
- **Morillo-Jiménez VC, Marín-Manzano E, Gutiérrez-Nistal M,**

Mondragón-Zamora J, Zafra-Angulo JD, Fernández-Heredero A. Ayoga related aneurysm? An internal carotid artery aneurysm. *Rev Mex Angiol.* 2023; 51(1): 28-32. Article. Not indexed

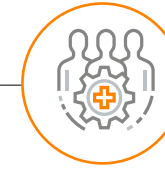
Clinical trials

- **Cuervo Vidal L.** Impacto del hierro intravenoso en el tratamiento preoperatorio de la anemia en pacientes con isquemia crónica de los miembros inferiores.

Type/Phase: IV

Sponsored by: Fonseca Legrand Juan Luis

Signed date: 28/12/2023



4.2 Clinical Analysis Service Group



Publications:9 | **Q1:**5

Group Leader

Jorge Díaz-Garzón Marco

Composition

- Blanca Beumer Prieto
- Raquel Cid Herranz
- Maria Gema Crespo Sánchez
- Marta Duque Alcorta
- Blanca Fabre Estremera
- Belén Fernández Puntero
- Abraham García López
- Ruben Gomez Rioja
- M Luisa González Casaus
- Laura González Iglesias
- José Manuel Iturzaeta Sánchez
- Álvaro Martínez Ortega
- Helena Méndez del Sol
- Marta Molero Luis
- Roberto Mora Corcovado
- Isabel Moreno Parro
- Yilian Nieves Simón
- Marcos Pedrosa Serrano
- Guillermo Pérez Nuño
- Laura Pérez Suárez
- Ruth Pliego Morante
- Daniel Prieto Arribas
- Ana Laila Qasem Moreno
- Andrea Rangel de la Mata
- Cristian Rios Campillo
- Olaia Rodríguez Fraga
- Maria Patricia Sanz de Pedro
- Noelia Seco Moro
- Kenza Sefrioui
- Maria Gemma Serrano Olmedo
- Mariana Serres Gómez
- María Isabel Soler Gallardo
- Berta Suftrate Vergara

RESEARCH AREAS

Large system pathology

RESEARCH ACTIVITY

Publications

- **Ricós C, Perich C, Bullich S, Ventura M, Piqueras B, Panadés M, Fernández-Calle P.** Compliance to specifications in an external quality assurance program: did new biological variation estimates of the European Federation of Laboratory Medicine (EFLM) affect the quality of laboratory results?. *Adv Lab Med.* 2023; 4(4): 379-386. Article. IF: 1.1; Q4.NO
- **Chávez EM, Oliver P, Buño A, Fernández-Calle P.** No Observed Interference by Nucleated Red Blood Cells in Total Bilirubin Measurement by Point-of-Care Testing: Six Years of Experience. *Ann Lab Med.* 2023; 43(6): 625-627. Letter. IF: 4.0; Q1.NO
- **González A, Ferrer-Costa R, Fernández-Calle P, Arribas I, Jiménez W.** A new era for advances in laboratory medicine. *Adv Lab Med.* 2023; 4(3): 203-204. Editorial Material. IF: 1.1; Q4.NO
- **Serradilla J, Moreno AMA, Talayero P, Burgos P, Machuca M, Ortega OC, Vallejo MT, Bolívar EJR, Bueno A, Sánchez A, Zambrano C, Ramos CAD, Rodríguez O, Largo C, Serrano P, Bozano GP, Ramos E, Santamaría ML, Stringa P, Hernández F.** Preclinical Study of DCD and Normothermic Perfusion for Visceral Transplantation. *Transpl Int.* 2023; 36(): -11518. Article. IF: 2.7; Q1.NO

- **Simón E, Molero-Luis M, Fueyo-Díaz R, Costas-Batlle C, Crespo-Escobar P, Montoro-Huguet MA.** The Gluten-Free Diet for Celiac Disease: Critical Insights to Better Understand Clinical Outcomes. *Nutrients.* 2023; 15(18): -4013. Review. IF: 4.8; Q1.NO
- **Campillo CR, de Pedro MS, Iturzaeta JM, Qasem AL, Alcaide MJ, Fernández-Puntero B, Rioja RG.** Design of an algorithm for the detection of intravenous fluid contamination in clinical laboratory samples. *Clin Chem Lab Med.* 2023; 61(11): 2002-2009. Article. IF: 3.8; Q1.NO
- **Oliver P, Pellicer M, Prieto D, Díaz-Garzon J, Mora R, Tomoiu I, González N, Carcavilla A, González-Casado I, Losantos I, Buño A, Fernández-Calle P.** Impact of COVID-19 pandemic on HbA1c management and

results in pediatric and adult outpatients with diabetes. *Adv Lab Med.* 2023; 4(1): 105-111. Article. IF: 1.1; Q4.NO

- **Díaz-Garzon J, Fernández-Calle P, Aarsand AK, Sandberg S, Coskun A, Equey T, Aikin R, Soto AB.** Long-Term Within- and Between-Subject Biological Variation Data of Hematological Parameters in Recreational Endurance Athletes. *Clin Chem.* 2023; 69(5): 500-509. Article. IF: 7.1; Q1.SI
- **Castro-Olmo EJ, Morales-Fernández P, Alcaide-Martín MJ, Fernández-Puntero B, Quintana-Díaz M, Aceña-Gil V.** Is minimising waste volume for drawing blood samples in critically ill patients feasible?. *Enferm Intensiva.* 2023; 34(1): 19-26. Article. IF: 1.1; Q3.NO

Research projects

- **Molero Luis M.** Diagnóstico sin biopsia en la Enfermedad Celíaca: definición de un umbral para

cada test de anticuerpos antitransglutaminasa IgA (PI-5473). Fundación José Luis Castaño-Sociedad Española de Laboratorio clínico. 2023-Ongoing. *Management centre:* FBHULP

- **Molero Luis M.** Utilidad de la medición de zonulina fecal como biomarcador de permeabilidad intestinal en pacientes con enfermedad celíaca (PI-4948). Fundación José Luis Castaño-Sociedad Española de Laboratorio clínico. 2021-Ongoing. *Management centre:* FBHULP
- **Sanz de Pedro MP.** Eficiencia de la implementación de un algoritmo de alta resolución basado en el uso de biomarcadores séricos para la detección de fibrosis hepática asociada a la enfermedad del hígado graso secundaria a la disfunción metabólica (). Fundación José Luis Castaño-Sociedad Española de Laboratorio clínico. 2022-2023. *Management centre:* FBHULP



4.3 Endocrinology and Nutrition Group



Publications: 19 | **Q1:** 5

Group Leader

Cristina Álvarez Escolá

Composition

- Beatriz Barquiel Alcalá
- Beatriz Lecumberri Santamaría
- Patricia Martín Rojas-Marcos
- Laura Mola Reyes
- Rosa María García Moreno
- Elena García Pérez de Sevilla
- Noemí González Pérez de Villar
- Natalia Hillman Gadea
- Arturo Lisbona Catalán
- Óscar Moreno Domínguez
- Miriam Zapatero Larrauri
- Gonzalo Miñón Sánchez
- Mary Gaby Llaró Casas
- Maíra Cristina Montes Castillo
- Elvira Maíra Melián Pérez

RESEARCH AREAS

Surgery, Transplantation and Health Technology

RESEARCH ACTIVITY

Master Theses

- **Gaspar Lafuente R.** Análisis del impacto de un programa estructurado de educación terapéutica en ejercicio físico y deporte en personas con diabetes tipo 1 usuarias del sistema MiniMed 780G[dissertation]. Barcelona: UB: 2023(29/05/2023). Director: Barquiel Alcalá B.
- **García Muñoz N.** Prevalencia y evolución clínica de pacientes con hipotiroidismo ingresados por COVID-19[dissertation]. Madrid: UAM: 2023(09/06/2023). Director: Barquiel Alcalá B.

Publications

- **Álvarez-Hernández J, Matía-Martín P, Cáncer-Minchot E.** Long-term outcomes in critically ill patients who survived COVID-19: The NUTRI-COVID observational cohort study. Clin Nutr. 2023; 42(10): 2029-35. Article. IF: 6.6; D1
- **Araujo-Castro M, Fano MP, Boillos MG, Pascual-Corrales E, Cano AMG, Ramírez PP, Rojas-Marcos PM, Delgado AV, Casteràs A, Puig A, Sanz IG, Guardiola PD, Lázaro CR, Núñez MAS, Guerrero-Vázquez R, Tous MD, Alevras TM, Rodrigo ST, Hanzu FA.** Diagnostic accuracy of adrenal iodine-131 6-beta-iodomethyl-19-nor-

cholesterol scintigraphy for the subtyping of primary aldosteronism. Biomedicines. 2023; 11(7): 1934. Article. IF: 3.9; Q2

- **Araujo-Castro M, Fano MP, Peris BP, Boillos MG, Pascual-Corrales E, Cano AMG, Ramírez PP, Rojas-Marcos PM, Ruiz-Sánchez JG, Delgado AV, Hoyos EG, Ferreira R, Sanz IG, Sala MR, San Millan RB, César MJP, Guardiola PD, Perdomo CM, Miguélez LM, Centeno RG, Percovich JC, Román AR, Gimeno PG, Lázaro CR, Morales-Ruiz M, Gutiérrez MC, Collao SAF, Meneses D, Nuñez MAS, Quesada VE, Ribas EM, Sánchez AS, Díaz CG, Lamas C, Guerrero-Vázquez R, Tous MD, Gotarredona JS, Alev-**

ras TM, Mateo EMM, Hanzu FA. Prevalence, risk factors and evolution of diabetes mellitus after treatment in primary aldosteronism. Results from the SPAIN-ALDO registry. J Endocrinol Invest. 2023; 46(11): 2343-52. Article. IF: 3.9; Q2

- **Araujo-Castro M, Fano MP, Peris BP, Boillos MG, Pascual-Corrales E, García-Cano AM, Ramírez PP, Rojas-Marcos PM, Ruiz-Sánchez JG, Vicente A, Gómez-Hoyos E, Ferreira R, Sanz IG, Recasens M, San Millan RB, César MJP, Guardiola PD, Perdomo C, Manjón L, García-Centeno R, Percovich JC, Román AR, Gimeno PG, Lázaro CR, Morales M, Calatayud M, Collao SAF, Meneses D, Nuñez MAS,**



4. Associated clinicians

4.1 Angiology and Vascular Surgery Group



- **Quesada VE, Ribas EM, Sánchez AS, Díaz CG, Lamas C, Guerrero-Vázquez R, Tous MD, Serano J, Michalopoulou T, Mateo EMM, Hanzu F.** Autonomous cortisol secretion in patients with primary aldosteronism: prevalence and implications on cardiometabolic profile and on surgical outcomes. *Endocr Connect.* 2023; 12(9): e230043. Article. IF: 2.6; Q3
- **Araujo-Castro M, Ojeda CM, Sanz IG, Calatayud M, Hanzu F, Mora M, Vicente A, Carrera CB, Novoa PD, García MDL, Lamas C, Manjón-Miguélez L, Tous MD, de Vera PR, Millán RBS, Recasens M, Fernández-Ladreda MT, Valdés N, Gimeno PG, Lazaro CR, Michalopoulou T, Ramírez PP, Marazuela M, Escolá CA, Centeno RG.** Genetic study in pheochromocytoma: is it possible to stratify the risk of hereditary pheochromocytoma? *Neuroendocrinology.* 2023; 113(6): 657-66. Article. IF: 3.2; Q2
- **Araujo-Castro M, Paredes I, Pérez-López C, Feijoo PG, Álvarez-Escola C, Calatayud M, Lagares A, Librizzi MS, Cancela AA, Berrocal VR.** Differences in clinical, hormonal, and radiological presentation and in surgical outcomes in patients presenting with and without pituitary apoplexy. A multicenter study of 245 cases. *Pituitary.* 2023; 26(2): 250-8. Article. IF: 3.3; Q2
- **Araujo-Castro M, Pascual-Corrales E, Rojas PM, Ramírez PP.** Primary aldosteronism: Practical recommendations for treatment and follow-up. *Hipertens Riesgo Vasc.* 2023; 40(4): 215-21. Review. IF: 1.2; Q3
- **Barquiel B, Calvo M, Moreno-Domínguez O, Martínez-Sánchez N, Muner M, Bedate MF, Delgado M, López S, Hillman N, González N, de la Calle M, Bartha JL.** The PREDG study: A randomised controlled trial testing whether an educational intervention can prevent gestational weight gain in women with obesity. *Clin Nutr Espen.* 2023; 57: 266-71. Article. IF: 2.9; Q3
- **Dayan CM, Lecumberri B, Muller I, Ganesanathan S, Hunter SF, Selmaj KW, Hartung HP, Havrdova EK, LaGanke CC, Ziemssen T, Van Wijmeersch B, Meuth SG, Margolin DH, Poole EM, Baker DP, Senior PA.** Endocrine and multiple sclerosis outcomes in patients with autoimmune thyroid events in the alemtuzumab CARE-MS studies. *Mult Scler J Exp Transl Clin.* 2023; 9(1): 20552173221142700. Article. IF: 2.5; Q2
- **Díez JJ, Anda E, Alcazar V, Isidro ML, Familiar C, Paja M, Rojas-Marcos PM, Pérez-Corral B, Navarro E, Romero-Lluch AR, Oleaga A, Pamplona MJ, Fernández-García JC, Megía A, Manjón-Miguélez L, Sánchez-Ragnarsson C, Iglesias P, Sastre J.** Consumption of health resources in older people with differentiated thyroid carcinoma: a multicenter analysis. *Endocrine.* 2023; 81(3): 521-31. Article. IF: 3.0; Q2
- **Gómez CG, Navarro E, Alcázar V, López-Guzmán A, Arrieta F, Anda E, Biagetti B, Guerrero-Pérez F, Villabona C, Valverde ARD, Lamas C, Lecumberri B, Sierra JAR, Sastre J, Díez JJ, Iglesias P.** Therapeutic management and long-term outcome of hyperthyroidism in patients with antithyroid-induced agranulocytosis: a retrospective, multicenter study. *J Clin Med.* 2023; 12(20): 6556. Article. IF: 3.0; Q1
- **Herrera-Martínez AD, Román AR, Corrales EP, Idrobo C, Ramírez PP, Rojas-Marcos PM, Lázaro CR, Marginean DL, Araujo-Castro M.** Adrenal incidentalomas and other endocrine-related adenomas: how much does cortisol secretion matter? *Cancers (Basel).* 2023; 15(19): 4735. Article. IF: 4.5; Q1
- **López-Plaza B, Gil A, Menéndez-Rey A, Bensadon-Naeder L, Hummel T, Feliú-Battle J, Palma-Milla S.** Effect of regular consumption of a miraculin-based food supplement on taste perception and nutritional status in malnourished cancer patients: a triple-blind, randomized, placebo-controlled clinical trial-CLINMIR pilot protocol. *Nutrients.* 2023; 15(21): 4639. Article. IF: 4.8; Q1
- **Marín-Baselga R, Sanz-Ortega C, Platero-Deñas L, Sorriguieta-Torre R, Palma-Milla S, Tung-Chen Y.** Nutritional assessment by ultrasound of the rectus femoris and preperitoneal adipose tissue as predictors of hospitalized patient complications. *Rev Clin Esp.* 2023; 223(10): 640-6. Article. IF: 2.3; Q2
- **Martín PM, Alija MJC, Kohen VL, del Portillo RC, Milla SP, Pérez MV, Olmos MAM, Álvarez MTM, Torres FG, Lozano EC, Blázquez PP, Gutiérrez FP, Candela CG.** Results of the survey on care units and caring for eating disorders in Spain. SENPE Working Group on Eating Disorders. *Nutr Hosp.* 2023; 40: 213-21. Article. IF: 1.2; Q4
- **Martínez MM, Plaza BL, Castellanos LA, Pérez MV, Milla SP.** Evaluation of the organoleptic characteristics of an oral nutritional supplement designed specifically for the cancer patient. *Nutr Hosp.* 2023; 40(2): 266-72. Article. IF: 1.2; Q4
- **Pedrianes-Martín PB, Dassen-de-Monzo C, Guardia-Baena JM, Riestra-Fernández M, Salom-Vendrell C, PerceptiONS Grp, Calvo-Barbero A, Lizan-Tudela L.** Physicians' perception of oral nutritional supplement acceptance and tolerability in malnourished outpatients: perceptions study. *Nutrients.* 2023; 15(5): 1219. Article. IF: 4.8; Q1
- **Ramírez PP, Rojas-Marcos PM, Hernández MC, Ruiz-Sánchez JG, Oliveira CL, Hanzu FA, Araujo-Castro M.** First survey on the diagnosis and treatment of primary aldosteronism by Spanish Endocrinology and Nutrition specialists. *Endocrinol Diabetes Nutr.* 2023; 70(6): 374-80. Article. IF: 1.8; Q4
- **Valderrama PB, Calvo AC, Riesco LR, Zapata RR, Ramírez PP.** Fibrous variant of Hashimoto's thyroiditis as a sign of IgG4-related disease, mimicking thyroid lymphoma: Case report. *Endocrinol Diabetes Nutr.* 2023; 70: 60-2. Letter. IF: 1.8; Q4



4.4 Nutrinvest Group

Publications: 8 | Q1:1

Group Leader

Bricia López Plaza

Composition

- Samara Palma Milla
- Laura Mola Reyes
- Rosa María García Moreno
- Lucía Arcos Castellanos
- Natalia García Vázquez
- Marilhyn Valero Pérez

RESEARCH AREAS

Surgery, Transplantation and Health Technology

RESEARCH ACTIVITY

Publications

- **Bermejo LM, Trabado-Fernández A, Aparicio A, Lozano-Estevan MC, López-Plaza B.** Food sustainability: keys for the consumer, advantages and disadvantages. *Nutr Hosp.* 2023; 40(Spec No2): 70-6. Article. IF: 1.2; Q4
- **López-Plaza B, Gil A, Menéndez-Rey A, Bensedon-Naeder L, Hummel T, Feliú-Batlle J, Palma-Milla S.** Effect of regular consumption of a miraculin-based food supplement on taste perception and nutritional status in malnourished cancer patients: a triple-blind, randomized, placebo-controlled clinical trial-CLINMIR pilot protocol. *Nutrients.* 2023; 15(21): 4639. Article. IF: 4.8; Q1
- **López-Plaza B, Bermejo LM, Loria-Kohen V, Fernández-Cruz E.** Nutrition in breast cancer

genesis. *Nutr Hosp.* 2023; 40(Spec No2): 37-40. Article. IF: 1.2; Q4

- **Loria-Kohen V, Montiel Fernández N, López-Plaza B, Aparicio A.** Anorexia nervosa, microbiota and brain. *Nutr Hosp.* 2023; 40(Spec No2): 46-50. Article. IF: 1.2; Q4
- **Marín-Baselga R, Sanz-Ortega C, Plate-ro-Deñás L, Sorriguieta-Torre R, Palma-Milla S, Tung-Chen Y.** Nutritional assessment by ultrasound of the rectus femoris and preperitoneal adipose tissue as predictors of hospitalized patient complications. *Rev Clin Esp.* 2023; 223(10): 640-6. Article. IF: 2.3; Q2
- **Martín PM, Alija MJC, Kohén VL, del Portillo RC, Milla SP, Pérez MV, Olmos MAM, Álvarez MTM, Torres FG, Lozano EC, Blázquez PP, Gutiérrez FP, Candela CG.** Results of the



4. Associated clinicians

4.1 Angiology and Vascular Surgery Group



survey on care units and caring for eating disorders in Spain. *SENPE Working Group on Eating Disorders. Nutr Hosp.* 2023; 40: 213-21. Article. IF: 1.2; Q4

- **Martínez MM, Plaza BL, Castellanos LA, Pérez MV, Milla SP.** Evaluation of the organoleptic characteristics of an oral nutritional supplement designed specifically for the cancer patient. *Nutr Hosp.* 2023; 40(2): 266-72. Article. IF: 1.2; Q4
- **Palma Milla S.** The challenge of assessing a patient's nutritional status and its evolution during treatment. From critical patients to outpatients (II). *Nutr Hosp.* 2023; 40(Spec No1): 20-5. Article. IF: 1.2; Q4

Research projects

- **Palma Milla S.** Estudio Afedin: Análisis de los factores etiológicos de desnutrición: inflamación e ingesta (PI-5724). *Adventia Pharma S.L.* 2023-2024. Management centre: FIBHULP
- **Palma Milla S.** Estudio para evaluar la eficacia de un algoritmo de práctica clínica asistencial en el tratamiento de la desnutrición relacionada con la enfermedad. *Lima Farma S.A.* 2023-2024. Management centre: FIBHULP

Clinical trials

- **Palma Milla S.** Estudio para evaluar la eficacia de un algoritmo de práctica clínica asistencial en el tratamiento de la desnutrición relacionada con la enfermedad.

Type/Phase: PRODUCTO ALIMENTICIO
Sponsored by: Palma Milla Samara
Signed date: 19/06/2023

- **Palma Milla S.** Estudio clínico de intervención nutricional para evaluar el efecto del consumo de una fórmula nutricional sobre la adherencia y tolerancia de la fórmula y el estado nutricional postquirúrgico de pacientes con cáncer colorrectal que han recibido prehabilitación nutricional previa al tratamiento quirúrgico.

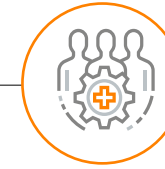
Type/Phase: PRODUCTO ALIMENTICIO
Sponsored by:
Signed date: 18/12/2023

- **Palma Milla S.** Análisis de los factores etiológicos de desnutrición: inflamación e ingesta.

Type/Phase: No EPA
Sponsored by: Adventia Pharma SI
Signed date: 22/05/2023

- **Palma Milla S.** Eficacia sobre el estado nutricional de un programa de soporte nutricional con recomendaciones dietéticas, ejercicio y suplementación específica para personas con diabetes tipo 2 con o en riesgo de malnutrición en un entorno real según práctica clínica habitual (estudio gladiator).

Type/Phase: OTROS
Sponsored by: Abbott Laboratories, S.A.
Signed date: 13/11/2023



4.5 Ophthalmology Group



Publications:12 | **Q1:**4

Group Leader

Felix Armada Maresca

Composition

- Gloria Amorena Santisteban
- Mónica Asencio Duran
- Beatriz Manzano Muñoz
- Pino Ciudad Betegón
- Irene Rosa Pérez
- Javier Coca Robinot
- Oriana D'Anna Mardero
- Armelle Schlincker Giraud
- Ventura Hidalgo Barrero
- Ana Boto de los Bueys
- Almudena del Hierro Zarzuelo
- Paola Vázquez Colomo
- Rosa Langa Hontoria
- Rosa Cordero Ros
- Cosme Lavín Dapena
- Ana Ramos Castrillo
- Álvaro Arbizu Duralde
- Margarita Sánchez-Orgaz,
- Ricardo Romero Martín
- Jesús Peralta Calvo
- Carmen Ramos Plaza
- María Granados Fernández
- Sofía de Manuel Triantafilo

RESEARCH AREAS

Large system pathology

RESEARCH ACTIVITY

Publications

- **Arruti N, Munot P, Bowman R.** Demographics and ocular findings in children with myasthenia. *Eye.* 2023; 37(4): 700-4. Article. IF: 2.8; Q1
- **Arruti N, Rodríguez-Solana P, Nieves-Moreno M, Guerrero-Carretero M, del Pozo A, Montaña VEF, Santos-Simarro F, Rikeros-Orozco E, Delgado-Mora L, Vallespin E, Noval S.** OPA1 Dominant optic atrophy: diagnostic approach in the pediatric population. *Curr Issues Mol Biol.* 2023; 45(1): 465-78. Article. IF: 2.8; Q3
- **Cores ML, de Los Bueis AB.** Implications of neuropathy and management of the corneal surface in a patient with Stuve-Wiedemann syndrome. *Rom J Ophthalmol.* 2023; 67(4): 412-5. Article. Not indexed
- **de los Bueis AB, de la Fuente M, Montejano-Milner R, Zarzuelo AD, Vecino E, Acera A.** A Pilot study of a panel of ocular inflammation biomarkers in patients with primary sjogren's syndrome. *Curr Issues Mol Biol.* 2023; 45(4): 2881-94. Article. IF: 2.8; Q3
- **González-Atienza C, Sánchez-Cazorla E, Villoldo-Fernández N, del Hierro A, Boto A, Guerrero-Carretero M, Nieves-Moreno M, Arruti N, Rodríguez-Solana P, Mena R, Rodríguez-Jiménez C, Rosa-Pérez I, Acal JC, Blasco J, Naranjo-Castresana M, Ruz-Caracuel B, Montaña VEF, Patrón CO, Rubio-Martín ME, García-Fernández L, Rikeros-Orozco E, Gómez-Cano MD, Delgado-Mora L, Noval S, Vallespin E.** Whole-exome sequencing of 24 spanish families: candidate genes for non-syndromic pediatric keratoconus. *Genes (Basel).* 2023; 14(10): 1838. Article. IF: 2.8; Q2
- **Montejano-Milner R, Dabad-Moreno JV, de la Hoz-Polo A, Boto de los Bueis A.** Anterior segment optical coherence tomography in a case of penetrating corneal necrosis repair with amniotic membrane. *Arch Soc Esp Ophthalmol (Engl Ed).* 2023; 98(7): 422-3. Letter. Not indexed
- **Petzold A, Liu Y.** Application of diagnostic criteria for optic neuritis Reply. *Lancet Neurol.* 2023; 22(5): 376-7. Letter. IF: 46.5; D1
- **Rodríguez-Solana P, Arruti N, Nieves-Moreno M, Mena R, Rodríguez-Jiménez C, Guerrero-Carretero M, Acal JC, Blasco J, Peralta JM, Del Pozo A, Montano VEF, De Dios-Blázquez L, Fernández-Alcalde C, González-Atienza C, Sánchez-Cazorla E, Gómez-Cano MD, Delgado-Mora L, Noval S, Vallespin E.** Whole exome sequencing of 20 spanish families: candidate genes for non-syndromic pediatric cataracts. *Int J Mol Sci.* 2023; 24(14): 11429. Article. IF: 4.9; Q1
- **Ruiz-Moreno JM, Adán A, Lafuente M, Durán MA, Barquet LA, Layana AG, Iribarren JA.** Effectiveness and safety of fluocinolone acetonide intravitreal implant in diabetic macular edema patients considered insufficiently responsive to available therapies (REACT): a prospective, non-randomized, and multicenter study. *Int Ophthalmol.* 2023; 43(12): 4639-49. Article. IF: 1.4; Q3
- **Sánchez-Cazorla E, González-Atienza C, López-Vázquez A, Arruti N, Nieves-Moreno M, Noval S, Mena R, Rodríguez-Jiménez C, Rodríguez-Solana P, González-Iglesias E, Guerrero-Carretero M, Mardero OD, Coca-Robinot J, Acal JC, Blasco J, Castañeda C, Maya JF, Del Pozo A, Gómez-Pozo MV, Montaña VEF, Dios-Blázquez LD, Rodríguez-Antolín C, Gómez-Cano MD, Delgado-Mora L, Vallespin E.** Whole-exome sequencing of 21 families: candidate genes for early-onset high myopia. *Int J Mol Sci.* 2023; 24(21): 15676. Article. IF: 4.9; Q1

- **Sanjuán Riera L, Peralta Calvo J, Hernández Rivas L, Klein Burgos C, Roca Cabau M.** Functional results in children with retinopathy of prematurity treated with intravitreal bevacizumab. *Arch Soc Esp Ophthalmol (Engl Ed).* 2023; 98(7): 386-90. Article. Not indexed
- **Zarranz-Ventura J, Escobar-Barranco JJ, Gómez-Baldó L, Gallego-Pinazo R, Study Investigators.** Reasons for delayed anti-VEGF treatment during COVID-19 lockdown and clinical impact in neovascular age-related macular degeneration. *Ophthalmol Ther.* 2023; 12(5): 2537-55. Article. IF: 2.6; Q2

Research projects

- **Asencio Durán M.** Actividades de creación de un material didáctico impreso de difusión de la experiencia investigadora del servicio de oftalmología en patología de retina. Bayer Hispania S.L. 2021-2024. *Managment centre:* FIBHULP
- **Asencio Durán M.** Actividades de creación de un material didáctico impreso de difusión de la experiencia investigadora del servicio de oftalmología en patología de retina. Alcon Healthcare S.A. 2021-Ongoing. *Managment centre:* FIBHULP

Clinical trials

- **Vázquez Colomo P.** Comparación del rendimiento y la seguridad de t2769 frente a vismed® multi en el tratamiento del síndrome del ojo seco de moderado a grave. **Type/Phase:** Producto Sanitario **Sponsored by:** Sas Laboratorios Thea **Signed date:** 21/09/2023



4.6 Pediatric Nephrology Group

Publications:9 | Q1:4

Group Leader

Laura Espinosa Román

Composition

- Juan Bravo Feito
- Carlota Fernández Cambor
- Diego Morante Martínez
- Sara Rodríguez López
- Alejandro Zarauzo Santoveña
- Laura García Espinosa

RESEARCH AREAS

Maternal Infant Child and youth research

RESEARCH ACTIVITY

Publications

- Bakkaloglu SA, Vidal E, Bonthuis M, Neto G, Paripovic D, Asberg A, Hijosa MM, Vondrak K, Jankauskiene A, Roussinov D, Awan A, Jager KJ. European chronic kidney disease registries for children not on kidney replacement therapy: tools for improving health systems and patient-centred outcomes. *Clin Kidney J.* 2023; 16(11): 1980-5. Article. IF: 3.9; Q1
- Caravaca-Fontán F, Cavero T, Díaz-Encarnación M, Cabello V, Ariceta G, Quintana LF, Marco H, Barros X, Ramos N, Rodríguez-Mendiola N, Cruz S, Fernández-Juárez G, Rodríguez A, de José AP, Rabasco C, Rodado R, Fernández L, Pérez-Gómez V, Ávila A, Bravo L, Espinosa N, Allende N, de la Nieta MDS, Rodríguez E, Rivas B, Melgosa M, Huerta A, Miquel R, Mon C, Fraga G, de Lorenzo A, Draibe J, González F, Shabaka A, López-Rubio



- ME, Fenollosa MA, Martín-Penagos L, Da Silva I, Titos JA, de Córdoba SR, de Jorge EG, Praga M. Clinical profiles and patterns of kidney disease progression in C3 glomerulopathy. *Kidney360.* 2023; 4(5): 659-72. Article. IF: 3.2; Q1
- Delgado-Miguel C, Martínez-Urrutia MJ, Espinosa L, Martínez L, Espinosa LG, Lobato R, Rivas S, Díez R, López-Pereira P, Oliveros FH. Neutrophil-to-lymphocyte ratio as a predictor of primary vesicoureteral reflux evolution in children with associated acute pyelonephritis. *Transl Pediatr.* 2023; 12(11): 1971-80. Article. IF: 1.5; Q2
- Donà D, Bravo-Gallego LY, Remacha EF, Cananzi M, Gastaldi A, Canizalez JT, Stephenne X, Laccaille F, Lindemans C, Calore E, Galea N, Benetti E, Nachbaur E, Sandes AR, Teixeira A, Ferreira S, Klau-del-Dreszler M, Ackermann O, Boyer O, Espinosa

- L, Guereta LG, Sciveres M, Fischler B, Schwert N, Neland M, Nicastro E, Dello Strolongo L, Toporski J, Vainumae I, Rascon J, Urbonas V, del Rosal T, López-Granados E, Perilongo G, Baker A, Vega PJ. Vaccination practices in pediatric transplantation: A survey among member centers of the European reference network TransplantChild. *Pediatr Transplant.* 2023; 27(7): e14589. Article. IF: 1.2; Q3
- Grasa C, Monteagudo-Vilavedra E, Pérez-Arenas E, Falces-Romero I, del Castillo YM, Schüffelmann-Gutiérrez C, del Rosal T, Méndez-Echevarría A, Baquero-Artigao F, Santoveña AZ, Fernández PS, Sainz T, Calvo C. Adenovirus Infection in Hematopoietic and Solid Organ Paediatric Transplant Recipients: Treatment, Outcomes, and Use of Cidofovir. *Microorganisms.* 2023; 11(7): 1750. Article. IF: 4.1; Q2
- Marlais M, Wlodkowski T, Printza N, Kronsteiner D, Krisam R, Sauer L, Aksenova M, Ashoor I, Awan A, Bacchetta J, Balasubramanian R, Basu B, Bekassy Z, Boyer O, Chan EYH, Csicsich D, Decramer S, Dorresteijn E, Drozyska-Duklas M, Eid LA, Espinosa L, Ferraris V, Flgelova H, Forero-Delgado J, Gianviti A, Gracchi V, González ML, Hansen M, Hattori M, Hong X, Hooman N, Ivanov D, Kang HG, Karava V, Kazrya I, Lungu A, Marks S, Macted A, Moczulska A, Mueller R, Nastausheva T, Parolin M, Pecoraro C, Principi I, Sánchez-Kazi C, Saygili S, Schild R, Shenoy M, Sinha R, Spizzirri AP, Stack M, Szczepanska M, Tsygin A, Tzeng J, Urbonas V, Zapata C, Zieg J, Schaefer F, Vivarelli M, Tullus K. Clinical factors and adverse kidney outcomes in children with antineutrophil cytoplasmic antibody-associated glomerulonephritis. *Am J Kidney Dis.* 2023; 81(1): 119-22. Letter. IF: 9.4; D1
- Peces R, Peces C, Espinosa L, Mena R, Blanco C, Tenorio-Castano J, Lapunzina P, Nevado J. A Spanish family with gordon syndrome due to a variant in the acidic motif of WNK1. *Genes (Basel).* 2023; 14(10): 1878. Article. IF: 2.8; Q2
- Zirngibl M, Buder K, Luthle T, Tönshoff B, Weitz M. Diagnostic and therapeutic management of vesico-ureteral reflux in pediatric kidney transplan-

tation-Results of an online survey on behalf of the European Society for Paediatric Nephrology. *Pediatr Transplant.* 2023; 27(2): e14449. Article. IF: 1.2; Q3

- Zurowska A, Drozyska-Duklas M, Topaloglu R, Bouts A, Boyer O, Shenoy M, Vivarelli M. Rituximab-associated hypogammaglobulinemia in children with idiopathic nephrotic syndrome: results of an ESPN survey. *Pediatr Nephrol.* 2023; 38(9): 3035-42. Article. IF: 2.6; Q1

Clinical trials

- Espinosa Román L. Estudio con enmascaramiento doble, controlado con placebo, de aumento progresivo de la dosis para evaluar la eficacia, la seguridad y la farmacocinética de la voclosporina en adolescentes con nefritis lúpica. **Type/Phase: III**
Sponsored by: Aurinia Pharmaceuticals Inc
Signed date: 06/01/2023
- Zarauza Santoveña A. Estudio en fase ii de grupo único de tratamiento para investigar la farmacocinética, la seguridad y la tolerabilidad de cefepima-enmetazobactam administrado mediante infusión intravenosa durante 2 horas en participantes de ambos sexos y edades comprendidas entre el nacimiento y los 18 años hospitalizados con infecciones del tracto urinario complicadas (ituc), incluida la pielonefritis aguda (pa). **Type/Phase: II**
Sponsored by: Allecra Therapeutics Sas
Signed date: 23/05/2023



4.7 Urology Group

Publications:10 | Q1:4

Group Leader

Luis Martínez-Piñeiro

Composition

- Pablo Abad López
- Alfredo Aguilera Bazan
- José María Alonso Dorrego
- Cristina Ballesteros Ruiz
- Ramon Cansino Alcaide
- Cristina De Castro Guerin
- Esau Fernández Pascual
- María Jesús García-Matres Cortes

- Manuel Giron De Francisco
- Asier Leivar Tamayo
- Estefanía Linares Espinos
- Eduardo López Pérez
- Juan Antonio Mainez Rodríguez
- José Antonio Moreno Valle
- Emilio Rios González
- Miriam Serrano Liesa
- Alvaro Javier Yebes

RESEARCH AREAS

Large system pathology

RESEARCH ACTIVITY

Publications

- Mantica G, Carriero DM, Antón-Juanilla M, Pang K, Parodi S, Tappero S, Rodríguez-Serrano A, Crespo-Atín V, Cansino R, Scarpa RM, Nikles S, Balzarini F, Terrone C, Rivas JG, Esperto F. Impact of a delayed presentation to the emergency department for acute renal colic on biochemical and clinical outcomes. *Actas Urol Esp.* 2023; 47(1): 41-6. Article. IF: 1.2; Q3
- Marra G, van Leenders GJLH, Zattoni F, Kesch C, Rajwa P, Cornford P, van der Kwast T, van den Bergh RCN, Briens E, Van den Broeck TV, De Meerleer G, De Santis M, Eberli D, Farolfi A, Gillissen S, Grivas N, Grummet JP, Henry AM, Lardas M, Lieuw M, Espinós EL, Mason MD, O'Hanlon S, van Oort IMV, Oprea-Lager DE, Ploussard

- G, Rouvière O, Schoots IG, Stranne J, Tilki D, Wiegel T, Willemsse PPM, Mottet N, Gandaglia G. Impact of epithelial histological types, subtypes, and growth patterns on oncological outcomes for patients with nonmetastatic prostate cancer treated with curative intent: a systematic review. *Eur Urol.* 2023; 84(1): 65-85. Review. IF: 25.3; D1
- Martínez-Piñeiro L. Mid-perineal scrotal flap for the repair of urorectal fistulas: a new technique. *Urol Int.* 2023; 107(10-12): 988-94. Article. IF: 1.5; Q3
- Martínez-Piñeiro L. Checklist for transurethral resection of bladder tumor (turbt): a step forward in the standardization for turbt reporting. *Eur Urol Open Sci.* 2023; 48: 22-3. Review. IF: 3.2; Q1
- Rivas JG, Fernández L, Abad-López P, Moreno-Sierra J. Androgen deprivation therapy in localized prostate cancer. Current status and future trends. *Actas Urol Esp.* 2023; 47(7): 398-407. Article. IF: 1.2; Q3

- Ruiz CB, Toribio-Vázquez C, Fernández-Pascual E, Ríos E, Serrano AR, Dorrego JMA, de Francisco MG, Moreno JA, Valor PC, Martínez-Piñeiro L. Repair of traumatic urethral strictures: la paz university hospital experience. *J Clin Med.* 2023; 12(1): 54. Article. IF: 3.0; Q1
- Toribio-Vázquez C, Yebes A, Quesada-Olarte J, Rodríguez A, Alonso-Bartolomé M, Ayllon H, Martínez-Piñeiro L. Genital mutilation in males. *Curr Urol Rep.* 2023; 24(3): 121-6. Article. IF: 2.5; Q2
- Tozzi M, Gobbo A, Yebes A, Spiridonescu B, Djivovic R. The dire consequences of multiple failed hypospadias repairs: a case report of a cavernosal reconstruction with mesh and malleable prosthesis. *J Surg Case Rep.* 2023; 2023(7): rjad430. Article. IF: 0.4; Q4
- van Straten CGJ, Caris C, Grimm MO, Colombel M, Muilwijk T, Martínez-Piñeiro L, Babjuk MM, Türkeri LN, Palou J, Patel A, Bjartell AS, Witjes WPJ, van der Heijden AG, Kiemeneij LALM. Quality of life in patients with high-grade non-muscle-invasive bladder cancer undergoing standard versus reduced frequency of bacillus calmette-guérin instillations: The EAU-RF NIMBUS Trial. *Eur Urol Open Sci.* 2023; 56: 15-24. Article. IF: 3.2; Q1
- Yebes A, Toribio-Vázquez C, Martínez-Pérez S, Quesada-Olarte JM, Rodríguez-Serrano A, Álvarez-Maestro M, Martínez-Piñeiro L. Prostatitis: A Review. *Curr Urol Rep.* 2023; 24(5): 241-51. Review. IF: 2.5; Q2

Clinical trials

- Martínez-Piñeiro Lorenzo L. Inhibición del crecimiento de cultivos de células de carcinoma renal a través de la inhibición del factor inducible por la hipoxia (hif) (hif-vhl).

4. Associated clinicians



4. Urology and Vascular Surgery Group

Type/Phase: OTROS

Sponsored by: Martínez-Piñeiro Lorenzo Luis

Signed date: 05/06/2023

- Linares Espinós EE. Multicenter, randomized, non-drug related study to evaluate the impact of lifestyle changes in patients with metastatic hormone sensitive prostate cancer (prosfitt).

Type/Phase:

Sponsored by: Grupo Centro De Tumores Genitourinarios

Signed date: 14/02/2023

- Linares Espinós EE. Estudio de viabilidad para evaluar la aceptación de los usuarios y el compromiso, tanto de pacientes como de sus profesionales sanitarios, en relación con las plataformas wave health (aplicación para pacientes) y wave connect (portal de proveedores de atención médica) durante el manejo de pacientes con cáncer de próstata (estudio pro-wave1).

Type/Phase: No EPA

Sponsored by: Treatment Technologies & Insights, Inc. (Tti)

Signed date: 16/02/2023

- Linares Espinós, Estefanía Esperanza. estudio aleatorizado, controlado, multicéntrico y abierto para investigar la eficacia y la seguridad de añadir apalutamida a la radioterapia y al agonista de la h1hl en pacientes con cáncer de próstata hormonosensible positivos en pet con psma, con un seguimiento observacional de los pacientes negativos en pet con psma.

Type/Phase: III

Sponsored by: Janssen Cilag International Nv

Signed date: 19/12/2023

