IdiPAZ

Instituto de Investigación
Hospital Universitario La Paz

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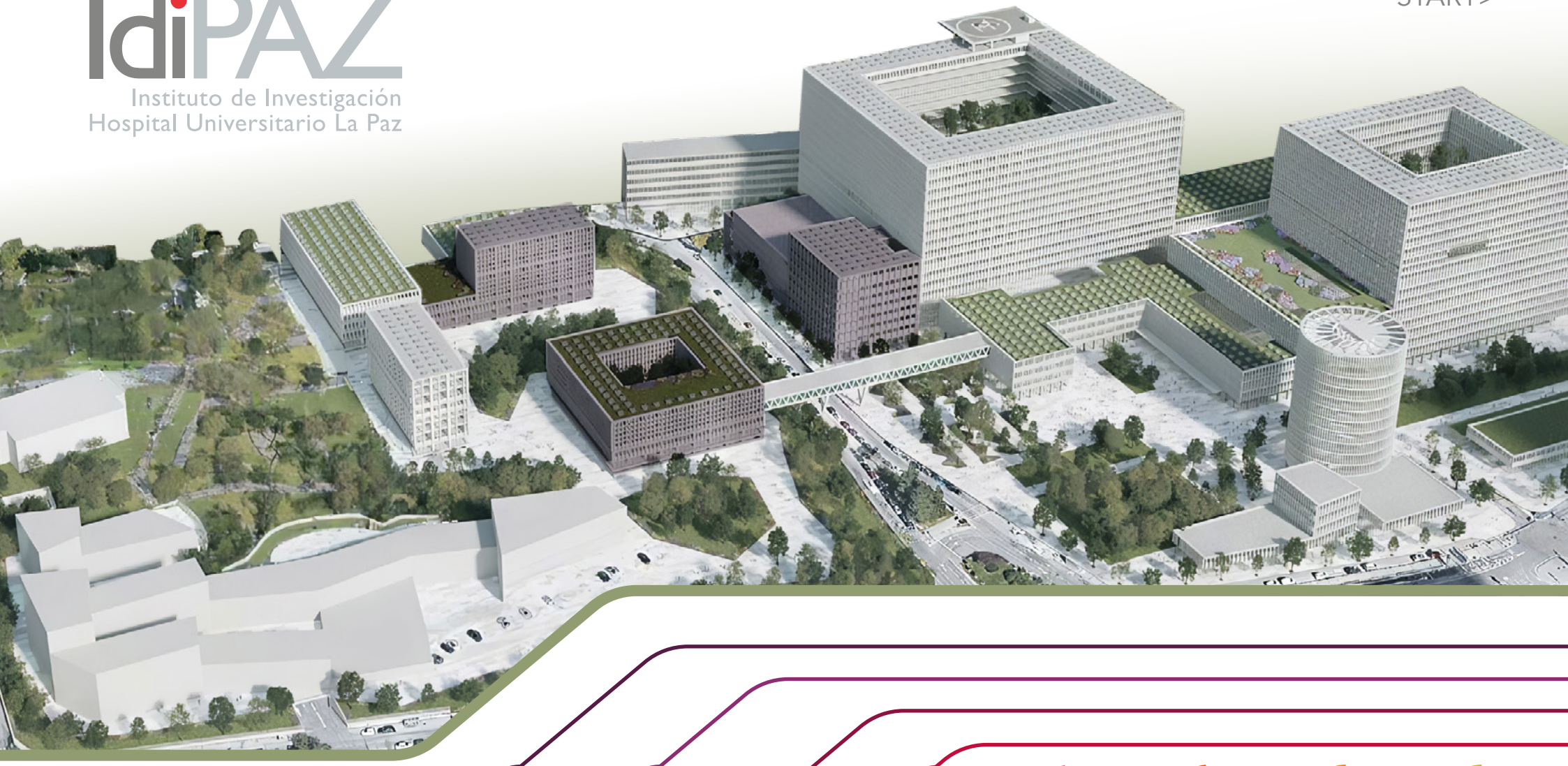

SCIENTIFIC REPORT 2023

IdiPAZ
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Hospital Universitario La Paz

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SCIENTIFIC
REPORT
2023

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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.

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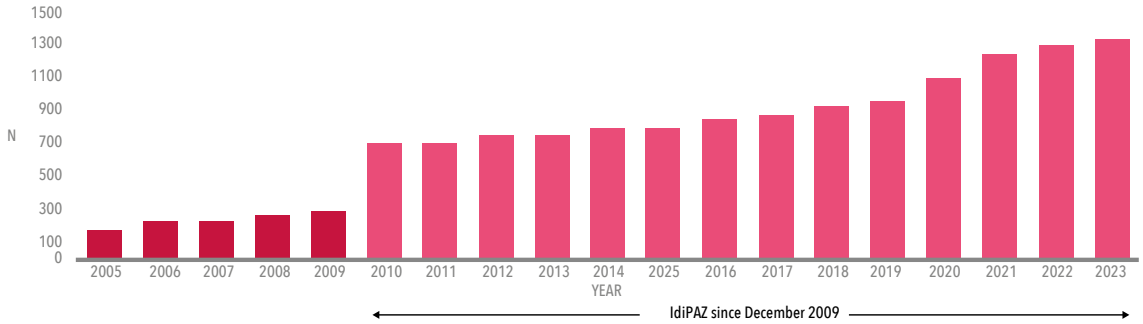
Dr. José Luis López-Sendón Henstchel
Scientific Director of IdiPAZ

Number of original research publications in indexed journals*



* Indexed journals, excluing 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 attribute 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 reflectd the growing number of the Institute working groups. Want to belong, just say it. New ideas are always welcome

The future ahead

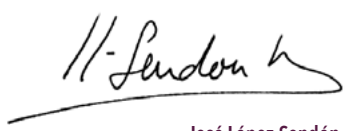
Truly, the future could not be more exciting. Both La Paz Hospital and the Universidad Autonoma de Madrid will very soon start a process of total remodeling of the hospital and the Medicine Campus (www.comunidad.madrid/hospital/lapaz/ciudadanos/ciudad-salud) breaking physical and functional barriers, 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

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 throug 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

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2.5 Quality Committee

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2.6.1. Biobank
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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 Comunication and Public Engagement

2.11 Responsible Research and Innovation

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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 almos 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

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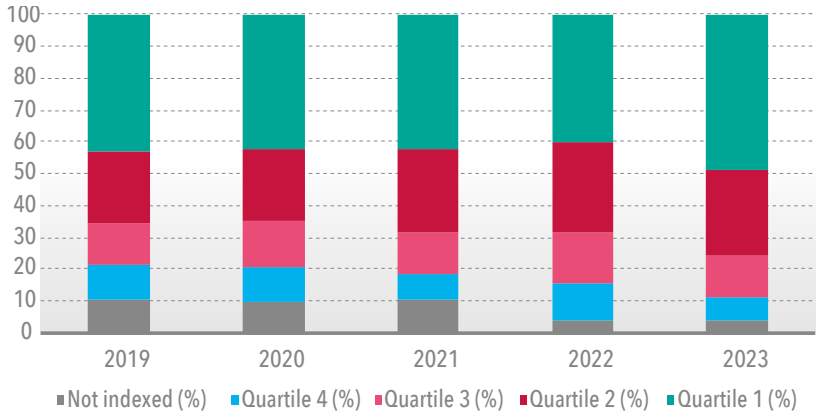
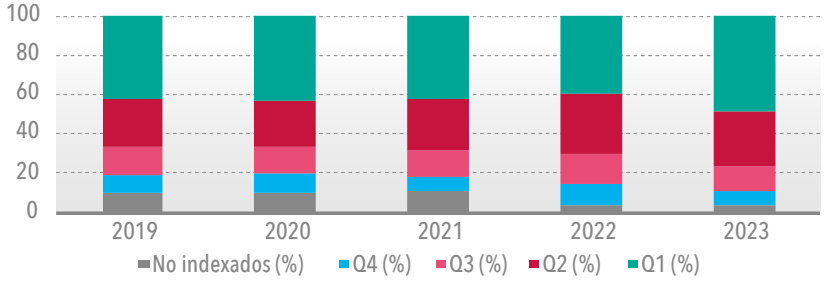
In the year 2023, the production of scientific activity has been maintained with respect to the growth of previous years. The importance of the work of our researchers can be seen in the fact that almost half of the documents have been published (48.77%) in the most relevant journals of their thematic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

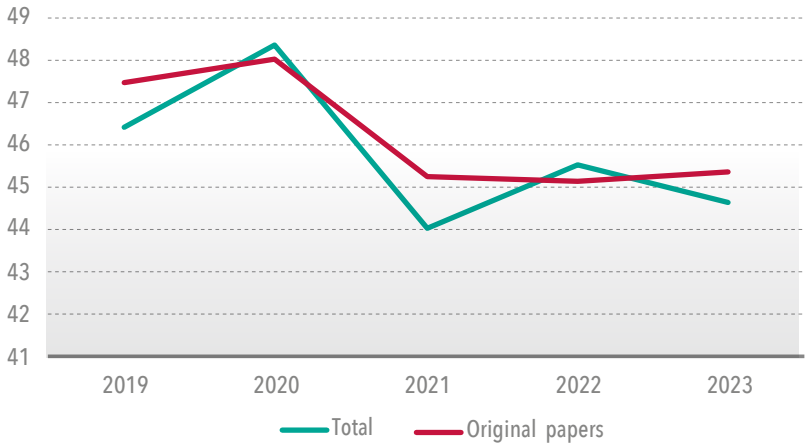
Distribution of publicactions by quartile 2019-2023



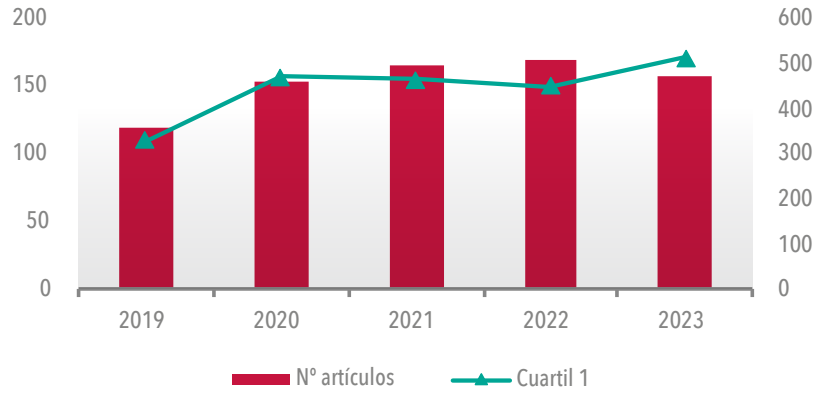
Distribution of originals by quartile 2019-2023



Papers with international collaboration between 2019-2023



Owned originals between 2019-2023



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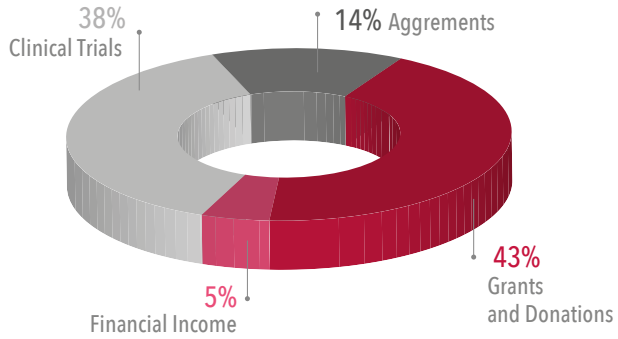
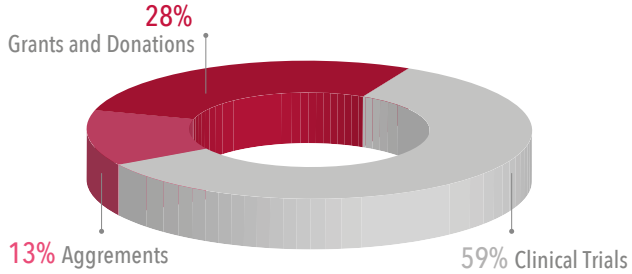
2.1.2 Annual Accounts

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
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**

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2. Executive summary

2.1 Global Analysis

In 2023, the foundation –FIBHULP- received a Nominative Transfer of the *Consejeria 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 wich these contracts have been signed are:

Organization	Nº Aggrements
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.LU.	1
Boehringer Ingelheim España S.A.	1
Cepheid Iberia S.L.U	1
Consorcio 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	Nº Aggrements
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

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2.2 Research Structure

Scientific Director

José Luis López-Sendón Henstchel

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. *Chancelor 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 os 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*

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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 (PSMAR) 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 Salmanca. 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.

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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
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EQUALITY, DIVERSITY AND CONFLICT RESOLUTION COMMISSION

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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 Biomedical Research of La Paz University Hospital (FIBHULP) 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 Biomedical 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 Biomedical 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.

EU Platform of Diversity

CARTA DIVERSIDAD 2022 2024

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.

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IQNet
CERTIFICATE

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.

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Sergio Palomero Lorente.*Prevention Technician*
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Secretary
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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 Microbiolovgy
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 Phatology
Directors: Margarita López Trascasa
Pilar Sánchez-Corral Gómez

Lymphocyte Pathophysiology in Immunodeficiencies
Director: Eduardo López Granados

Drug Hypersensibility 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

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Large System Pathology Area

Coordinator: Francisco García Río

Internal Medicine and Systemic Diseases
Director: Francisco Arnalich Férnandez

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

Nephrology
Director: María Gemma Fernández Juárez

Diagnosis and Treatment of Allergic Diseases
Director: Santiago Quirce Gancedo

Patient Blood Management
Director: Manuel Quintana Díaz

Health Care Nurses Research
Director: Esther Rey Cuevas

Emergency and Critical Pathology
Director: Alejandro Martín Quirós

Hospital Pharmacy
Director: Alicia Herrero Ambrosio

Translational Hepatology
Director: Francisco Javier García-Samaniego Rey

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 Hernáez

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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Maternal Infant Child and Youth Research

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

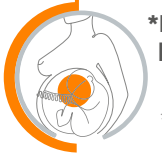
Pediatric Systemic Infections; HIV, tuberculosis, Imported and Emergent Diseases
Director: Talía Sainz Costa

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*

Multidisciplinar 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

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SCIENTIFIC REPORT 2023

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 Hypersensibility 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
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- 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
- Paula Rodríguez Molino (CM21/00174)
- Gabriel Torres Iglesias (CM22/00065)
- 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)

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- 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
- Sara Ruiz Martínez (JR22/00019)
- Carlos Daniel Grasa Lozano (JR22/00044)
- Irene García García (JR22/00036)

Sara Borrell Contracts - ISCIII
- Francisco Javier Cueto Rodríguez (CD21/00185)
- 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

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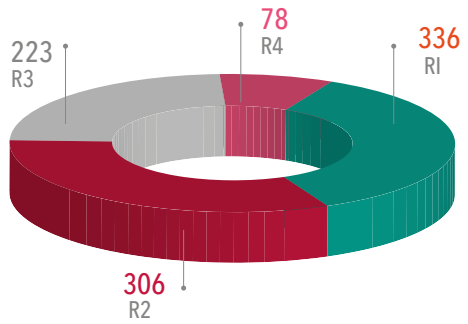
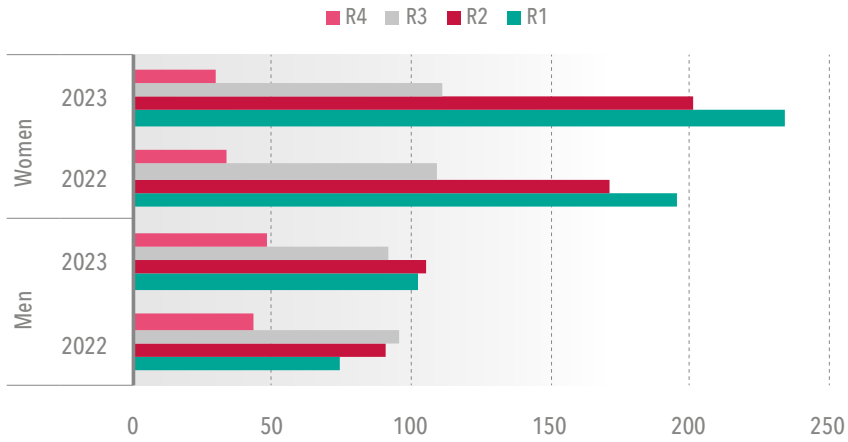
DATA: HUMAN RESOURCES

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
Predoctoral Fellowship	ISCIII	8
Investigo Contract	SEPE	15
Predoctoral 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 DEPENDET 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.





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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, Martína 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: Hiperglicinemia 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

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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 deprivación 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

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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 micrornas (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

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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, Maria del Mar	Metabolismo pulmonar en el modelo de nitrofén 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 terapeútica 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

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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

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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 esferoides 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 percusisión 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 Cidfuentes 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 Multiple	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 Lecñana 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 Leciñana 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 Leciñana 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 Leciñana M	UPM
García Pastor S	Manifestaciones de enfermedad cardiaca en el dúplex carotídeo en pacientes con ictus isquémico	Alonso de Leciñana M, Rodríguez Pardo J	UPM
Vázquez Medel A	Caracterización de mutantes de GLYT2 asociados a hiperplexia humana	López Corcuera B	UAM

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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 crioablación en pacientes con cáncer de mama	del Fresno Sánchez C	UAH
Guitierez 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-Johson /necrolísis 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

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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

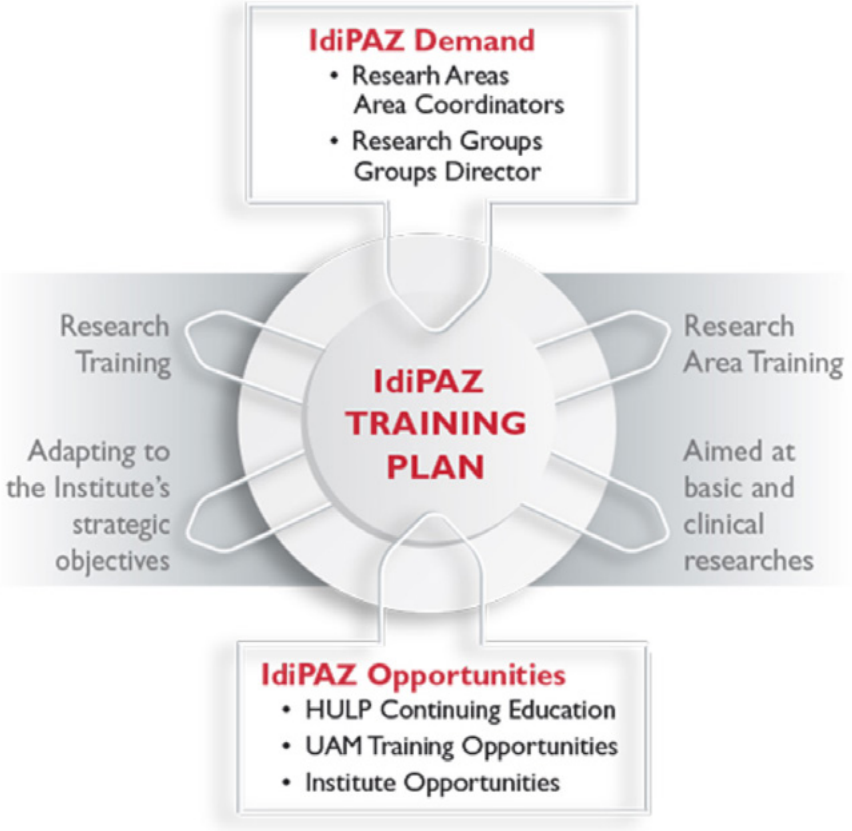
Secretary
Mercedes Ruiz Balibrea

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



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2.3.4.1 Training Program

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

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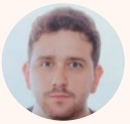
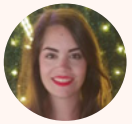
Research Area	Date	Speaker		Seminar title
MATERNAL INFANT CHILD AND YOUTH RESEARCH	13 jan	**Dr. Luiz Stark Aroeira** Postdoctoral Researcher of the "Molecular Hepatology" research group at IdiPAZ.		**"Identification of biological processes with diagnostic potential for liver diseases in childhood."**
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 "Ingenieria Celular" de IdiPAZ.		**"Generación de córnea biomimética con células madre mesenquimales de tejido adiposo"**

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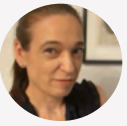
Research Area	Date	Speaker		Seminar title
SURGERY, TRANSPLANT AND HEALTH TECHNOLOGIES	17 Feb.	**Dr. Miguel Ángel Bañares** investigador del CSIC, **Dra. Ana Iglesias** investigadora del Instituto de Catálisis y Petroleoquímica y **Dr. Antonio Alcam**í investigador del Centro de Biología Molecular Severo Ochoa.		**"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 Inmunologia, Oftalmologia 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 Y Traslacional - 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"**

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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"**

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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), Mª 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), Mª 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 Gª 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	Mª 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 cardiaca), 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)

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FECHA	TEMA	PONENTES	MODERADORES
24/05/2023	Varón de edad muy avanzada con fibrilación auricular de reciente diagnóstico e insuficiencia cardíaca	Rocío Menéndez (S. Geriatría), Marta de Uribe Viloria (S. Anatomía patológica), Esther Pérez David (S. Cardiología)	Juan Ignacio González Montalvo (S. Geriatría), 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 Fiandor (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	Maria 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 cardiaca 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, trombectomia 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 Auñon (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 Hermosilla (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)	

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2.3.4.4. Another Scientific activities

14th December 2023: 5th PhDay IdiPAZ

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.

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

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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.

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noche europea de los investigadores madrid

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.

Ciencia por la Calle

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
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.	

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.

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ACTIVITY	DATE
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. **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 **"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. **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.	 *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.*
Science and Innovation Week: The future needs the best …biobanqueros! Paloma Gómez, Marina Arranz, Laura Córdoba, Sandra Nieto, Yaiza Pedroche y Celia García.	6 th November
Science and Innovation Week: **How do we defend ourselves? Journey inside our Immune System.** Luna Cordeiro y Carlos del Fresno.	6 th November
Science and Innovation Week: **Separating the wheat from the chaff: How to find an oasis in the information desert.** Raúl Román	7th November
Science and Innovation Week: IdiPAZ: Research in the service of health and medicine. Gema Vallés, Kilian Gutiérrez y Eva Jaraba	7 th and 14 th November
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.	8 th and 15 th November
Searching for defects in genes and proteins: it goes a long way. Pilar Sánchez-Corral, Alberto López y Laura González	10 th and 17 th November
How to be a scientific Sherlock Holmes? Daniel Quijada	13th November
From transplant research to the operating room: how scientific breakthroughs reach the patient Francisco Hernández, Ane Miren Andrés y Javier Serradilla.	13th November
An approach to a childhood cancer research laboratory. Alfonso Navarro, Andrés París, Karima Al-Akioui, Lara Clares, Lidia Pertiñez, Natalia Riestra y Patricia Rodríguez.	13 th , 15 th and 17 th November
The Pediatric Radiologist: who we are and what we do Montserrat Bret	14th November
Debunking myths about ADHD Eduardo Fernández-Jiménez	16th November

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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-

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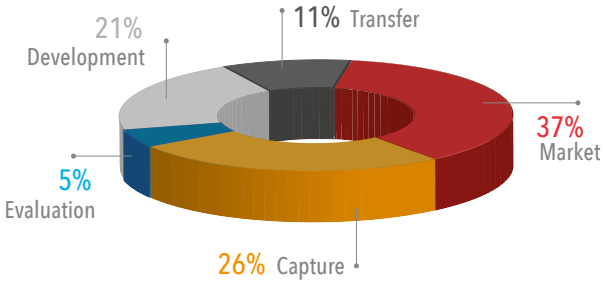
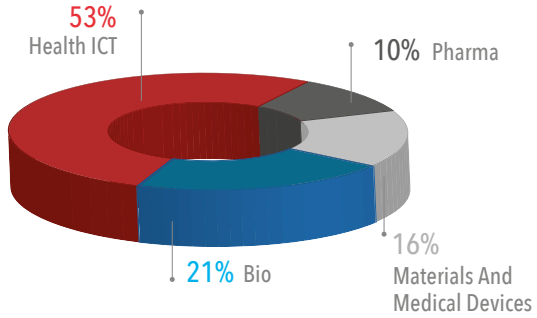
UAI portfolio breakdown by project development phase (2023)

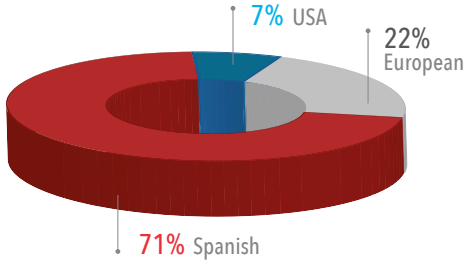


UAI portfolio breakdown by project type (2023)



cording 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.

Priority of IdiPAZ's patent families in force during 2023

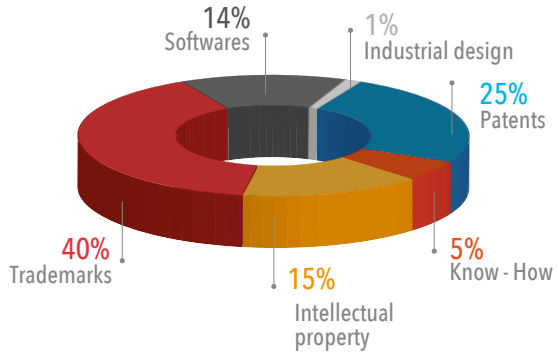


The analysis of IdiPAZ's technology portfolio according to the type of project show how Health ICT, Bio and Medical Device, and Materials and Devices types stand out above the others, with practically the same number of projects for all three types.

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).

Total tally of ip legal figures in force during 2023



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.

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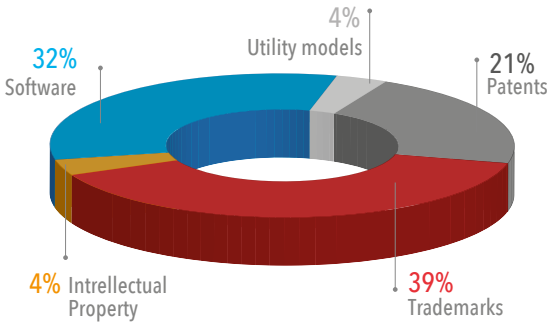
It is important to note that these trademarks, besides allowing IdiPAZ to distinguish its products or services from competitors' products or services, are associated with the know-how of the institution, know-how that has been transferred along with the distinctive sign in the case of the license agreements 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 released 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 full-filled 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 Comission:** "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 protection 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 our main stoppers, for that reason, investors, private entities and funding companies are one of the

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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 multivariant 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 SolutIon 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.

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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 bost 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*

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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.

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2.4.2. Patents and trademarks

NEUROSCIENCES AREA

Psychiatry and Mental Health Group

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Neurology and Cerebrovascular Diseases Group

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Neuroprotective Strategies in Neurodegenerative Diseases Group

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MicroRNA Regulation of Immune Tolerance, Autoimmunity and Cancer Group

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LARGE SYSTEM PATHOLOGIES AREA

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Respiratory Diseases Group

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Nephrology Group

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Patient Blood Management Group

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Hospital Pharmacy Group

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Azabal Agudo A, Ruiz-Valdepeñas Martín de Almagro S; Julián García Rivera F, de la Quintana Jiménez P, inventors; UP DEVICES AND TECHNOLOGIES, S.L., FIBHULP, assignees. Dispositivo de corte automático de discos de ostomía. P201830718, PCT/ES2019/070492. 2018 July 16.

Ramírez de Molina A, Tabernero Urbieta M, Reglero Rada G, Torres Olivares CF, Largo Aramburu C, Santamaría Ramiro M, Polo Paredes G, Ruiz Pérez D, de Miguel del Campo E, Álvarez Gómez de Segura I, inventors; Fundación IMDEA Alimentación, UAM, FIBHULP, IGENFARMA, assignees. Composición para la reducción del declive metabólico asociado al envejecimiento y/o el tratamiento de trastornos relacionados al metabolismo lípidico. P201830740; 2018 July 20.

Martín Mateos P, Acedo Gallardo P, Jorcano Noval JL, Díaz Ojeda L, Bonastre Juliá J, Martínez Méndez JR, Largo Aramburu C, inventors; UC3M and FIBHULP, assignees. Device for monitoring the perfusion status of skin flaps. P202130486; 2021 May 31.

Salinas Gómez J, García Sanz M; inventors; FIBHULP and DISTRIBUCIONES CLINICAS S.A. (DICLISA), assignees. Two-way probe for flushing and/or draining. U202100070; 2021 February 19.

Muñoz Caro JM; Azabal Agudo A, Ruiz-Valdepeñas Martín de Almagro S, inventors; FIBHULP and Up Devices and Technologies S.L. assignees. Light diffusing device for photodynamic therapy treatment of anogenital region. U202131773; 2021 September 03.

Gómez Candela C, López Plaza B, Bermejo López L, authors; FIBHULP, assignee. Trademark name: NUTRinvest Grupo de investigación en Nutrición y Alimentos Funcionales; ESM3.649.812-2; 2017 February 02.

De la Quintana Jiménez P, authors; FIBHULP, assignee. Trademark name: #OdeOstomía; CM 016922734; 2017 September 21.

De la Quintana Jiménez P, authors; FIBHULP, assignee. Trademark name: CM 016922858; 2017 September 21.

De la Quintana Jiménez P, authors; FIBHULP, assignee. Trademark name: Ostomía; CM 017131822; 2017 August 22.

MATERNAL INFANT CHILD AND YOUTH RESEARCH

Neonatology Group

Segovia Iñigo C, Montes Bueno MT, inventors; Segovia Iñigo C, assignee. Positioning device for neonates (Utility model). U201330102; 2013 January 31.

Pediatric Systemic Infections; HIV, Tuberculosis, Imported and Emergent Diseases Group

Mellado MJ, Piñeiro R, authors; Asociación Española de Pediatria (AEPED), assignee. Trademark name: PEDIAMÉCUM; ESM 3079824; 2013 June13.

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Translational Research in Pediatric Oncology, Hematopoietic Transplantation and Cell Therapy Group

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, IB2019/052042; 2018 March 13.

Pérez Martínez A, Ferreras Puente C,B, inventors; UAM, FIBHULP, Universidad Miguel Hernández de Elche (UMH), Fundación de la Comunitat Valenciana para la gestión del Instituto de Investigación Sanitaria y Biomédica de Alicante (ISABIAL), assignees. Memory T cells as adoptive cell therapy for viral infections. EP20382850.4 (EP3974029), PCT/EP2021/076516; 2020 September 25.

Mayán Santos M, Acea Nebril B, Varela Eirín M, Rodríguez-Candela Mateos M, Díaz Carballa CC, Fonseca Capdevila E, Barrio LC, Escudero López A, inventors; Fundación Profesor Novoa Santos-Instituto de Investigación Biomédica de A Coruña (INIBIC), assignees. Composición para el tratamiento de los efectos secundarios de la radioterapia y/o quimioterapia. PCT/ES2020/070269: 2020 April 27

Research in Endometrioisis Group

Hernández A, López A, Spagnolo E, authors; FIBHULP, assignees; Brand name: EndoPaz: 018876162. 2023 May 17, 2023 September 27

Congenital Malformations and Transplantation Group

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.

OTHER TRADEMARKS OF IdiPAZ

FIBHULP, author; FIBHULP, assignee. Trademark name: IdiPAZ Instituto de Investigación Hospital Universitario La Paz; USM 85.078.878, CM8.871.873; 2010 July 06, 2010 February 10.

FIBHULP, author; FIBHULP, assignee. Trademark name: CEASEC Centro Avanzado de Simulación y Entrenamiento Clínico; ESM 3.567.901-8; 2015 June 22.

FIBHULP, author; FIBHULP, assignee. Trademark name: InnoPAZ Plataforma de Innovación Hospital Universitario La Paz; ESM 3.572.575-3; 2015 July 27.

FIBHULP, author; FIBHULP, assignee. Trademark name: CEASEC Centro Avanzado de Simulación y Entrenamiento Clínico; ESM 3.567.901-8; 2015 June 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*

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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 6ªD	New
Manejo multidiciplinar 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
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

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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.isciiibiobanksbiomodels.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 observing 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

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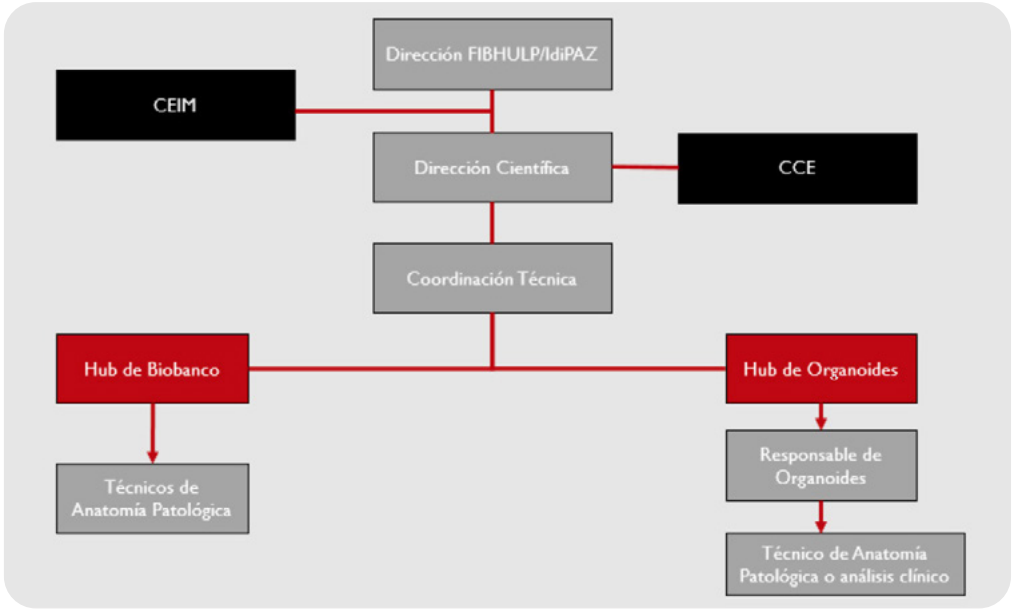
Biobanco y biomodelos (BB)

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 cooperation 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

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Pathologial Anatomy Technician
Sandra Nieto Torrero
Yaiza Pedroche Just
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Pablo Concha Soler

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Head: Laura Córdoba García
Jesús Jiménez Rodríguez

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Olga Vera Puente (PhD)
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Eduardo López Granados (MD, PhD)

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Equipment

- Eight -80°C deep freezers equipped with remote alarm temperature control and a CO_2 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 CO_2 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

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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 embeding and sectioning
- Hematoxilin 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 proyects

Stored samples

7,389

INPUT 2023 →

1,618 Donors → 3,279 Biological sample → 9,875 Aliquot

BIOBANK

OUTPUT 2023 →

2,486 Aliquot

17 research proyects

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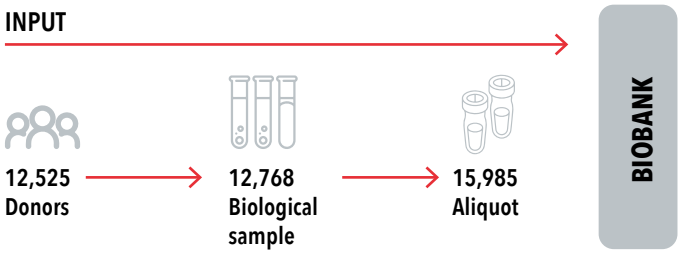
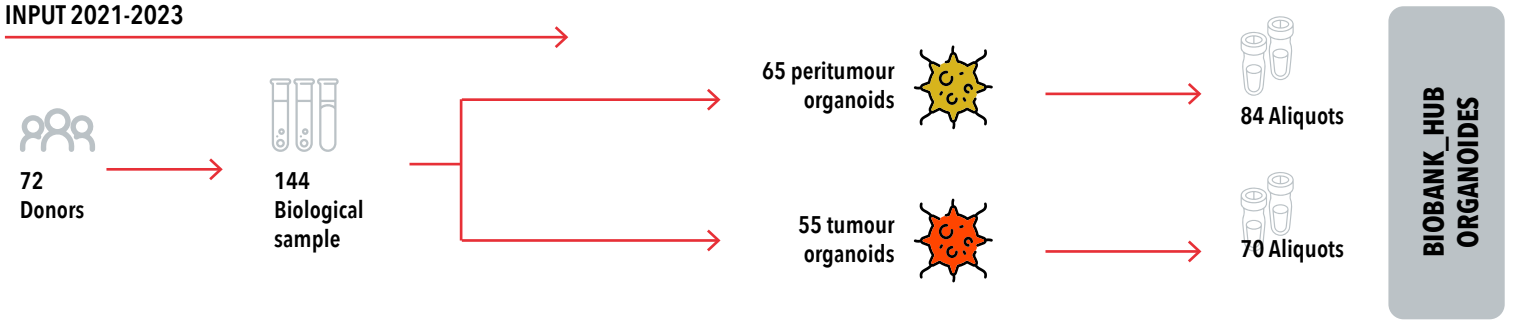
Finally, the recent emergence of the novel pathogenic SARS-coronavirus 2 (SARS-CoV-2) and its rapid national and international spread 00pose, have provided the IdiPAZ Biobank the opportunity of have started a COVID-19 Collection.

SARS-CoV-2 Samples



Colon organoids

Stored 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

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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 REDCap, 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 procedures 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 handling 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.

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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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Fernando Gil Villaverde
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 perfusion 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.

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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.

AENOR GESTIÓN DE LA CALIDAD ISO 9001 ER-0512/2018

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

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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-UCICEC 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-UCICEC 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

Coordination

Head

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UCICEC Manager

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Phone: (+34) 912 071 466

Clinical Pharmacologists

Elena Ramírez García (MD, PhD)
Irene García García (MD, PhD)
Alicia Marín Candón (MD)
Elena Diago Sempere (MD,PhD)
Mikel Urroz Elizalde (MD)
Enrique Seco Meseguer (MD)
Stefan Stewart Balbas (MD)
Lucía Díaz (MD)

Ethics Senior Researcher

Maria Cristina Murano (PhD)

Predoctoral Researchers

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

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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
Paloma Moraga Alapont (MSc)
Paula Valle Simon (MSc)
Eloy Ferreras Puente (MSc)

National Project Manager
Rocío Prieto Pérez (PhD)
Suriñe Valdespina Macaya (MsC, PhD)

Clinical Research Associate
Marta Muñoz Sagastibelza (MsC)
Belén Ortiz del Castillo (MsC)
Cristina Marian Revilla (MsC)
Paula Gómez Rodríguez (MsC)
Noa Baz Baz (MsC)

Project Manager Paediatrics Oncology Trials
Maria Ignacia Ceballos Darnadude
Andrés Gómez Davila (MsC)

Data Management
Maria Teresa García Morales
Diego Alvaredo Rodríguez

Bioestaticians
María Jiménez González
Vega Rey Mauleón
María Martínez Balaguer

Technical Secretary of SCReN
Victoria Hernández Rubio
María José Rubira Touriño
Gema del Prado Marugán
Victor 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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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

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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 preparation, 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:

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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	EU4HEALTH	
	TransplantChild 2023-2027	EU4HEALTH	
	PaEdiatric Transplantation European Registry - PETER	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	

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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.

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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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Secretary

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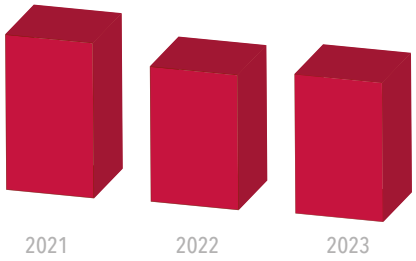
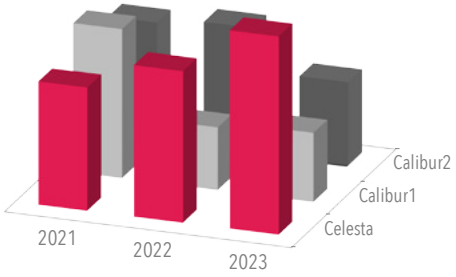
Indicators

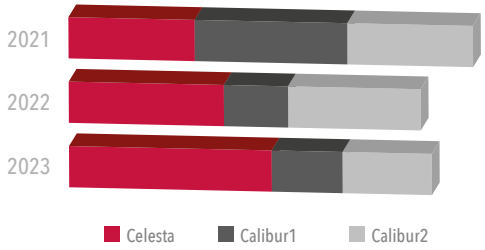
Cytometry Core Activity



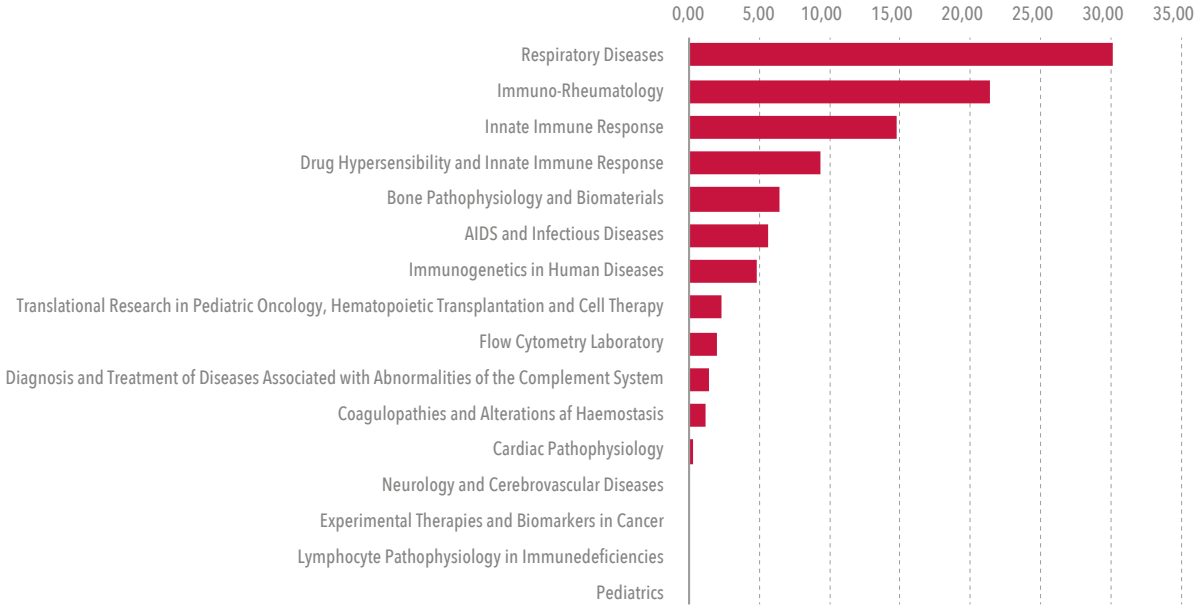
Cytometers Activity Distribution



Cytometers Activity



Groups Activity (%)



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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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Secretary:

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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 CO_2 and N_2.

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

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Centrifuges:

- 2 Eppendorf 5810R refrigerated centrifuges
- 2 Eppendorf 5804 centrifuges
- 1 Hettich Universal 32R refrigerated centrifuge
- 1 Kubota 2010 centrifuge
- 1Eppendorf 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 Precisterm thermostatic waterbaths
- 1 Grant JB Aqua 12 Plus thermostatic waterbath

Vacuum pumps, pipettes, counters, automatic pipettors, 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.

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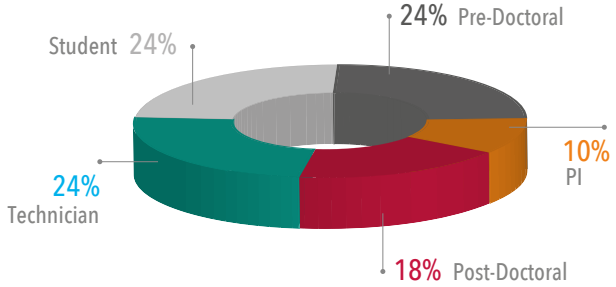
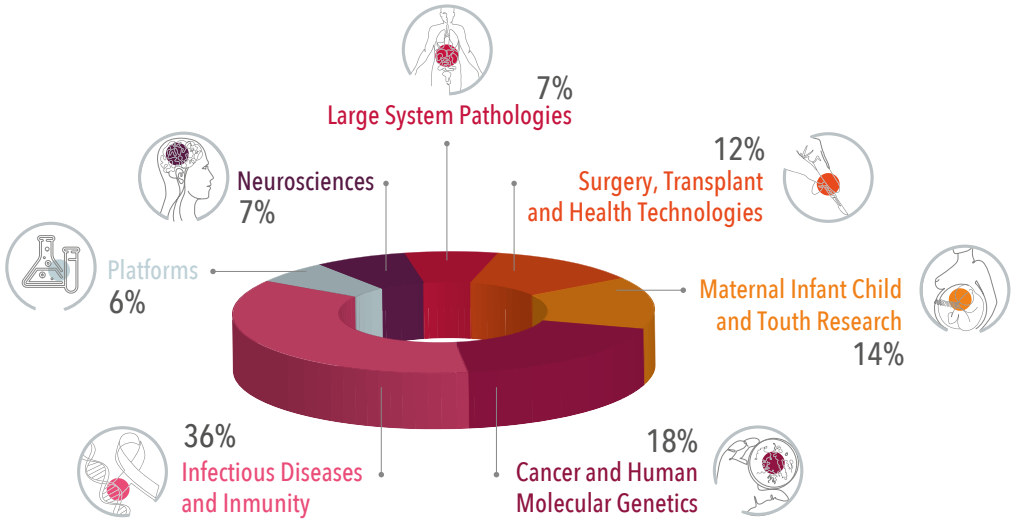
Cell Culture Unit´s scientific indicators

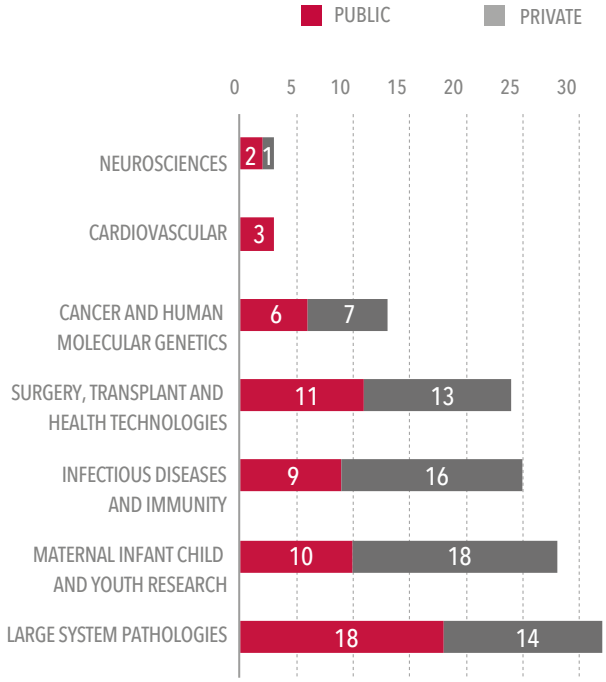
USERS: Distribution according to academic profile and IdiPAZ research

128 USERS





PROJECTS: Distribution according to IdiPAZ research areas



128 PROJECTS

52 FUNDING INSTITUTIONS

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Collaborations: Cooperative Health Research Networks & CIBER

International Collaborations

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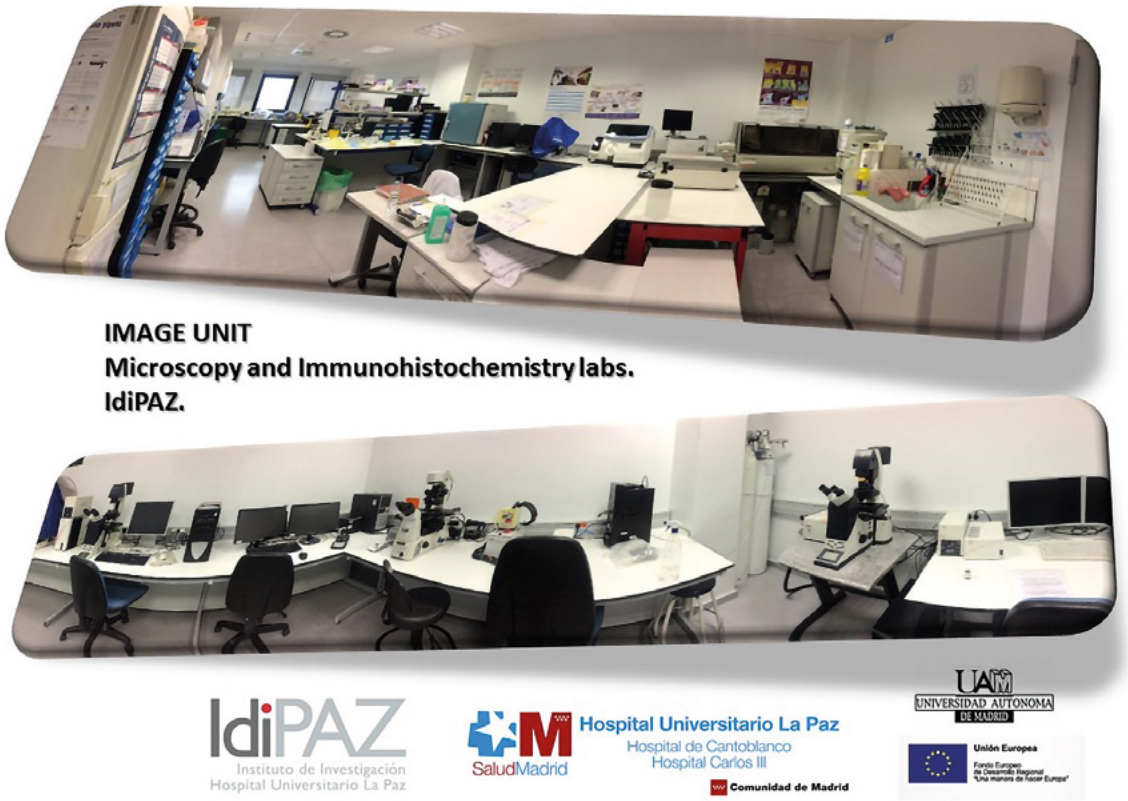
2.6.9. Molecular Image and Immunohistochemistry Unit

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 freezed), sectioning of tissues (microtomes and 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-

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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.

Composition

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Secretary:

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Phone: (+34) 912 071 512

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 feld) upright microscope with an attached Digital camera
- Zeiss Axio Lab.Al microscope five objectives from 5x to100x. 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;
  - » Ilumination 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

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- 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 fuorescent 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; Ilumination 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 Transplantes 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.

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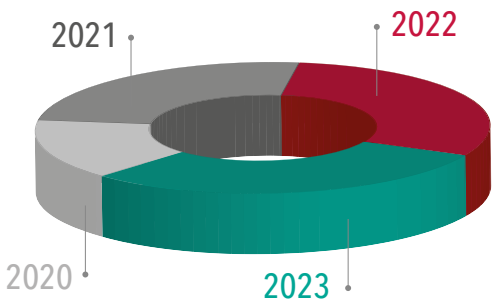
Equipment usage ratio



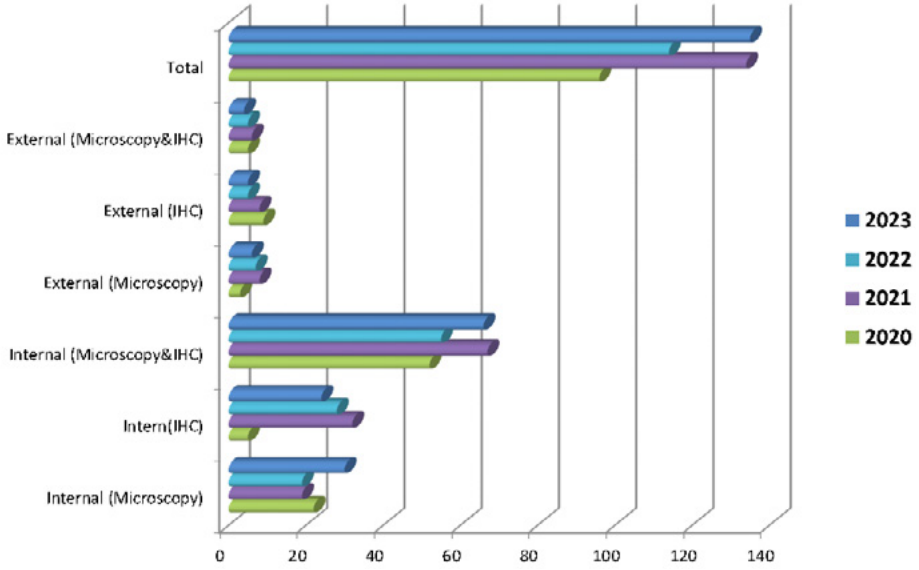
During the year 2023, it has been proven that the extraordinary period of low activity suffered by the consequences of the pandemic has ended. In 2023, as was the case in periods before COVID, the activity remains similar or even higher than that estimated in 2022, as can be seen in the annual equipment 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.

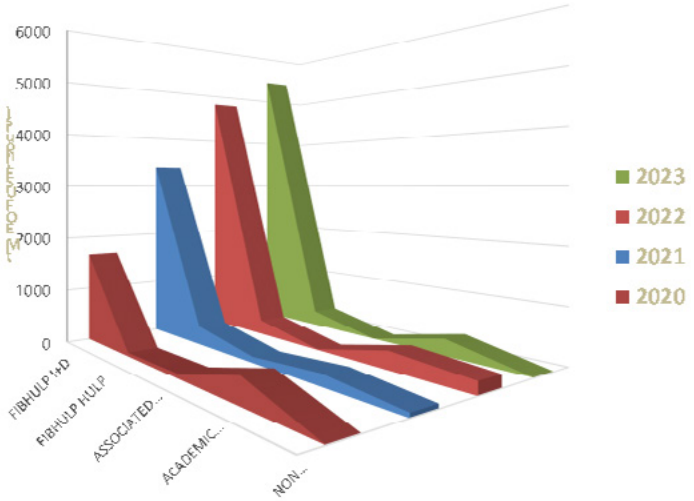
The greater number of users has also resulted in an increase in the hours of use of the equipment. This increase is mostly due to FIBHULP users, both basic and clinical (FIBHULP I+D and HULP) and to a lesser extent to external research groups (UCM, CSIC, etc.) remains practically the same.

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)



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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.

Composition

Head laboratory:

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David Vicent López
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Secretary:

Susana García Pérez
investigacion.hulp@salud.madrid.org
Phone: (+34) 91 207 15 12

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

Coordinator

Berta Rodés Soldevila
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Secretary

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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

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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.

IQNet THE INTERNATIONAL CERTIFICATION NETWORK CERTIFICATE

AENOR GESTIÓN DE LA CALIDAD ISO 9001 ER-0512/2018

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 Precisterm thermostatic bath
- 1 Inteliwasher 3D-IW8 BIOSAN
- 1 Automatic cell counter LUNA II

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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 arear 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.Pérez@idipaz.es
Phone: (+34) 91 207 10 32

Technical Staff

Ana María Van Den Rym Mayoral

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Equipment

- Eppendrof 5415D Centrifuge.
- Veriti Termocycler(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

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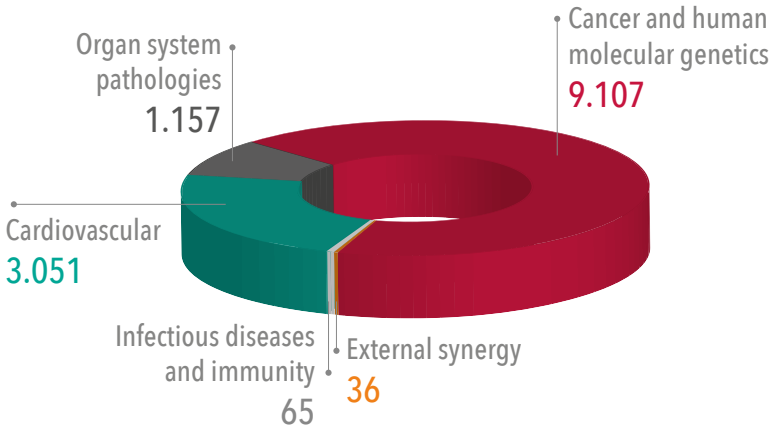
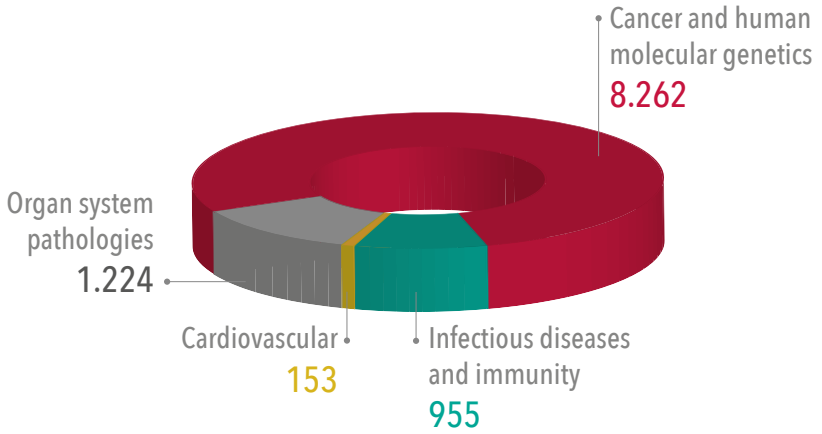
Distribution Sanger sequencing migration service by area

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, Lorenzo-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

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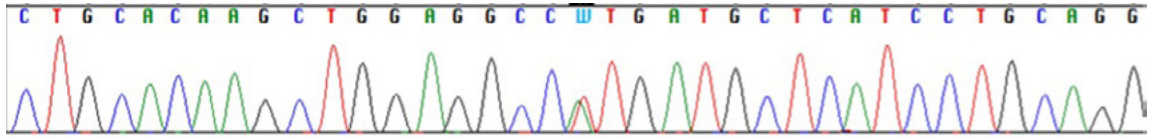
4. Whole-Exome Sequencing of 21 Families: Candidate Genes for Early-Onset High Myopia.
Sánchez-Cazorla E, González-Atienza C, López-Vázquez A, Arruti N, Nieves-Moreno M, Noval S, Mena R, Rodríguez-Jiménez C, Rodríguez-Solana P, González-Iglesias E, Guerrero-Carretero M, D'Anna Mardero O, Coca-Robinot J, Acal JC, Blasco J, Castañeda C, Fraile Maya J, Del Pozo Á, Gómez-Pozo MV, Montaño 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, Montaño 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, Montaño 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.



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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

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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 immunuprecipitation 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

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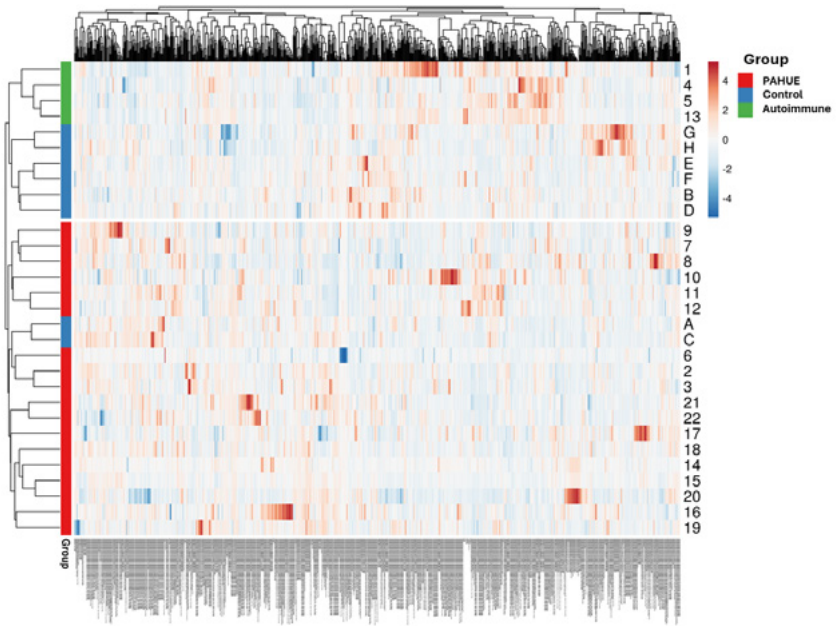
of unknown origin", bioinformatic platform has developed a predictive model for this disease, working with pediatric department of Hospital La Paz (Mª Loreto Hierro Llanillo) and pediatric UCI.

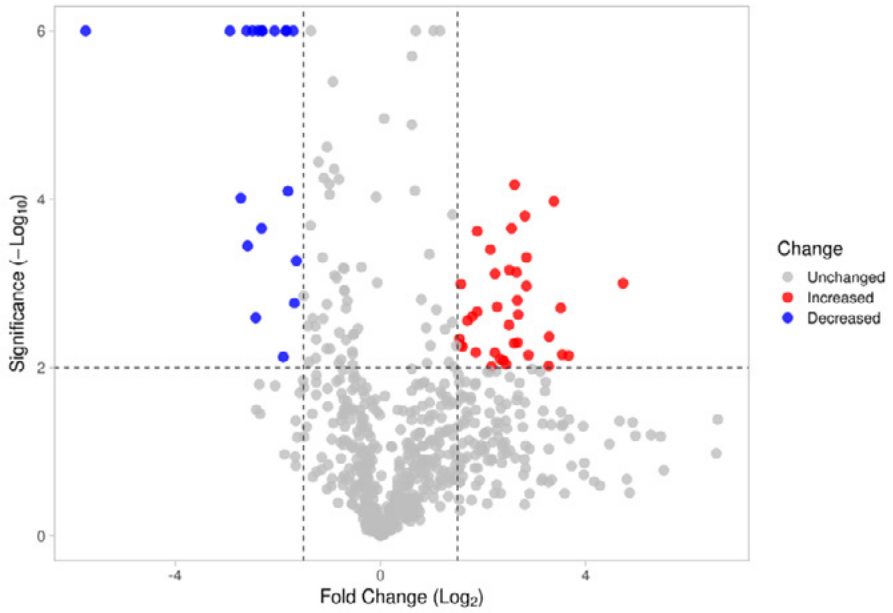
In sepsis project, this platform constructed a database taking all data from septic patients from Hospital La Paz and created a classification method for them. In addition, volcano analysis was performed with all the data, leading to biomarkers identification.

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.





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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

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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 (Mª 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
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 INFECTIUS DISEASES
TERESA DEL ROSAL RABÉS	PAEDIATRICS AND INFECTIUS DISEASES

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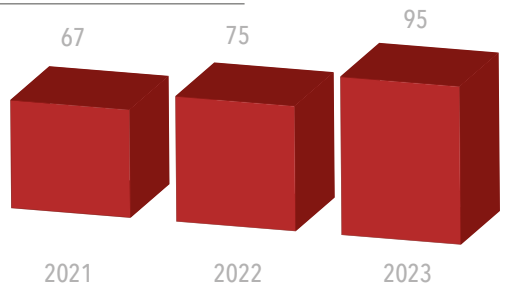
RESEARCHER	SERVICE / RESEARCH GROUP (RG)
ALBERTO ALONSO BABARRO	PALLIATIVE CARE
LUCÍA DEIROS BRONTE	PEDIATRIC CARDIOLOGY
ROSARIO LÓPEZ LÓPEZ	PEDIATRIC EMERGENCY MEDICINE
ATILANO CARCAVILLA UROQUI	PEDIATRIC ENDOCRINOLOGY
JULIO GUERRERO FERNÁNDEZ	PEDIATRIC ENDOCRINOLOGY
JUAN JOSÉ MENÉNDEZ SUSO	PEDIATRIC 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



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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

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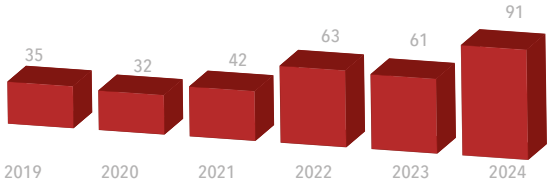
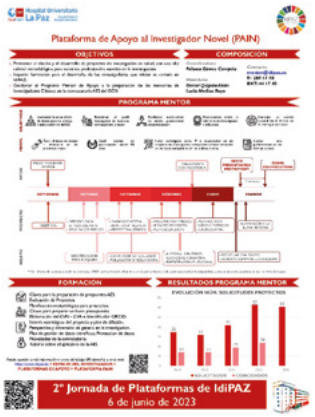
In its third year, all the actions developed in the Mentor Programme have led to an increase in the number of proposals applied to Acción Estratégica en Salud (AES) call for health research projects by IdiPAZ researchers:



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

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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)
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Rosa María García Moreno (Endocrinologist)
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Lucía Arcos Castellanos (Nutricionist)
lucia.arcos.castellanos@idipaz.es
Natalia García Vázquez (Pharmacist)
nGarcía.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, oxidationa and hormonal biomarkers...)

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- 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.

Equipment

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

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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 Mª 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:

Dª. 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-

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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.

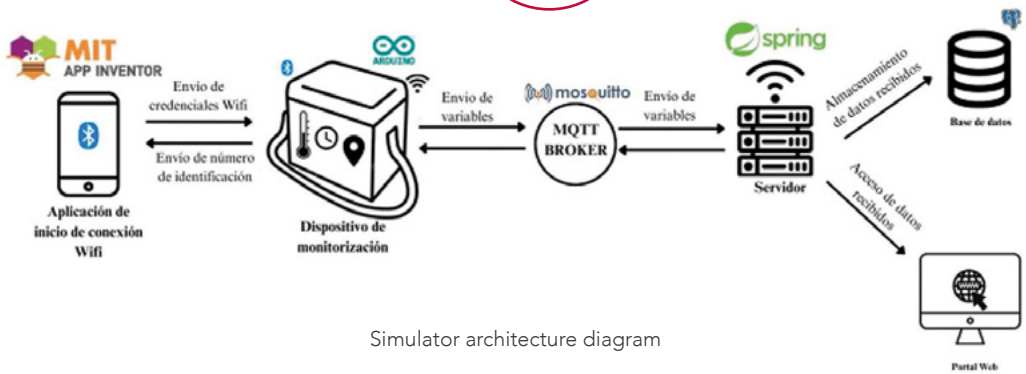
Optimization of a System for Tracking and Monitoring Transplanted Organs During the Transportation Phase

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, representing 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.

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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.

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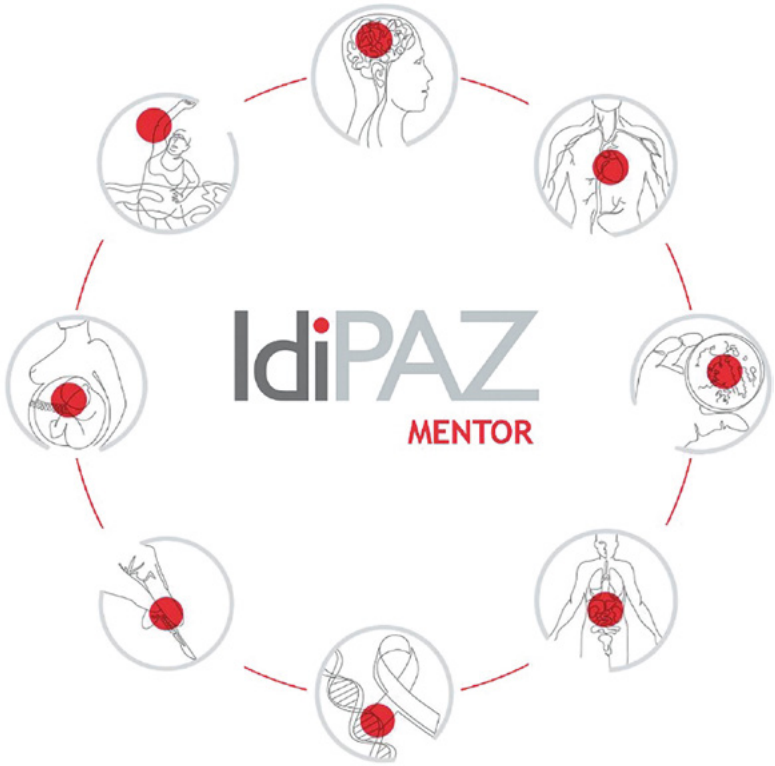
2.7. Mentor and prementor program



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.

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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 (Mª 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
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 INFECTIUS DISEASES
TERESA DEL ROSAL RABÉS	PAEDIATRICS AND INFECTIUS 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

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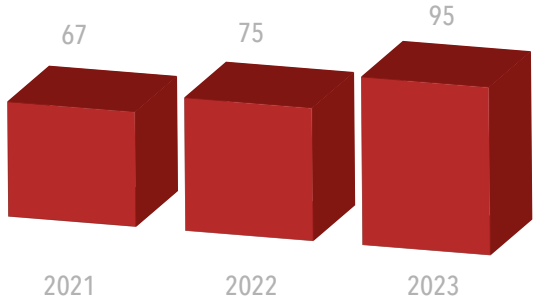
RESEARCHER	SERVICE/RESEARCH GROUP (RG)
BELÉN CALDERÓN LLOPIS	PEDIATRIC INTENSIVE CARE
PEDRO MARÍA RUBIO APARICIO	PEDIATRIC ONCOLOGY
OLGA DE LA SERNA BLÁZQUEZ	PEDIATRIC RESPIRATORY MEDICINE
CLARA UDAONDO GASCÓN	PEDIATRIC RHEUMATOLOGY
ROSA ALCOBENDAS RUEDA	PEDIATRIC RHEUMATOLOGY
JOSÉ LUIS ENCINAS HERNÁNDEZ	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.

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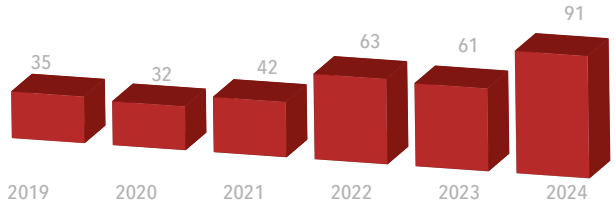
In the 3rd **Mentor Program** 42 senior mentor have collaborated:

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:



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 want to thanks 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.

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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

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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 Obstetricia et Gynecológica Scandinavica	0001-6349	2	3,5	Q1
Acta Otorhinolaryngológica Italica	0392-100X	1	2,1	Q2
Acta Otorrinolaringológica Española	0001-6519	1	0,9	Q3
Acta Paediatrica	0803-5253	3	2,4	Q1
Actas Dermo-Sifiliográficas	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-Psychológical 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**
Angiología	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

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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-Basel	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
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**

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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 Biológical 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

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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 Gynaecológical 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
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 Biológical 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 Obgyn	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

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Frontiers in Public Health	2296-2565	11	3	Q2
Future Cardiology	1479-6678	3	1,6	Q3
Future Oncology	1479-6694	2	3	Q2
Galicia 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
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 Gynecológical 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

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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 of Ect	1095-0680	1	1,8	Q3
Journal of Endocrinológical 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 Microbiológical 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 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-Biológical 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
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

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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
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**
Phlebolymphology	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
Radiología	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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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 Geriatría 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
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

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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	ciberned	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	ciberdem	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	ciberes	Networked Biomedical Research Center for Respiratory Diseases	Carlos III Health Institute	García Río, Francisco	Respiratory Diseases	31/12/2023
CB16/10/00464	ciberfes	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	ciber-bbn	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	ciberehd	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	ciberer	Networked Biomedical Research Center for Rare Diseases	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			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 Immunodecficiencies	31/12/2023

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CB16/11/00286	cibercv	Networked Biomedical Research Center for Cardiovascular Diseases	Carlos III Health Institute	Salaices Sánchez, Mercedes	Vascular Physiology and Pharmacology	31/12/2023
CB16/12/00295	ciberonc	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	ciberinfec	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	itemas	Plataforma ITEMAS	Carlos III Health Institute	de Castro Carpeño, Javier	Experimental Therapies and Biomarkers in Cancer	31/12/2023
PT20/00004	Red Biobancos	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	RICAPPS	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		Red de Investigación en Cronicidad, Atención Primaria y Promoción de la Salud. (RICAPPS)	Carlos III Health Institute	Castell Alcalá, María Victoria	Frailty, Multimorbidity Patterns and Mortality in the Elderly Population Residing in the Community	31/12/2023
PT20/00036	SCReN 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	RICORS-ICTUS	Red de Enfermedades Vasculares Cerebrales	Carlos III Health Institute	Fuentes Gimeno, Blanca	Neurology and Cerebrovascular Diseases	31/12/2024

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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	TerCel ISCIII	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	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) TransplantChild	ERN Paediatric Transplants	ERN European Reference Network	Jara Vega, Paloma	Molecular Hepatology	31/12/2023
	eatris European infrastructure for translational medicine	EATRIS European Infraestructure 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
	ISC Instituto de Salud Carlos III ecdc	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

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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.

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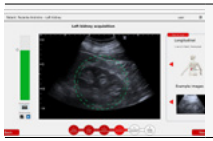


19/04/2023

El Hospital La Paz usa inteligencia artificial para diagnosticar a los astronautas

18/05/2023

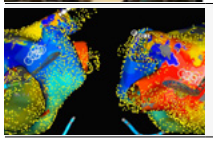
El Hospital La Paz participa en un estudio internacional que revela variantes genéticas asociadas a COVID-19 grave y posibles dianas terapéuticas.

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 anestesistas.



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 cardiacas.

24/06/2023

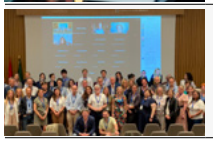
El hospital La Paz trata las secuelas del covid con una unidad especial.

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'

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SCIENTIFIC REPORT 2023

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 disfagia

14/12/2023

Seis de los Díez 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.

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2.10.3. Social networks

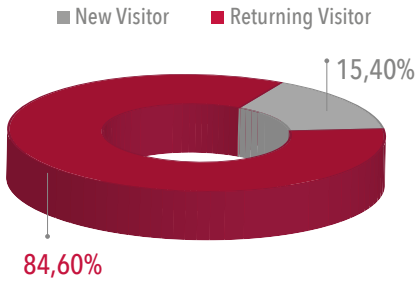
On the other hand, news that includes the work of our researchers, data about courses, grants and other news of interest to the public, are published in the main social networks. Our Twitter account, @IdiPAZscience, has the largest number of followers among the institutes of the Community of Madrid.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

Twitter
Followers: 3338

Facebook
Followers: 497

Instagram
Followers: 1243

Youtube
Followers: 42



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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25 Abr. Nº 25/2023: Día de la Propiedad Intelectual
04 May. Nº 26/2023: ¡Cuídate! 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

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: Soslticio de verano
28 Jun. Nº 43/2023: Día Internacional del Orgullo LGTBI
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

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

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: Movember
16 Nov. Nº 68/2023: Píldora formativa REGIC sobre Ciencia Abierta
24 Nov. Nº 69/2023: Día contra la violencia de género
01 Dic. Nº 70/2023: Día Mundial contra el SIDA
05 Dic. Nº 71/2023: IdiPAZ finalista en los Premios Diversidad
15 Dic. Nº 72/2023: Actividades por el Día de la Mujer y la Niña en la Ciencia

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 asses 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*

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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-

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

- Conduct Code
- Code of Ethics and Good Scientif 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 internal 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

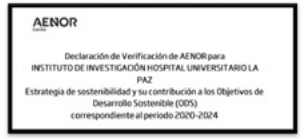
AENOR
Certificado del Sistema de Gestión de la Responsabilidad Social
INSTITUTO DE INVESTIGACIÓN HOSPITAL UNIVERSITARIO LA PAZ

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


AENOR
Declaración de Verificación de AENOR para INSTITUTO DE INVESTIGACIÓN HOSPITAL UNIVERSITARIO LA PAZ
Estrategia de sostenibilidad y su contribución a los Objetivos de Desarrollo Sostenible (ODS) correspondiente al periodo 2020-2024

AENOR
ESTRATEGIA SOSTENIBLE (ODS)

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

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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 no 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

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-

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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 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

12 CONSUMO E PRODUÇÃO RESPONSÁVEIS

17 PARCERIAS E MEIOS DE IMPLEMENTAÇÃO

17.6 Enhance North-South, South-South and triangular regional and international cooperation 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:

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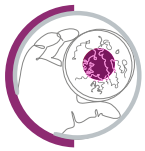
3.1 Neurosciences Area

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

3.2 Cardiovascular Area

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



3.3 Infectious Diseases and Immunity Area

Documents: 283 | **Originals:** 224 | **D1:** 56 | **Q1:** 141

3.4 Large System Pathologies Area

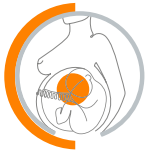
Documents: 296 | **Originals:** 219 | **D1:** 49 | **Q1:** 159

3.5 Cancer and Human Molecular Genetics Area

Documents: 235 | **Originals:** 195 | **D1:** 51 | **Q1:** 122

3.6 Surgery, Transplant and Health Technologies Area

Documents: 208 | **Originals:** 152 | **D1:** 29 | **Q1:** 84



3.7 Maternal Infant Child and Youth Research Area

Documents: 256 | **Originals:** 205 | **D1:** 28 | **Q1:** 102

3.8 Multidisciplinary Research in Healthy Aging Area

Documents: 54 | **Originals:** 46 | **D1:** 2 | **Q1:** 21

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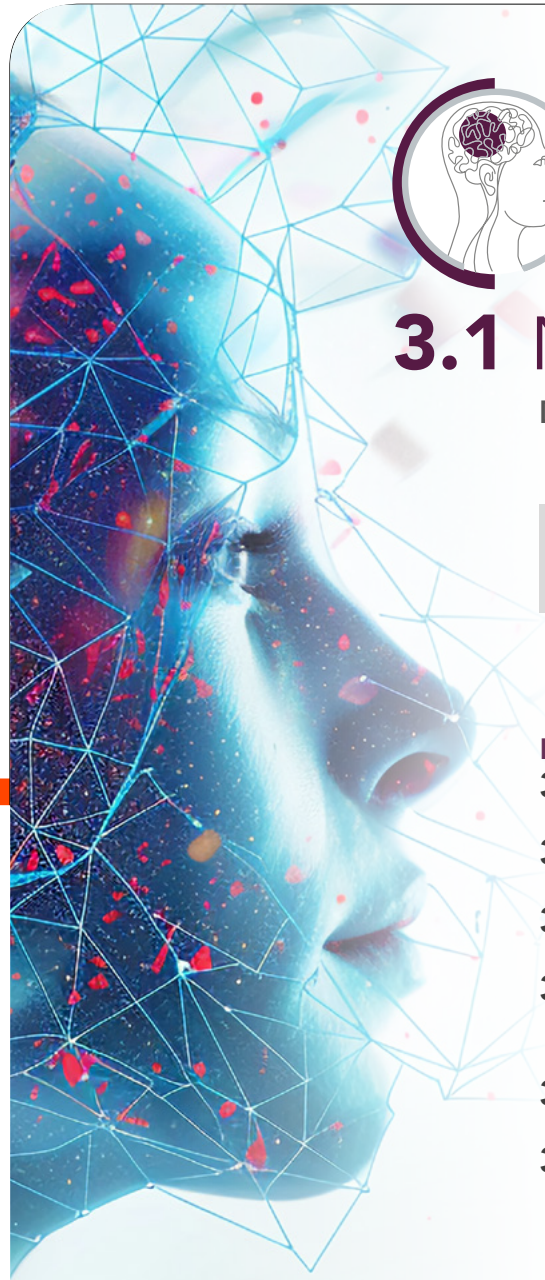

3.1 Neurosciences Area

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

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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-Altares 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-Collazo 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, Puertas I, Barranco AT, Fuentes B, de Leciñana MA, Alonso-López E, Bravo SB, Miranda-Carús ME, Montero-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-Ruíz 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-Alemany 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

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3.1.1 Psychiatry and Mental Health Group

Publications: 24 | **Q1:**13

COMPOSITION

María Fe Bravo Ortíz.
Jefa del servicio de Psiquiatría, Psicología Clinica y Salud Mental. Hospital Universitario La Paz. Profesora Asociada CCSS. Facultad de Medicina. Universidad Auntónoma 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 OBJETIVES

- 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

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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-Ortiza 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, Mediavillab 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, Olfson 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, Olfson 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, Felez-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 poandemic 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, Félez-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-San-José 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, Díaz-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, Felez-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 Adoles 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

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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

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- **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. *Managment centre: FIBHULP*
- **Bravo Ortiz MF.** Contrato garantía juvenil ayudante de investigación. (PEJ-2021-AI/SAL-22352). CM. 2023-Ongoing. *Managment 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. *Managment centre: FIBHULP*
- **Bravo Ortiz MF.** Estudio sobre el impacto de la implantación del programa ARSUIC en la prevención de la conducta suicida en el área de influencia del Hospital Universitario La Paz. (BRAVO ORTIZ PI-2116). UCICEC. 2015-Ongoing. *Managment 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. *Managment 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. *Managment 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. *Managment 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. *Managment 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. *Managment centre: FIBHULP*
- **Palao Tarrera A.** Intensificación de la actividad investigadora de investigadores participantes del programa mentor. FIBHULP. 2023-2024. *Managment 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 suicidio. (PI19/00941). ISCIII. 2020-2024. *Managment centre: FIBHULP*
- **Rodríguez Vega B.** Traducción y validación de los instrumentos reflective functioning questionnaire e inventary of personality onganization. (Rodríguez VEGA PI-2956). Fundación Vasca de Innovacion e Investigación Sanitarias. 2018-Ongoing. *Managment centre: FIBHULP*
- **Villanueva Peña R. A** Randomnized, Double-blind, Multicenter, Parallel-group, Placebo-controlled. Study to evaluated the efficacy, safety, and tolerability of aticaprant 10 mg as adjunctive therapy in adult participants with major depressive disorder (MDD) with moderated-to-severe anhedonia and inadequate response to current antidepressant therapy protocol 67953964MDD3001 VENTURA-1;PAHASE 3. Janssen Pharmaceutica. 2023-2024. *Managment 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 & Commercializacion, 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 antidepresivo actual, incluido un isrs o un irsn.
  Type/Phase: EOm 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 antidepresivos en pacientes adultos y de edad avanzada con trastorno depresivo mayor con síntomas de insomnio que respondieron de manera inadecuada al tratamiento con antidepresivos 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 antidepresivo 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.

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3.1.2 Neurology and Cerebrovascular Diseases Group

Publications: 62 | **Q1:**35

COMPOSITION

Exuperio Díez Tejedor.
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- **David Hernández Herrero.** Facultativo Especialista de Área en Rehabilitación y Medicina Física. Hospital Universitario La Paz
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- **Manuel Lara Lara.** Facultativo Especialista de Área en Neurología. Hospital Universitario La Paz
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- **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

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- **Marta Naranjo Castresana.** Facultativo Médico Especialista de Área en Neurofisiología Clínica. Hospital Universitario La Paz
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- **Gabriel Torres Iglesias.** Contrato Río Hortega. FIBHULP
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- **Arturo Ugalde Canitrot.** Facultativo Especialista de Área en Neurofisiología Clínica. Hospital Universitario La Paz

3.1 Neurosciences Area

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 remyelinizating 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 neuropsy-chological) and anthropological factors influencing functional recovery and reintegration of stroke pa tients 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 criptogenic 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.

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- 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 autoinmune diseases
- CGRP-pathway drugs in elderly patients with refractory migraine
- Multicentric colaboration in post-COVID related headache investigation
- Features and outcome of chronic refractory cluster headache treated with greater occipital nerve stimulation
- Cronic 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 polymorfism 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 Friedrich'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 fotometric strategies.

Autoinmune encephalitis and other autoinmune neurological diseases

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

Infectious diseases

- Study of neurological symptoms after COVID19 recovery in patients refer to specific consutation
- 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 placeb.

EPILEPSY

- Analysis of factors influencing the recurrence of seizures, tolerance and adherences to drugs, during the first monotherapy in patients with epilepsia.
- 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: peculiarieties 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

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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 bet - ween child cerebral palsy and PEF in paediatric patients.

BRAIN PLASTICITY AND REPAIR AFTER CEREBRAL 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, Diez 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 espectroscopía ex vivo.[dissertation]. *Madrid: UAM: 2023(23/03/2023). Director: Roda Frade, José Maria.*
- **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: UPM: 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 Ledged Beam Walking Test en modelos experimentales murinos de ictus[dissertation]. *Madrid: UAM: 2023(15/07/2023). Director: Gutiérrez Fernández M.*
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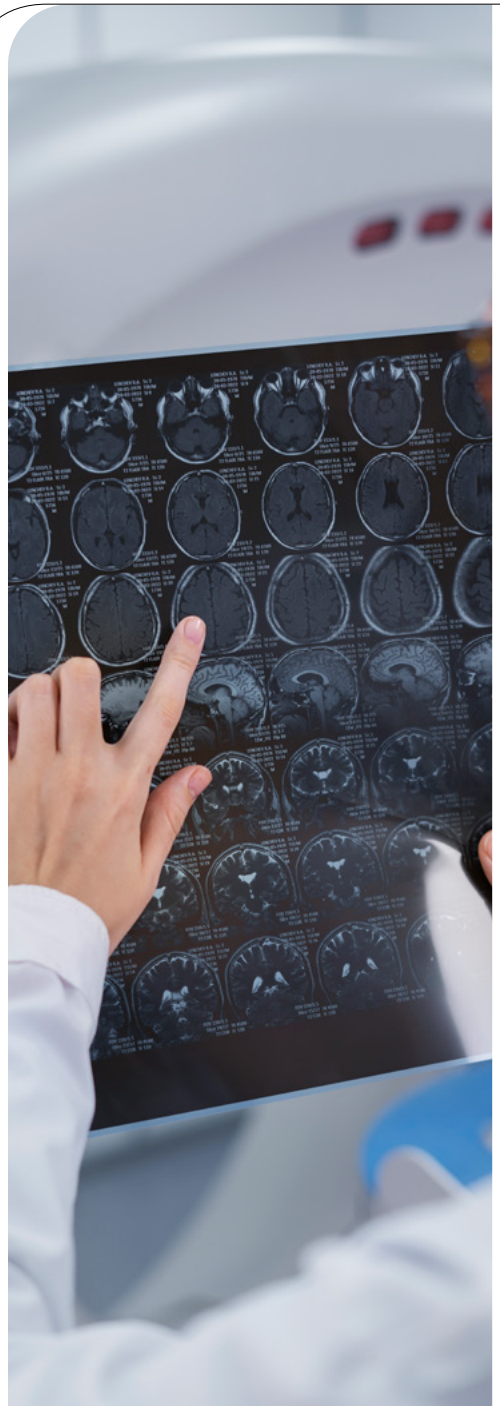

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- **Wang Y, Wang T, Montero-Pedrazuela A, Guadaño-Ferraz A, Rausell E.** Thyroid hormone transporters MCT8 and OATP1C1 are expressed in pyramidal neurons and interneurons in the adult motor cortex of human and macaque brain. Int J Mol Sci. 2023; 24(4): 3207. Article. IF: 4.9; Q1

Research projects

- **Aguilar-Amat Prior MJ.** Registro de pacientes en una clinica de primera crisis epileptica. Laboratorios Bial S.A. 2016-Ongoing. *Managment centre: FIBHULP*
- **Alonso de Leciñana Cases M.** Utilidad de la telemedicina mediante dispositivos móviles en el código Ictus y la detección precoz de signos radiológicos de afectación pulmonar por Sars-Cov 2 en la red de Ictus de Madrid. Ministerio de Asuntos Internos y Comunicaciones de Japón. 2021-Ongoing. *Managment centre: FIBHULP*
- **Alonso López E.** Contrato Rio Hortega (CM20/00047). ISCIII-MICINN. 2021-2023. *Managment centre: FIBHULP*
- **Díaz de Terán Velasco FJ.** Influencia del estrés como factor precipitante de la crisis en pacientes con epilepsia. UCB Pharma S.A. 2015-Ongoing. *Managment centre: FIBHULP*
- **Díaz de Terán Velasco FJ.** Sensibilización central y percepción del dolor en pacientes con cefalea en racimos. Allergan S.A. 2019-Ongoing. *Managment centre: FIBHULP*
- **Díez Tejedor E.** Actualización y renovación de la actividad en neurología crónica hospitalaria registro de anticuagulación en ictus. Boehringer Ingelheim España S.A. 2007-Ongoing. *Managment centre: FIBHULP*
- **Díez Tejedor E.** AMASCIS-02. Alogenic adipose tissue-derived mesenchymal stem cells in ischemic stroke. A phase IIB multicenter double blind placebo controllled clinical trial (PIC18/00016). ISCIII. 2019-2024. *Managment centre: FIBHULP*
- **Díez Tejedor E.** Informatización de la gestión de pacientes. Unidad de neuroinmunología y esclerosis múltiple en el Hospital Universitario La Paz. Sanofi Aventis S.A. 2014-Ongoing. *Managment centre: FIBHULP*
- **Díez Tejedor E.** Moléculas moduladores del sistema inmune como biomarcadores de respuesta al tratamiento en Esclerosis Múltiple: estudio traslacional. (PI21/00918). ISCIII. 2022-2023. *Managment centre: FIBHULP*
- **Díez Tejedor E.** Pacientes con esclerosis múltiple: análisis de la respuesta a tratamientos biológicos. Fundación Biogen Idec. 2013-Ongoing. *Managment centre: FIBHULP*
- **Díez Tejedor E.** Pacientes con esclerosis múltiple: análisis de la respuesta al natalizumab. Schering España S.A. 2011-Ongoing. *Managment 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. *Managment 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. *Managment centre: FIBHULP*
- **Frank García A.** Análisis antropológico de la sobrecarga del cuidador principal de personas con demencia. estrategias de comunicación. Various funders. 2018-Ongoing. *Managment 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. *Managment 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. *Managment centre: FIBHULP*
- **Fuentes Gimeno B.** Ensayo clínico piloto dulcinea (dubbing language-therapy cinemabased in aphasia post-stroke. A feasibility crossover pilot-trial. Fundación la Caixa. 2019-2023. *Managment centre: FIBHULP*

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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. Daichii 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 Leciñana 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 (FI18/00026). 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 butolínica 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. Fundacion 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 observacional 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 carioembolico. Estudio Coala-IC. Daiichi Sankyo España. 2020-Ongoing. *Managment centre: FIBHULP*
- **Rodríguez de Rivera Garrido FJ.** Consorcio europeo de ataxia de Friedreich para la realizacion 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

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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 Sl
  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 II/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: II
  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: II
  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 fxia 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 fxia -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 reperfusión en pacientes con infarto cerebral agudo tratados con trombectomía mecánica. estudio glias-tm.
  Type/Phase:
  Sponsored by: Fundacion Para La Investigacion Biomedica 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 supervisar 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. adorext (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: Corcept 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

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- **Pascual Pascual SI.** Estudio de fase 4 de nusinersen (biib058) en pacientes con atrofia muscular espinal que recibieron onasemnogene abeparvovec.
  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 (appreziate study). estudio observacional multicéntrico para describir la persistencia en pacientes con esclerosis múltiple recurrente-remitente con actividad baja a moderada sin tratamiento previo, que han iniciado tratamiento con ozanimod (zeposia®) en la práctica clínica en españa (estudio appreziate)..
  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 (mgg).
  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 cemdisirán 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, Lorrio González S, Negredo 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, Martíns 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 Estudio 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 Leciñana M, Díez Tejedor E, Fuentes Gimeno B, Rodríguez-Pardo de Donlebun 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

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3.1.3 Neuroprotective Strategies in Neurodegenerative Diseases

Publications: 12 | **Q1:**11

COMPOSITION

Ana Isabel Rojo Sanchís.
Profesor Permanente (Profesor Contratado Doctor). Dpto. Bioquímica. Facultad Medicina. Universidad Autónoma de Madrid

- **Daniel Carnicero Senabre.** Investigadora Predoctoral. Universidad Autónoma de Madrid
- **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
- **José Jiménez Villegas.** Investigador Predoctoral. Universidad Autónoma de Madrid
- **Ángela Martínez Valverde.** Cientifico titular CSIC. IIB "Alberto Sols"/UAM-CISC
- **Patricia Rada Llano.** Investigadora Postdoctoral. CIBERNED

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 ould 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 Martínes 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(45089). Director: García Yagüe AJ, Cuadrado Pastor A*

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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
- **Bourgonje AR, Kloska D, Grochot-Przeczek A, Feelisch M, Cuadrado A, van Goor H.** Personalized redox medicine in inflammatory bowel diseases: an emerging role for HIF-1α and NRF2 as therapeutic targets. Redox Biol. 2023; 60: 102603. Article. IF: 10.7; Q1
- **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
- **Ferreira V, Folgueira C, García-Altares 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; Q1
- **García-Martínez I, Alen R, Pereira L, Povo-Retana A, Astudillo AM, Hitos AB, Gómez-Hurtado I, López-Collazo 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
- **García-Yagüe AJ, Cuadrado A.** Mechanisms of NURR1 regulation: Consequences for its biological activity and involvement in pathology. Int J Mol Sci. 2023; 24(15): 12280. Review. IF: 4.9; Q1
- **Laiglesia LM, Escoté X, Sáinz N, Félix-Soriano E, Santamaría E, Collantes M, Fernández-Galilea M, Colón-Mesa I, Martínez-Fernández L, Quesada-López T, Quesada-Vázquez S, Rodríguez-Ortigosa C, Arbones-Mainar JM, Valverde AM, Martíinez JA, Dalli J, Herrero L, Lorente-Cebrián S, Villarroya F, Moreno-Aliaga MJ.** Maresin 1 activates brown adipose tissue and promotes browning of white adipose tissue in mice. Mol Metab. 2023; 74: 101749. Article. IF: 7.0; D1
- **Marsal-Beltrán A, Rodríguez-Castellano A, Astiarraga B, Calvo E, Rada P, Madeira A, Rodríguez-Peña MM, Llauradó G, Núñez-Roa C, Gómez-Santos B, Maymó-Masip E, Bosch R, Frutos MD, Moreno-Navarrete JM, Ramos-Molina B, Aspichueta P, Joven J, Fernández-Real JM, Quera JC, Valverde AM, Pardo A, Vendrell J, Ceperuelo-Mallafré V, Fernández-Veledo S.** Protective effects of the succinate/SUCNR1 axis on damaged hepatocytes in NAFLD. Metabolism. 2023; 145: 155630. Article. IF: 10.8; D1
- **Palomino-Antolín A, Decouty-Pérez C, Farré-Alins V, Narros-Fernández P, López-Rodríguez AB, Álvarez-Rubal M, Valencia I, López-Muñoz F, Ramos E, Cuadrado A, Casas AI, Romero A, Egea J.** Redox regulation of microglial inflammatory response: Fine control of NLRP3 inflammasome through Nrf2 and NOX4. Antioxidants. 2023; 12(9): 1729. Article. IF: 6.0; Q1
- **Peyman M, Barroso E, Turcu AL, Estrany F JR, Smith D, Jurado-Aguilar J, Rada P, Morisseau C, Hammock BD, Valverde AM, Palomer X, Galdeano C, Vázquez S, Vázquez-Carrera M.** Soluble epoxide hydrolase-targeting PROTAC activates AMPK and inhibits endoplasmic reticulum stress. Biomed Pharmacother. 2023; 168: 115667. Article. IF: 6.9; Q1
- **Valverde Araceli M, Naqvi Raza A, Naqvi Afsar R.** Global profiling of differentiating macrophages identifies novel functional long non-coding rnas regulating polarization and innate immune responses. Biorxiv. 2023; 536159. Preprint. Not indexed
- **Zhang MJ, Barroso E, Ruart M, Peña L, Peyman M, Aguilar-Recarte D, Montori-Grau M, Rada P, Cugat C, Montironi C, Zarei M, Jurado-Aguilar J, Camins A, Balsinde J, Valverde AM, Wahli W, Palomer X, Vázquez-Carrera M.** Elafibranor upregulates the EMT-inducer S100A4 via PPARβ/δ. Biomed Pharmacother. 2023; 167: 115623. Article. IF: 6.9; Q1

Research projects

- **Cuadrado Pastor A, Seabra M.** NRF2 as a novel therapeutic target in age-related macular degeneratio (HR22-00569). Fundación La Caixa. 2022-2026. *Managment centre: UAM*
- **Cuadrado Pastor A.** Activation of NRF2 by 6-MISTC, role in AD (2021/0175). KINJIRUSHI Ltd. Co. 2021-2023. *Managment centre: Fundación UAM*
- **Cuadrado Pastor A.** Bench to bedside transition for pharmacological regulation of NRF2 in noncommunicable diseases (1004040104). Europeo. Programa COST. 2021-2025. *Managment 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. *Managment centre: UAM*
- **Cuadrado Pastros A, Rojo Sanchís AI.** Desarrollo de nuevos fármacos antiinflamatorios basados en la activación del factor de transcripción NRF2 (PDC2021-121421-I00). Agencia Estatal de Investigación. 2021-2023. *Managment centre: UAM*
- **Cuadrado Pastros A, Rojo Sanchís AI.** El factor de transcripción NRF2 en la patofisiología de la enfermedad de Alzheimer (1004020167). MICIN. 2020-2023. *Managment centre: UAM*
- **Cuadrado Pastros A, Rojo Sanchís AI.** Optimización de un nuevo activador del factor de transcripción NRF2 para frenar la progresión de NASH (1004020190). Agencia Estatal de Investigación. 2022-2024. *Managment centre: UAM*
- **Cuadrado Pastros A, Rojo Sanchís AI.** Papel del factor de transcripción NRF2 en protección sináptica en las Taupatías (1004020200). MICIN. 2023-2026. *Managment centre: UAM*
- **Martínez Valverde A.** Extracelular vesicles: new insights into their role in liver-pancreas interactome in T2D. European Association for the Study of Diabetes. 2021-2023. *Managment centre: CIBER*

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- **Cuadrado Pastor A.** Centro de Investigación Biomédica en Enfermedades Neurodegenerativas (CIBERned). ISCIII (31/12/2023). UAM
- **Martínez Valverde A.** Centro de Investigación Biomédica en Red de Diabetes y Enfermedades Metabólicas Asociadas (CIBERdem). ISCIII. (31/12/2023). CSIC
- **Cuadrado Pastor A, Rojo Sanchís AI.** Bench to bedside transition for pharmacological regulation of NRF2 in noncommunicable diseases (BenBedPhar). 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 October15.
- **Cuadrado Pastor A, Fernández-Ginés R, León Martínez R, Encinar JA, Rodríguez Franco MI, García López MG, Rojo Sanchís AI, inventors.** UAM, CSIC, UMH y Fundación de Investigación Biomédica del Hospital Universitario de la Princesa, assigness. Treatment of NRF2-Related diseases. PCT/2022/382025.1.

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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 OBJETIVES

- 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 fuxes in brain as potential targets to prevent excitotoxicity, associated with brain disfunctions like ischemia, o 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, a2 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. *Managment centre: UAM*
- **López Corcuera B.** El transportador neuronal de glicina GlyT2 en hiperplexia: una patología glicinérgica del desarrollo. Fundación Ramón Areces. 2021-2024. *Managment 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. *Managment centre: UAM*

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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 translate, 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 STAUFEN 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 PARKIN and PINK1 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 mithocondria between neurons and astrocytes in a-synuclein associated- PD.

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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 STAUFEN 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 derivads de ácido araquidónico con afinidad por el transportador de anandamide. P200001920. 2020 nov 5

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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 OBJETIVES

- 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, Gónzalez-Suarez I, Gómez-Palomares 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. *Managment centre: Hospital Universitario de Getafe*

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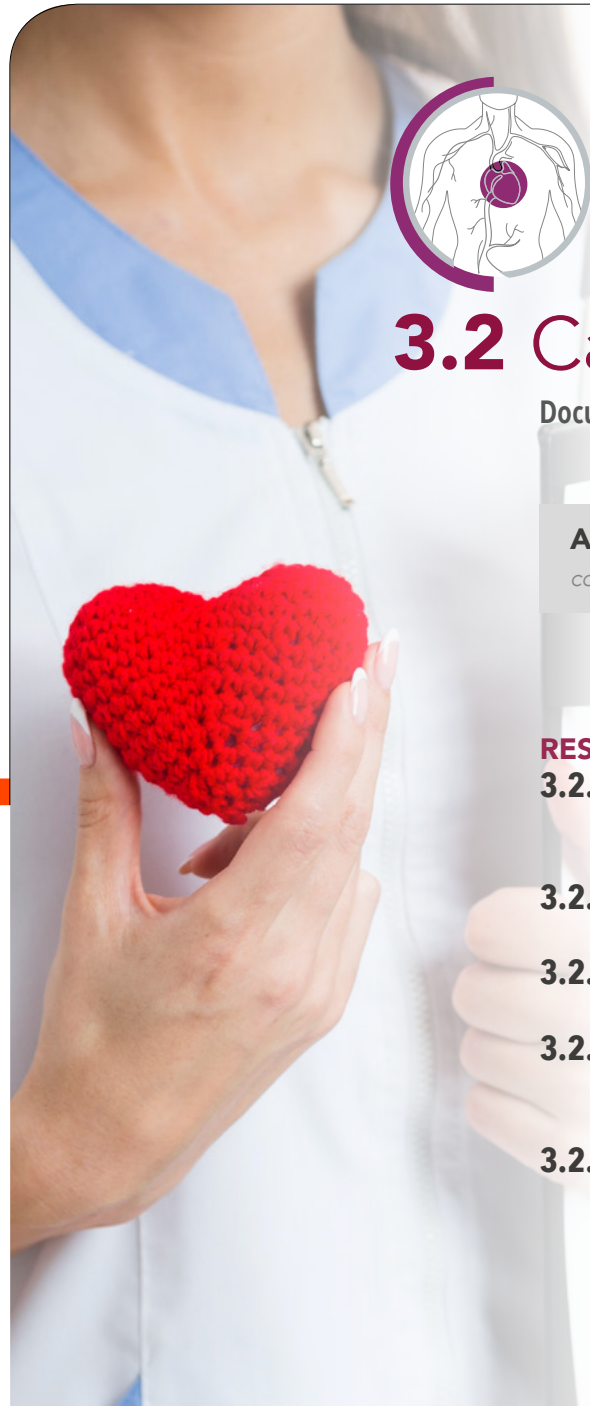

3.2 Cardiovascular Area

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-Larraya Aguado

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Strategic Objectives	Development forecast for the coming years:	Actions
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.	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.	Foster and support translational research lines.
	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.	Establish relationships/ collaboration/alliances with other IdiPAZ research groups and with groups from other institutions and maintain those already started.
	Resources should be focused on priorities established by the researchers themselves, or directly by IdiPAZ after analyzing the scientific production of each group.	Analyze the scientific production of each group
	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.	Encourage participation in clinical trials of researchers.

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): euad297. 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

Divisón-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

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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.
Investigadora Senior (Contrato Miguel Servet-Tipo I). Jefa de Laboratorio. FIBHULP

- **Joaquín Jesús Alonso Martín.** Jefe de Servicio de Cardiología. Hospital Universitario Getafe
- **Isabel Antorrena Miranda.** Facultativo Especialista de Área en Cardiología. Hospital Universitario La Paz
- **Eduardo Armada Romero.** Facultativo Especialista de Área en Cardiología. Hospital Universitario La Paz
- **Paula Awamleh García.** Facultativo Especialista de Área en Cardiología. Hospital Universitario Getafe
- **Andrea Bueno Sen.** Investigadora Predoctoral. FIBHULP
- **Paula Cantolla Pablo.** Investigadora Predoctoral. FIBHULP
- **Juan Caro Codón.** Facultativo Especialista de Área en Cardiología. Hospital Universitario La Paz
- **Almudena Castro Conde.** Facultativo Especialista de Área en Cardiología. Hospital Universitario La Paz
- **Regina Dalmau González-Gallarza.** Facultativo Especialista de Área en Cardiología. Hospital Universitario La Paz
- **Francisco Javier Domínguez Melcón.** Facultativo Especialista de Área en Cardiología. Hospital Universitario La Paz
- **Carlos Escobar Cervantes.** Facultativo Especialista de Área en Cardiología. Hospital Universitario La Paz
- **María Jesús Espinosa Pascual.** Facultativo Especialista de Área en Cardiología. Hospital Universitario Getafe
- **Jaime Fernández de Bobadilla Osorio.** Facultativo Especialista de Área en Cardiología. Hospital Universitario La Paz
- **Lucía Fernández Gasso.** Facultativo Especialista de Área en Cardiología. Hospital Universitario La Paz
- **Alfonso Fraile Sanz.** Facultativo Especialista de Área en Cardiología. Hospital Universitario Getafe
- **Javier Fuertes Beneítez.** Facultativo Especialista de Área en Cardiología. Hospital Universitario La Paz
- **Guillermo Galeote García.** Facultativo Especialista de Área en Cardiología. Hospital Universitario La Paz
- **Marta Gil Fernández.** Investigadora Predoctoral. IIB "Alberto Sols"
- **Elvira Ana González García.** Facultativo Especialista de Área en Cardiología. Hospital Universitario La Paz
- **Teresa González Gallego.** Investigadora Senior (Contrato Ramón y Cajal). IIB "Alberto Sols"
- **Gabriela Guzmán Martínez.** Facultativo Especialista de Área en Cardiología. Hospital Universitario La Paz
- **Ángel Manuel Iniesta Manjavacas.** Facultativo Especialista de Área en Cardiología. Hospital Universitario La Paz
- **Bárbara Izquierdo Coronel.** Facultativo Especialista de Área en Cardiología. Hospital Universitario de Getafe
- **Santiago Jiménez Valero.** Facultativo Especialista de Área en Cardiología. Hospital Universitario La Paz
- **Alfonso Jurado Román.** Facultativo Especialista de Área en Cardiología. Hospital Universitario La Paz
- **Teresa López Fernández.** Facultativo Especialista de Área en Cardiología. Hospital Universitario La Paz
- **Esteban López de Sá y Areses.** Jefe de Sección de Cuidados Intensivos Cardiológicos. Hospital Universitario La Paz
- **José Luis López-Sendón Hentschel.** Director Científico IdiPAZ. Hospital Universitario La Paz
- **José Luis Merino Llorens.** Facultativo Especialista de Área en Cardiología. Director Unidad Investigación en Arritmias/Electrofisiología Robótica. Hospital Universitario La Paz
- **Pablo Merás Colunga.** Médico Adjunto Cardiología. Hospital Universitario La Paz
- **María del Mar Moreno Yangüela.** Jefe de Sección de Imagen Cardiaca. Hospital Universitario La Paz
- **René Olsen Rodríguez.** Médico Interno Residente. Hospital Universitario de Getafe
- **Rafael Peinado Peinado.** Jefe de Sección de Arritmias y Electrofisiología. Hospital Universitario La Paz
- **Jesús Ángel Perea Egido.** Facultativo Especialista de Área en Cardiología. Hospital Universitario de Getafe
- **Esther Pérez David.** Facultativo Especialista de Área en Cardiología. Hospital Universitario La Paz
- **Inés Ponz de Antonio.** Facultativo Especialista de Área en Cardiología. Hospital Universitario La Paz
- **Elsa Prieto Moriche.** Facultativo Especialista de Área en Cardiología. Hospital Universitario La Paz
- **Elena Refoyo Salicio.** Facultativo Especialista de Área en Cardiología. Hospital Universitario La Paz
- **Juan Ramón Rey Blas.** Facultativo Especialista de Área en Cardiología. Hospital Universitario La Paz
- **Luis Riera del Moral.** Facultativo Especialista de Área en Angiología y Cirugía Vascular. Hospital Universitario La Paz. Profesor Asociado Departamento de Cirugía. Universidad Autónoma de Madrid
- **Adriana Rodríguez Chaverri.** Facultativo Especialista de Área en Cardiología. Hospital Universitario La Paz
- **Inmaculada Roldán Rabadán.** Facultativo Especialista de Área en Cardiología. Hospital Universitario La Paz
- **Sandra Rosillo Rodríguez.** Facultativo Especialista de Área en Cardiología. Hospital Universitario La Paz
- **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

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STRATEGIC OBJETIVES

- 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 reinforcedthrough 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 desfibrilador 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
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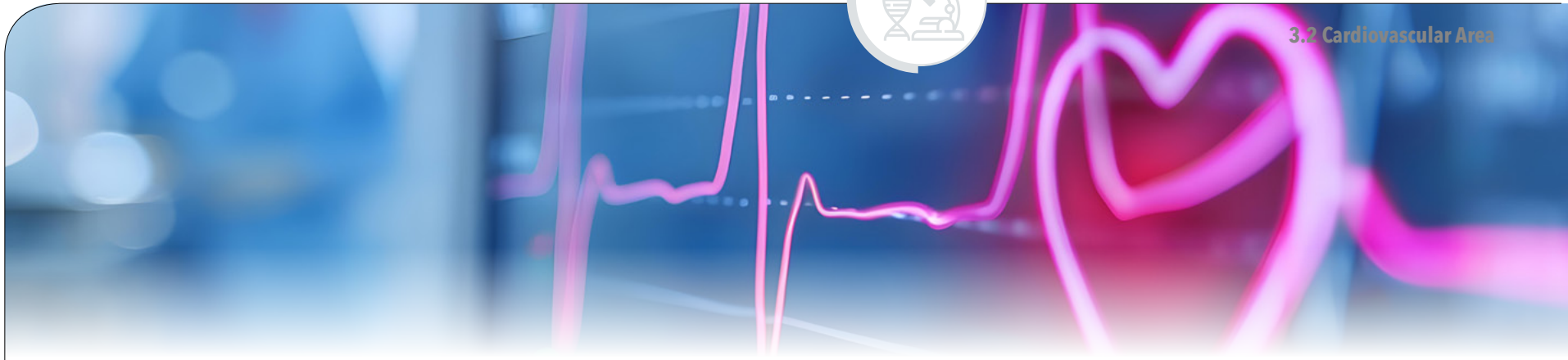
Research projects

- **Antorrena Miranda MI.** International study of comparative health effectiveness with medical and invasive approaches - estudio internacional comparativo de la eficacia sanitaria con enfoques médicos e invasivos. New York University School Of Medicine. 2013-Ongoing. *Managment centre: FIBHULP*
- **Fernández Velasco M.** Determinación de nuevos mediadores del sistema inmune innato como biomarcadores de daño cardiaco en el infarto agudo de miocardio. Sociedad Española de Cardiología. 2019-Ongoing. *Managment centre: FIBHULP*
- **Fernández Velasco M.** New inflammatory targets for atrial myopathy associated with heart failure (PI20/01482). ISCIII. 2021-2023. *Managment centre: FIBHULP*
- **Fernández Velasco M.** Nodi, una nueva diana terapeutica en el tratamiento del infarto agudo de miocardio. FIBHULP. 2022-Ongoing. *Managment centre: FIBHULP*
- **Guzmán Martínez G.** Inmunidad en sars-cov-2 y riego cardiovascular. cohorte prospectiva. FIBHULP. 2020-Ongoning. *Managment centre: FIBHULP*
- **Guzmán Martínez G.** Marcadores precoces de disfunción ventricular derecha y alteraciones de la circulación pulmonar en pacientes afectos de hipertensión pulmonar. Siemens Heatlhcare S.L.. 2018-Ongoning. *Managment centre: FIBHULP*
- **Jiménez Valero S.** Análisis de correlación entre los marcadores de inflamación y morfología de placas coronarias mediante tomografía de coherencia óptica y tec multicorte: Estudio IVI. Abbott Laboratories S.A. 2009-Ongoning. *Managment centre: FIBHULP*
- **Jiménez Valero S.** Estudio en modelo porcino para evaluar la utilidad de la tomografía de coherencia óptica en el análisis de las lesiones endocárdicas producidas por radiofrecuencia. Medlumics S.L. 2015-Ongoning. *Managment centre: FIBHULP*
- **Jurado Román A.** ASSIST_AI scalable solution for ST myocardial infarction. FIBHULP. *Managment centre: FIBHULP*
- **López-Sendón Hentschel JL.** Biomarcadores en la cardiotoxicidad por agentes antineoplás: rendimiento dianóstico. Boehringer Ingelheim España S.A. 2015-Ongoning. *Managment centre: FIBHULP*
- **López-Sendón Hentschel JL.** Colchicine cardiovascular outcome trial_COLCOT. Varios Financiadores. 2017-Ongoning. *Managment centre: FIBHULP*
- **López-Sendón Hentschel JL.** Colchicine coronavirus sars-cov2 trial (COLCORONA-covid-19). 2020-Ongoning. *Managment centre: FIBHULP*
- **López-Sendón Hentschel JL.** Predicción de riesgo de cardiotoxicidad en las unidades de cardiooncología. Valor de la genética y diferentes biomarcadores. El registro cardiotox (PMP22/00098). ISCIII. 2023-2025. *Managment centre: FIBHULP*
- **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) (PI22/00278). ISCIII. 2023-2025. *Managment centre: FIBHULP*
- **Merino Llorens JL.** Addressing multimorbidity in elderly atrial fibrillation patients through interdisciplinary, tailored, patient-centred care pathways. UE. 2020-2026. *Managment centre: FIBHULP*
- **Merino Llorens JL.** Comparative safety evaluation of atrial fibrillation by catheter with tissue temperature control mode (POWER FAST V). Medtronic. 2023-Ongoing. *Managment centre: FIHULP*
- **Merino Llorens JL.** EHRA-PATHS Addressing multimorbidity in elderly atrial fibrillation patients through interdisciplinary, tailored, patient-centered care pathways (GA 945260). UE. 2021-Ongoing. *Managment centre: FIHULP*
- **Merino Llorens JL.** El vectorcaidiograma como herramienta de caracterización no invasiva de iá dinámtca de activación y de i-a presencia y locauzación de zonas de conducción lenta en los circuitos de flijter auricutár atípico tzquierdo mediante vectorcardiograma. Arrhythmia Network Technology S.L. 2018-Ongoning. *Managment centre: FIBHULP*
- **Merino Llorens JL.** High radiofrequency power for fast and safe pulmonary veins ablastion-a pilot observational study (POWERFAST III) (PI18/01522). ISCIII. 2018-Ongoning. *Managment centre: FIBHULP*
- **Merino Llorens JL.** HosmartAI Hospital Smart development based on AI (GA 101016834). UE. 2021-2024. *Managment centre: FIHULP*



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- **Merino Llorens JL.** Hospital Smart development based on AI. UE. 2020-2024. *Managment 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. *Managment centre: FIHULP*
- **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. *Managment centre: FIHULP*
- **Merino Llorens JL.** Registro retrospectivo de identificación de factores cardiovasculares de mal pronóstico en pacientes covid-19 (CARD-covid). Medtronic Ibérica S.A. 2020-Ongoning. *Managment 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-Ongoning. *Managment 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 activacion en pacientes con taquicardias auriculares macroreentrantes. Medtronic Iberica S.A. 2019-Ongoning. *Managment 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-Ongoning. *Managment centre: FIBHULP*
- **Peinado Peinado R.** Papel de los receptores del sistema inmune innato en el desarrollo y evoluación de la fibrilación auricular. Medtronic Iberica S.A. 2021-Ongoning. *Managment 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-Ongoning. *Managment centre: FIBHULP*
- **Peinado Peinado R.** Registro de pacientes con cardipatía congénita del adulto portadores de un sistema de terapia de resincronización cardiaca (RETRACA). Abbott Medical España S.A. 2017-Ongoning. *Managment centre: FIBHULP*
- **Peinado Peinado R.** Utilidad de los algoritmos de diagnostico diferencial electrocardiografico de las taquicardias regulares de qrs ancho en pacientes con cardiopatias congenitas de adulto. Medtronic Iberica S.A. 2019-Ongoning. *Managment 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. *Managment centre: FIBHULP*
- **Pérez David E.** Fibrosis micocárdica en transposición de grandes vasos y ventrículo derecho sitémico: valoración mediante técnicas de imagen y asociación con clase funcional, biomarcadores de isuficiencia cardiaca y evento adversos. FIBHULP. 2022-Ongoning. *Managment centre: FIBHULP*
- **Riera del Moral LF.** Tratamiento celular de los aneurismas de aorta abdominal en un modelo murino. Jotec Cardiovascular S.L. 2017-Ongoning. *Managment 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 cdr132l en pacientes con fracción de eyección ventricular izquierda reducida (≤45 %) después de un infarto de mio.
  Type/Phase: II
  Sponsored by: Cardior Pharmaceuticals, 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 multicentrica 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.

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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: Fundacion Para La Investigacion 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 fxia 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 inclisirán 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 ponsegromab 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 cardiotóxicos.
  Type/Phase: III
  Sponsored by: Consorcio Centro De Investigacion 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 Cardiaca; CM 18457042; 2021 April 20.

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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*

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SCIENTIFIC REPORT 2023

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 Guia 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, Martínoli 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, Gresele 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, 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
- **Mingot-Castellano ME, Hirnyk MC, Sánchez-González B, Álvarez-Román MT, Bárez-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-Bárcenas 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
- **Mosquera-Orgueira A, Pérez-Encinas M, Hernández-Sánchez A, González-Martínez T, Arellano-Rodrigo E, Martínez-Elicegui J, Villaverde-Ramiro A, Raya JM, Ayala R, Ferrer-Marín F, Fox ML, Velez P, Mora E, Xicoy B, Mata-Vázquez MI, García-Fortes M, Angona A, Cuevas B, Senín MA, Ramírez-Payer A, Ramírez MJ, Pérez-López R, de Villambrosía SG, Martínez-Valverde C, Gómez-Casares MT, García-Hernández C, Gasior M, Bellosillo B, Steegmann JL, Álvarez-Larrán A, Hernández-Rivas JM, Hernández-Boluda JC.** Machine learning improves risk stratification in myelofibrosis: an analysis of the spanish registry of myelofibrosis. Hemasphere. 2023; 7(1): e818. Article. IF: 7.6; Q1
- **Négrier C, Mahlangu J, Lehle M, Chowdary P, Catalani O, Bernardi RJ, Jiménez-Yuste V, Beckermann BM, Schmitt C, Ventriglia G, Windyga J, d'Oiron R, Moorehead P, Koparkar S, Teodoro V, Shapiro AD, Oldenburg J, Hermans C.** Emicizumab in people with moderate or mild haemophilia A (HAVEN 6): a multicentre, open-label, single-arm, phase 3 study. Lancet Haematol. 2023; 10(3): E168-77. Article. IF: 15.4; D1
- **Ortigueira MDM, Álvarez-Román MT, Rodríguez HD, Coll NB, Jiménez-Yuste V.** Long-term impact of primary prophylaxis on joint status in patients with severe hemophilia A. Res Pract Thromb Haemost. 2023; 7(1): e100005. Article. IF: 3.4; Q2
- **Román MTA.** Hemostatic cover in orthopedic surgery. Blood Coagul Fibrin. 2023; 34: S22-5. Article. IF: 1.2; Q4
- **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
- **Sacedón R, de Arriba MC, Martínez-Santamaría L, Maseda R, Herráiz-Gil S, Jiménez E, Rosales I, Quintana L, Illera N, García M, Butta N, Fernández-Bello I, Lwin SM, Fernández-Arquero M, León**

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C, McGrath JA, Vicente MA, del Río M, de Lucas R, Sánchez-Ramón S, Escámez MJ. Gluten-sensitive enteropathy in recessive dystrophic epidermolysis bullosa. Brit J Dermatol. 2023; 189(6): 774-6. Letter. IF: 11.0; D1

- **Schutgens REG, Jiménez-Yuste V, Escobar M, Falanga A, Gigante B, Klamroth R, Lassila R, Leebeek FWG, Makris M, Owaidah T, Sholzberg M, Tiede A, Werring DJ, van der Worp HB, Windyga J, Castaman G.** Antithrombotic treatment in patients with hemophilia: an EHA-ISTH-EAHAD-ESO Clinical Practice Guidance. Hemasphere . 2023; 7(6): e900. Article. IF: 7.6; Q1
- **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
- **von Drygalski A, Chowdary P, Kulkarni R, Susen S, Konkle BA, Oldenburg J, Matino D, Klamroth R, Weyand AC, Jiménez-Yuste V, Nogami K, Poloskey S, Winding B, Willemze A, Knobe K.** Efanesoctocog alfa prophylaxis for patients with severe hemophilia A. New Engl J Med. 2023; 388(4): 310-8. Article. IF: 96.2; D1

Research projects

- **Álvarez Román MT.** Analisis descriptivo de los resultados del tratamiento en el mundo real con damoctocog alfa pegol en comparación con el tratamiento anterior (dacopri). Bayer Consumer Care Ag. 2021-Ongoing. *Managment centre: FIBHULP*
- **Álvarez Román MT.** Experiencias reales en la práctica clínica con elocta. Swedish Orphan Biovitrum AB. 2019-Ongoing. *Managment centre: FIBHULP*
- **Álvarez Román MT.** Fenotipo clínico y respuesta a agonistas de receptores de trombopoyetina en pacientes ancianos con trombocitopenia inmune (PI22/01489). ISCIII. 2023-2025. *Managment centre: FIBHULP*
- **Álvarez Román MT.** Hemolution: estudio observacional ambisprectivo 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. *Managment centre: FIBHULP*
- **Álvarez Román MT.** Monitorización del efecto hemostático de concentrados de derivados plasmáticos (dp) de FVW/FVIII para la enfermedad de Von Willebrand utilizando un sistema de cámara de flujo de microfluidos. Grifols S.A. 2022-Ongoing. *Managment centre: FIBHULP*
- **Álvarez Román MT.** Programa del tratamiento multidisciplinario del paciente con hemofilia. Omnix Pharma S.L. 2017-Ongoing. *Managment 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: Hemolution: estudio observacional ambispectivo para evaluar la eficacia y seguridad del tratamiento en emicizumab de pacientes con hemofilia a en condiciones práctica clinica habitual. Roche Farma S.A. 2018-Ongoing. *Managment centre: FIBHULP*
- **Butta Coll NV.** Desarrollo de nanosistemas para eliminar la respuesta inmune contra el factor VIII en ratones con hemofilia grave e inhibidores: un estudio de prueba de concepto para el diseño de nuevos protocolos de tolerancia inmune en pacientes con hemofilia. Real Fundación Victoria Eugenia. 2018-Ongoing. *Managment centre: FIBHULP*
- **Butta Coll NV.** Determinación de los niveles y actividad de TFPI en el plasma de pacientes con alteración hemostática no filiada. Novo Nordisk Pharma S.A. 2020-Ongoing. *Managment centre: FIBHULP*
- **Butta Coll NV.** Estudio de la hemostasia en la enfermedad de Behçet. Baxter S.L.. 2011-Ongoing. *Managment 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. *Managment centre: FIBHULP*
- **Butta Coll NV.** Fenotipo clínico y respuesta ancianos con trombocitopenia inmune. FIBHULP. 2022-Ongoing. *Managment centre: FIBHULP*
- **Butta Coll NV.** Role of platelet glycosylation on platelet function and immune response in immune thrombocytopenia patients (PI19/00772). ISCIII. 2020-2024. *Managment centre: FIBHULP*
- **García Barcenilla S.** Puesta en marcha del estudio clinico con codigo: ML42270: Estudio observacional para evaluar las estrategias de afrontamiento del dolor crónico en pacientes con hemofilia a desde el punto de vista de enfermería. Roche Farma S.A. 2020-Ongoing. *Managment centre: FIBHULP*
- **Jiménez Yuste VM.** Aplicación de inteligencia artificial para detectar de hemorragias articulares en pacientes con hemofilia. Novo Nordisk Health Care AG. 2022-Ongoing. *Managment 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 (Irl) Limited. 2022-Ongoing. *Managment centre: FIBHULP*
- **Jiménez Yuste VM.** Desarrollo de nuevas estrategias para mejorar el manejo terapeútico de los pacientes con hemofilia a en presencia de inhibidor (PI22/01461). ISCIII. 2023-2025. *Managment 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. *Managment 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. *Managment centre: FIBHULP*
- **Jiménez Yuste VM.** Estudio del papel de los biomarcadores de daño endotelial, hepatocelular y fibrosis hepatica y la elastografia de transición en el diagnostico del sindrome de obstrucción sinusoidal. Jazz Pharmaceuticals Iberia S.L. 2015-Ongoing. *Managment 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. *Managment 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. *Managment 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 chromogenic and one stage assays used in clinical laboratories. Bayer Hispania S.L. 2015-Ongoing. *Managment centre: FIBHULP*
- **Jiménez Yuste VM.** I edición del abordaje multidisciplinar del paciente con Ilc. Astrazeneca Farmaceutica Spain S.A. 2022-Ongoing. *Managment centre: FIBHULP*
- **Jiménez Yuste VM.** Individualización de la profilaxis: estudio de los niveles valles mediante técnicas globales e impacto de la actividad fisica. World Federation of Hemophilia. 2015-Ongoing. *Managment 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. *Managment 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. *Managment centre: FIBHULP*
- **Jiménez Yuste VM.** Post-hemarthrosis sinovitis markers on patients with haemophilia on prophilaxis. clinical, biological and ultrasonographic stuyd. Pfizer S.L.U. 2012-Ongoing. *Managment 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. *Managment 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. *Managment centre: FIBHULP*

3.2 Cardiovascular Area

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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 inhibito.
  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 (rfviiifc-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 inmunoquimioterapia 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 eftrenonacog alfa.
  Type/Phase: IV
  Sponsored by: Swedish Orphan Biovitrum Ab
  Signed date: 21/09/2023
- **Jiménez Yuste VM.** Ensayo de fase I/IB, 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 registrythe 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

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- **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 & Developpement
  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 multicentrico, para comparar zanubrutinib (BGB-3111) mas rituximab frente a bendamustina mas rituximab en pacientes con linfoma de celulas del manto no tratatos previamente que no son aptos para recibir un transplante de celulas 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 valemetostat en sujetos con linfoma periférico de células t en recaída / refractario (valemetostat 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 expresion.
  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 brentuximab 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 inmunoquimioterapia 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: II
  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 fitusirán 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 & Developpement
  Signed date: 24/10/2023
- **Jiménez Yuste VM.** Estudio de fase II, abierto, de 2 cohortes y multicéntrico de INCB050465, un inhibidor de PI3kδ, 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 Mª Carmen, Carballo García Mª Ángeles, inventors.** FIBHULP, García Rivera Mª Carmen, Carballo García Mª Ángeles, asignees. Dispositivo de recogida de muestras biológicas. P202230651. 2022 July 22.

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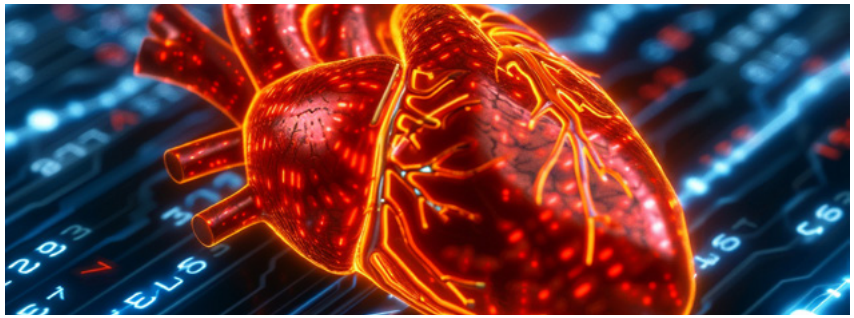
3.2.3 Vascular Physiology and Pharmacology Group



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 Postdoctoral. 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 Rodrígues Díez.** Profesora Ayudante Doctor. Departamento de Fisiologíaa. 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 LÍNES

- 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 sitiuations

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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.*
- Díez 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, Socuéllamos PG, Peraza DA, Rodrigues-Díez R, Valenzuela C, Dalli 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, Schereider 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 dopper. 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 nanospikes 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. *Managment 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 Sklodowska-Curie actions. Innovative Training Networks (ITN)-European Joint Doctorates . 2021-2024. *Managment centre: UAM*
- **Briones Alonso AM.** Papel del gen 15 estimulado por interferon (ISG15) en el remodelado vascular patológico. Sociedad Española de Arterioesclerosis. 2022-2023. *Managment 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. *Managment centre: FIBHULP*
- **Miguel Castro M.** Envejecimiento saludable. Hidrolizados de proteínas alimentarias multifuncionales como abordaje terapéutico en el síndrome de sarcopenia. SARCOPEP (PID2022-138610OB-I00). Ministerio de Ciencia e Innovacion. 2023-2026. *Managment 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. *Managment 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. *Managment centre: URJC*

CIBER y REtics:

- **Salaices Sánchez M, Briones Alonso A.** Networked Biomedical Research Center for Cardiovascular Diseases. (CIBERCV). IISCIII. (31/12/2024). UAM

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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, Salaíces 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 Expósito 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, Buendia 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-6,7,7a,8-tetrahidro-3H-pirrolo[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: Cárnicas Josélito S.L: assigne. 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: Cárnicas Josélito 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

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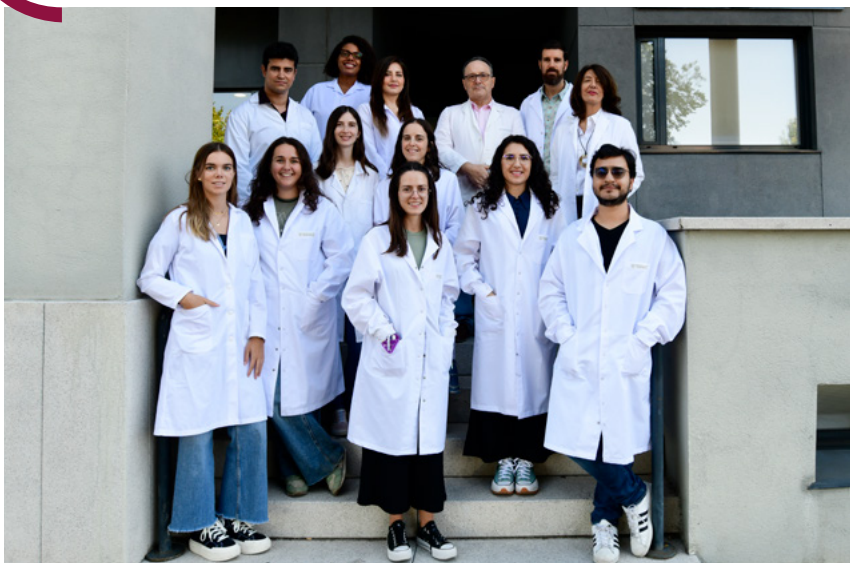
3.2.4 Vascular Pharmacology and Metabolism (FARMAVSM) Group



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
- **Míriam 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 ant diebetes 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. Managment 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. Managment centre: UAM
- **de la Cuesta Marina F.** Terapias senolíticas avanzadas basadas en nanoparticulas biológicas para tratar el envejecimiento vascular (CNS2022-135368). AEI. 2023-2025. Managment 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. Managment centre: UAM
- **Peiro Vallejo C, Sánchez Ferrer CF.** Identifying pharmacological targets for the prevention of cardiometabolic vascular inflammageing (PID2020-115590RB-I00). ISCIII. 2021-2024. Managment centre: UAM

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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 Gambra 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 Labrandero 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*

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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 Phatology - 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

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Strategic Objectives	Development forecast for the coming years:	Actions
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.	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 resultsby 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

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 Immun. 2023; 152(4): 997-1009. Article. IF: 11.4; 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

Lozano-Rodríguez R, Avendaño-Ortíz 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, Pelegrin P, García-Palenciano C, Cueto FJ, del Fresno C, **López-Collazo E**. The prognostic impact of SIGLEC5-induced impairment of CD8+ T cell activation in sepsis. Ebiomedicine. 2023; 97: 104841. Article. IF: 9.7; D1

Paniz-Mondolfi A, Reidy J, Pagani N, Lednicky JA, McGrail JP, Kasminskaya Y, Patino LH, García-Sastre A, Palacios G, González-Reiche AS, van Bakel H, Betancourt AF, Hernández MM, Cordon-Cardo C, Simon V, Sordillo EM, Ramírez JD, **Guerra S**. Genomic and ultrastructural analysis of monkeypox virus in skin lesions and in human/animal infected cells reveals further morphofunctional insights into viral pathogenicity. J Med Virol. 2023; 95(6): e28878. Article. IF: 6.8; D1

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. S**ession - 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 - Transmision 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?

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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
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- **Juan Julián González García.** Facultativo Especialista de Área en Medicina Interna. Unidad de VIH. Hospital Universitario La Paz
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- **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 Rio 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
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- **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 Univeristario 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-speciaslists. Furthermore, every year an increasing amount of special travelers (pregnants, comorbidities, immunossupressed) travel abroad, adding complexity in terms of a timely and effective diagnosis and management. The Tropical and Travel Medicine Unit provide both pre and postravel assistance in imported infectious diseases. The aim of this Unit is to provide efficient and effecrive specialist care with proven or suspected tropical disease and a specific preventative travel advice, togheter with international vaccines recommended for the trip.

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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.*

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- **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
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- **Berenguer J, Jarrín I, Bellón JM, Díez C, Jiménez-Sousa MA, Roca C, González-García J, Dalmau D, Olalla J, Herrero C, Villarroya 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
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3 Information groups by area

4 Associated clinicians

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- **Montejano Sánchez R.** Aceleración de la edad epigenética en personas que viven con VIH: Impacto de factores biológicos y de comportamiento (PI21/01349). ISCIII. 2022-2024. *Managment 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. *Managment centre: FIBHULP*
- **Rodés Soldevila B.** Contrato Miguel Servet Categoria A (CES11/021). ISCIII. 2007-2025. *Managment centre: FIBHULP*
- **Rodés Soldevila B.** Efecto de la Metformina sobre el Reservorio Viral en Personas con (2023.64). FIBHULP. 2023-2024. *Managment 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). ISCIII. 2019-2023. *Managment centre: FIBHULP*
- **Rodés Soldevila B.** Impacto de la regulación epigenética de la proteina p21 y su asociación a la progresión a sida en la infección por vih (PI25-11). Genoma España. 2011-Ongoing. *Managment 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). ISCIII. 2022-2024. *Managment 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. *Managment centre: FIBHULP*
- **Sendagorta Cudós E.** ClearPap: dispositivo de terapia fotodinámica para el tratamiento de lesiones anales asociadas a VPH (DTS22/00181). ISCIII. 2023-2025. *Managment centre: FIBHULP*

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SCIENTIFIC REPORT 2023

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 (Fundacio Clinic Per A La Reçerca 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 Víricas (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 ampolloso.
  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 tolerabilidad de ritlecitinib en participantes adultos y adolescentes con vitíligo 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 bictegravir/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 tolerabilida 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 & Developpement
  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, multicentrico, 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 & Developpement
  Signed date: 14/03/2023

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- **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 alafenamide (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 diagnostico causada por el complejo mycobacterium avium (mac.
  Type/Phase: III
  Sponsored by: Insmed 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 diagnostico causada por el complejo mycobacterium avium (mac.
  Type/Phase: III
  Sponsored by: Insmed 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 coingectados 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 expec9v 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 cápside 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 estrategico 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'Investigacións Mèdiques, FIBHULP, assignees. Kit for decision making in patients with Hepatitis C genotypes 1 and 4. P201330731; 2013 May 21.

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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
- **Elias 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 characterisation 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.

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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-Queipo-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, Arikan-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 EFJ, 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
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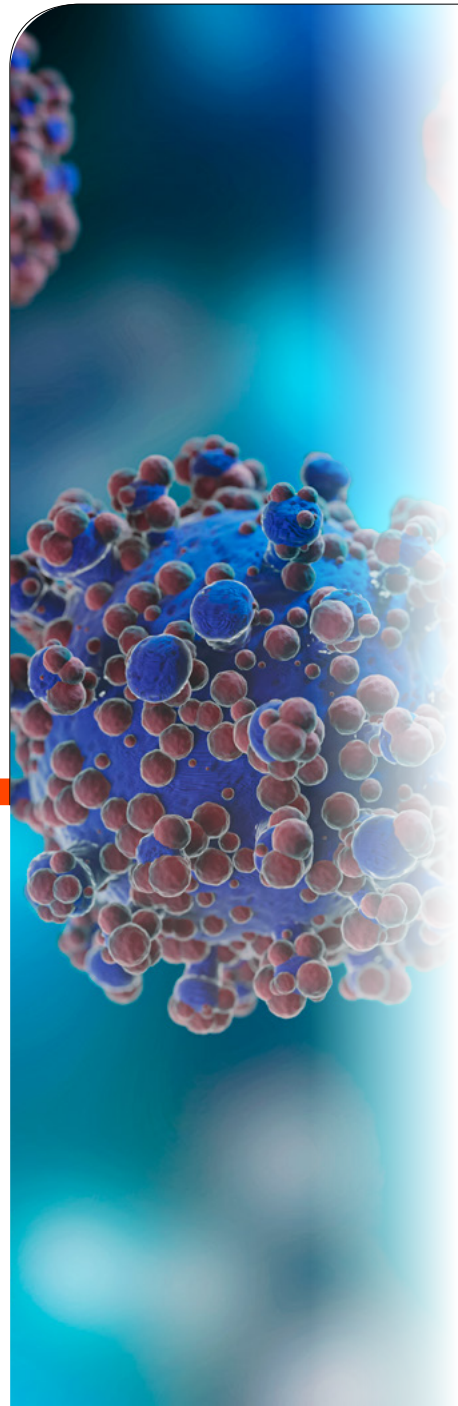

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  Signed date: 11/01/2023

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3.3.3 Immuno-Rheumatology Group

Publications: 22 | **Q1:**7

COMPOSITION

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- **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
- **Ana Martínez Feito.** Investigadora Predoctoral. Hospital Universitario La Paz
- **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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- **María Dora Pascual-Salcedo Pascual.** Químico Adjunto en Inmunología. Hospital Universitario La Paz
- **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

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- **Novella-Navarro M, Plasencia-Rodríuez C, Tornero C, Navarro-Compán V, Cabrera-Alarcón JL, Peiteado D, Nuño L, Monjo I, Franco-Gómez K, Villalba A, Balsa A.** Correspondence on: 'EULAR definition of difficult-to-treat rheumatoid arthritis'. Ann Rheum Dis. 2023; 82(3): e55. Letter. IF: 20.3; D1
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Research projects

- **Aguado Acín P.** Caracterización e historia natural de la hipofosfatasia en pacientes adultos con confirmacion genetica frente a pacientes con fosfatasa alcalina baja y test genético negativo. Hipofosfatasia del adulto. Alexion Pharmaceutical Inc. 2017-Ongoing. *Managment centre: FIBHULP*
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- **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. *Managment 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. *Managment 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. *Managment centre: FIBHULP*
- **Navarro Compán MV.** Towards a definition of early axial and peripheral spondyloarthritis. Assessment In Spondyloarthritis International Society. 2021-2023. *Managment 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. *Managment centre: FIBHULP*
- **Miranda Carús ME.** Stratification of Patients using advanced Integrative modeling of Data Routinely acquired for diagnosing Rheumatic complaints (SPIDeRR). EU. 2023-2028. *Managment 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. *Managment 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. *Managment 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.

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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 naive 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 tigulixostat 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 espondiloartirits 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.

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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.** Resposable 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 Antomía 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.).

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SCIENTIFIC REPORT 2023

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]. *Madriid: UCM: 2023(06/07/2023). Director: López-Collazo E; Cueto Rodríguez FJ.*
- **Cueto Rodríguez FJ.** 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 crioablación en pacientes con cáncer de mama[dissertation]. *Madrid: UAH: 2023(01/06/2023). Director: del Fresno Sánchez C.*
- **Guitierez 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 FJ, 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-1α. 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, Sánz-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-Rio 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
- **García-García A, de Diego RP, Flores C, Rinchai D, Solé-Violán J, Deya-Martínez A, García-Solis B, Lorenzo-Salazar JM, Hernández-Brito E, Lanz AL, Moens L, Bucciol G, Almuqamam M, Domachowske JB, Colino E, Santos-Pérez JL, Marco FM, Pignata C, Bousfiha A, Turvey SE, Bauer S, Haerynck F, Ocejo-Vinyals JG, Lendinez F, Prader S, Naumann-Bartsch N, Schmid JP, Biggs CM, Hildebrand K, Dreesman A, Cárdenes MA, Ailal F, Benhsaien I, Giardino G, Molina-Fuentes A, Fortuny C, Madhavarapu S, Conway DH, Prando C, Schidlowski L, Álvarez MTMD, Alfaro R, de Castro FR, Meyts I, Hauck F, Puel A, Bastard P, Boisson B, Jouanguy E, Abel L, Cobat A, Zhang Q, Casanova JL, Alsina L, Rodríguez-Gallego C.** Humans with inherited MyD88 and IRAK-4 deficiencies are predisposed to hypoxemic COVID-19 pneumonia. J Exp Med. 2023; 220(5): e20220170. Article. IF: 12.6; D1
- **García-Martínez I, Alen R, Pereira L, Povo-Retana A, Astudillo AM, Hitos AB, Gómez-Hurtado I, López-Collazo 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
- **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 Immun. 2023; 152(4): 997-1009. Article. IF: 11.4; D1
- **Gutiérrez AH, Mazariegos MS, Alemany S, Nevzorova YA, Cubero FJ, Sanz-García C.** Tumor progression locus 2 (TPL2): A Cot-plicated progression from inflammation to chronic liver disease. BBA-Mol Basis Dis. 2023; 1869(4): 166660. Review. IF: 4.2; Q2
- **Laso-García F, Casado-Fernández L, Piniella D, Gómez-de Frutos MC, Arizaga-Echebarria JK, Pérez-Mato M, Alonso-López E, Otero-Ortega L, Bravo SB, Chantada-Vázquez MD, Avendaño-Ortiz J, López-Collazo E, Lumbreras-Herrera MI, Gámez-Pozo A, Fuentes B, Díez-Tejedor E, Gutiérrez-Fernández M, de Leciñana MA.** Circulating extracellular vesicles promote recovery in a preclinical model of intracerebral hemorrhage. Mol Ther Nucleic Acids.

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2023; 32: 247-62. Article. IF: 6.5; Q1

- **Le Voyer T, Parent AV, Liu X, Cederholm A, Gervais A, Rosain J, Nguyen T, Lorenzo MP, Rackaityte E, Rinchai D, Zhang P, Bizien L, Hancioglu G, Ghillani-Dalbin P, Charuel JL, Philippot Q, Gueye MS, Renkilaraj MRLM, Ogishi M, Soudée C, Migaud M, Rozenberg F, Momenilandi M, Riller Q, Imberti L, Delmonte OM, Müller G, Keller B, Orrego J, Gallego WAF, Rubin T, Emiroglu M, Parvaneh N, Eriksson D, Aranda-Guillen M, Berrios DI, Vong L, Katelaris CH, Mustillo P, Raedler J, Bohlen J, Celik JB, Astudillo C, Winter S, McLean C, Guffroy A, DeRisi JL, Yu D, Miller C, Feng Y, Guichard A, Béziat V, Bustamante J, Pan-Hammarström Q, Zhang Y, Rosen LB, Holland SM, Bosticardo M, Kenney H, Castagnoli R, Slade CA, Boztug K, Mahlaoui N, Latour S, Abraham RS, Lougaris V, Hauck F, Sediva A, Atschekzei F, Sogkas G, Poli MC, Slatter MA, Palterer B, Keller MD, Pinzon-Charry A, Sullivan A, Droney L, Suan D, Wong M, Kane A, Hu H, Ma C, Grombiriková H, Ciznar P, Dalal I, Aladjidi N, Hie M, Lazaro E, Franco J, Keles S, Malphettes M, Pasquet M, Maccari ME, Meinhardt A, Ikinciogullari A, Shahrooei M, Celmeli F, Frosk P, Goodnow CC, Gray PE, Belot A, Kuehn HS, Rosenzweig SD, Miyara M, Licciardi F, Servettaz A, Barlogis V, Le Guenno G, Herrmann VM, Kuijpers T, Ducoux G, Sarrot-Reynauld F, Schuetz C, Cunningham-Rundles C, Rieux-Laucat F, Tangye SG, Sobacchi C, Doffinger R, Warnatz K, Grimbacher B, Fieschi C, Berteloot L, Bryant VL, Assant ST, Su H, Neven B, Abel L, Zhang Q, Boisson B, Cobat A, Jouanguy E, Kampe O, Bastard P, Roifman CM, Landegren N, Notarangelo LD, Anderson MS, Casanova JL, Puel A, (Pérez de Diego R).** Autoantibodies against type I IFNs in humans with alternative NF-κB pathway deficiency. Nature. 2023; 623(7988): 803-13. Article. IF: 50.5; D1
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Research projects

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- **del Fresno Sánchez C.** Cancer immunotherapy trough mucosae based on innate ummune memory. FIBHULP. 2022-Ongoing. *Managment 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). Inmunotek. 2021-Ongoing. *Managment 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. *Managment 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. *Managment centre: FIBHULP*
- **López Collazo E.** Contrato Miguel Servet Categoria A (CES08/002). CM. 2009-2025. *Managment centre: FIBHULP*
- **López Collazo E.** Los inmune-checkpoints en la sepsis: un abordaje para el diagnóstico y la terapia (PI18/00148). ISCIII. 2019-2023. *Managment centre: FIBHULP*
- **López Collazo E.** Caracterización de la inmunidad innata en niños nacidos de madres portadoras de VIH. Fundación Familia Alonso. 2019-Ongoing. *Managment centre: FIBHULP*
- **López Collazo E.** Contribución de las células híbridas tumorales a la metástasis del cáncer de pulmón: estudio exhastivo en modelos animales y pacientes con metástasis avanzada. FIBHULP. 2018-Ongoing. *Managment centre: FIBHULP*
- **López Collazo E.** Detection of pro-metastatic hybrids in primari tumour, peripheral blood and metastasis from patients with cáncer: a strategy for its deactivation. Siemens Gamesa Renewable Energy S. A. 2020-Ongoing. *Managment 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. *Managment 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. *Managment 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. *Managment centre: FIBHULP*
- **López Collazo E.** La metástasis tumoral infantil: una propuesta para eliminarla. Fundación Familia Alonso. 2018-Ongoing. *Managment centre: FIBHULP*
- **López Collazo E.** Transplantation (SOT & HSCT) in children transchild. Comunidad de Madrid. 2016-Ongoing. *Managment centre: FIBHULP*
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- **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. *Managment 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. *Managment 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. *Managment centre: FIBHULP*
- **López Collazo E.** UCIPREDICT. UE. 2022-2026. *Managment centre: CIEMAT*
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- **López Collazo E.** Plataforma de caracterización celular de alta dimensionalidad (CellDA) (IFCS21/00009). ISCIII. 2022-2026. *Managment 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. *Managment centre: FIBHULP*
- **Pérez de Diego R.** The human genetic and immunological determinants of the clinical manifestations of SARS-CoV-2 infection: Towards personalized medicine (UNDINE). UE. 2022-2026. *Managment centre: FIBHULP*
- **Mallonas Masferrer J, López-collazo E.** A phase 1 Clinincal Trial to evaluate safety and immunogenecity of HIV-1 Evelope-based vaccine (ICI23/00025). ISCIII. 2023-2026. *Managment centre: IdiBAS*
- **López-Collazo E.** Estudio inmunológico comparativo de la alopecia areata en pacientes pediátricos. Fundación Familia Alonso. 2023-2026. *Managment centre: FIBHULP*
- **López-Collazo E.** Viral intestinal reservoir and microbiota dysbiosis as pathological base for long COVID. MERCK. 2023-2026. *Managment centre: FIBHULP*
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Patents and trademarks

- **Llamas Matías MA, López-Collazo E, inventors; FIBHULP, Llamas Matías MA, Empireo 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.

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3.3.5 Complement Defects in Human Phatology

Publications: 9 | **Q1:**7

COMPOSITION

Margarita López Trascasa
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Pilar Sánchez Corral Gómez
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- **Fernando Corvillo Rodríguez.** Investigador postdoctoral. Hospital Universitario La Paz
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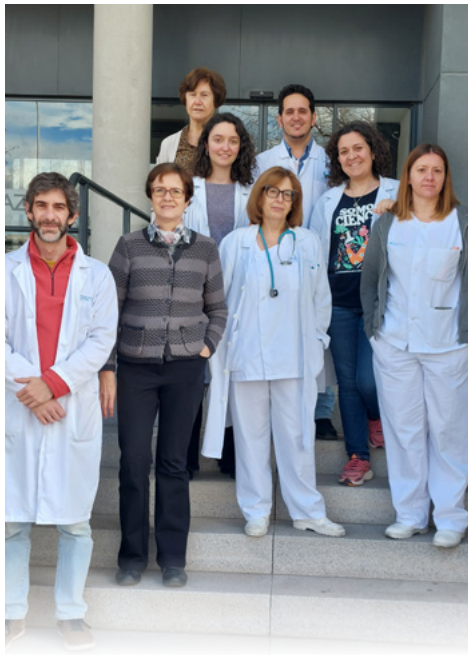
- **María del Rosario García Sánchez.** Investigadora predoctoral. FIBHULP
- **Laura González Sánchez.** Investigadora postdoctoral. Hospital Universitario La Paz
- **Alberto López Lera.** Investigador Postdoctoral. Contratado CIBERER. Hospital Universitario La Paz
- **Marta Melgosa Hijosa.** Facultativo 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 adquired lipodistrhphies: Barraquer-Simons syndrome, and Lawrence syndrome.
- Complement defects in Age Related Macular Degeneration

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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-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 Immun. 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 m RNA 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, Luithle 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 Categoria A (CES07/030). CM. 2008-2025. Managment 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. Managment 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. Managment centre: FIBHULP
- **Sánchez-Corral Gómez P.** Caracterización funcional de la deglicosilación y proteolisis del FH del Complemento y relevancia en la patologia del Síndrome Hemolítico-Urémico Atípico. Fundación SENEFRO. 2022-Ongoing. Managment 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. Managment centre: FIBHULP
- **Sánchez-Corral Gómez P.** El sistema del complemento en salud y enfermedad (Complemento III-CM) (P2022/BMD-7278). CM. 2023-Ongoing. Managment 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.

COMPLEMENTest ®

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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 that 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 immunosupresion 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, Camara C, Gerra-Galán T, Gómez-de-la-Torre**

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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-Peleteiro 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, 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
- **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-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 m RNA 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 MYOD1 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. Reumatol Clin. 2023; 19(5): 290-1. Letter. IF: 1.2; Q4
- **Sánchez MDC, Carrascoso 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
- **Shephard 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 neutropaenia 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

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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 Coordination 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 inmunopatogenéticas. 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.

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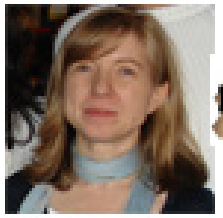
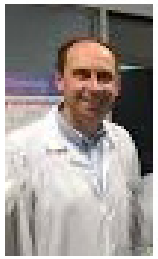
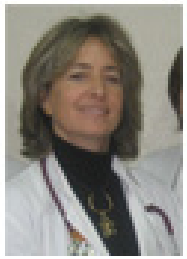
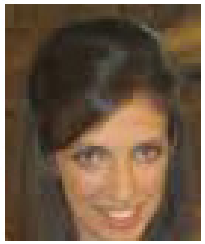
3.3.7 Drug Hypersensitivity and Innate Immune Response Group









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 immunopatohogenic 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 assessement.
  - 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.

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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 vtro 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-Johson /necrolísis 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, Lehloenya RJ, Martín-Pozo M, Micheletti RG, Mockenhaupt M, Nagao K, Pakala S, Palubinsky A, Pasieka 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, Ogiji 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, Cudós 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 Categoria B (CES06/016). ISCIII. 2007-2025. *Managment centre: FIBHULP*
- **Bellón Heredia T.** Impacto de los inhibidores de calcineurina sobre linfocitos efectores citotóxicos en síndrome de Stevens-Johnson/ necrolisis epidérmica tóxica de análisis de il-15 como biomarcador (PI18/00718). ISCIII. 2019-2023. *Managment 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. *Managment 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. *Managment 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. *Managment 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.

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3.3.8 Immunomediate Gastrointestinal Diseases and other Digestive Pathologies Group

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 Cordón.** 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

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 FJ, 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-Muñoza C, López-Cauce B, Alvarado VJM, Spicakova K, Brotons A, Bermejo F, Almela P, Ispízua 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-**

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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, Arraz 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 terapeutico de la administración colonoscópica de células madre mesenquimales derivadoas 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. *Managment centre: FIBHULP*
- **Martín Arranz MD.** Protocolo de abordaje temprano de pacientes con enfermedad inflamatoria intestinal. Abbvie Spain S.L.U. 2021-Ongoing. *Managment centre: FIBHULP*
- **Martín Arranz MD.** Dynamics of a4b7+ dendritic dells in inflammatory bowel disease. personalised medicine with biological therapies. dinamica de las celulas dendríticas a4b7+ en la enfermedad inflamatoria intestinal. avances hacia una medicina personalizada. FIBHULP. 2022-Ongoing. *Managment centre: FIBHULP*
- **Martín Arranz MD.** Programa de actualización en el conocimiento de la enfermedad inflamatoria intestinal. Abbvie Spain S.L.U. 2020-Ongoing. *Managment centre: FIBHULP*

Clinical trials

- **Martín Arranz MD.** A phase 2 long-term extension (lte) study to evaluate the safety and efficacy of efavaleukin 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: Fundacion 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 – abtec.
  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 – abtect 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 actica 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 actica 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 duracion para evaluar la seguridad y la efectividadde 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

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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, autoinmune 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.*

Research projects

- **González Martín A.** Systematic analysis of tumor-specific B cell immunity (CNS2022-136069). AEI. 2023-2025. *Managment centre: UAM*
- **González Martín A.** Harnessing microRNAs for improved lung cancer immunotherapies. Fundación Ramón Areces. 2023-2026. *Managment centre: UAM*
- **González Martín A.** MicroRNA regulatory networks in B cell tolerance and autoimmunity (PID2021-128244OB-I00). AEI. 2022-2025. *Managment centre: UAM*
- **González Martín A.** Harnessing microRNAs for improved lung cancer immunotherapies. Fundación FERO. 2023-2026. *Managment centre: UAM*
- **González Martín A.** B cell engineering in murine and human primary B cells (OPP11839562019). Bill and Melinda Gates Foundation. 2019-2024. *Managment centre: UAM*

Patents and trademarks

- **Voss J, Huang D, González-Martín A, Andrabi R, Burton D, inventors; The Srcipps Research Institute, assignees.** B Cell receptor modification in B cells. PCT/US/45255. 2018 August 3

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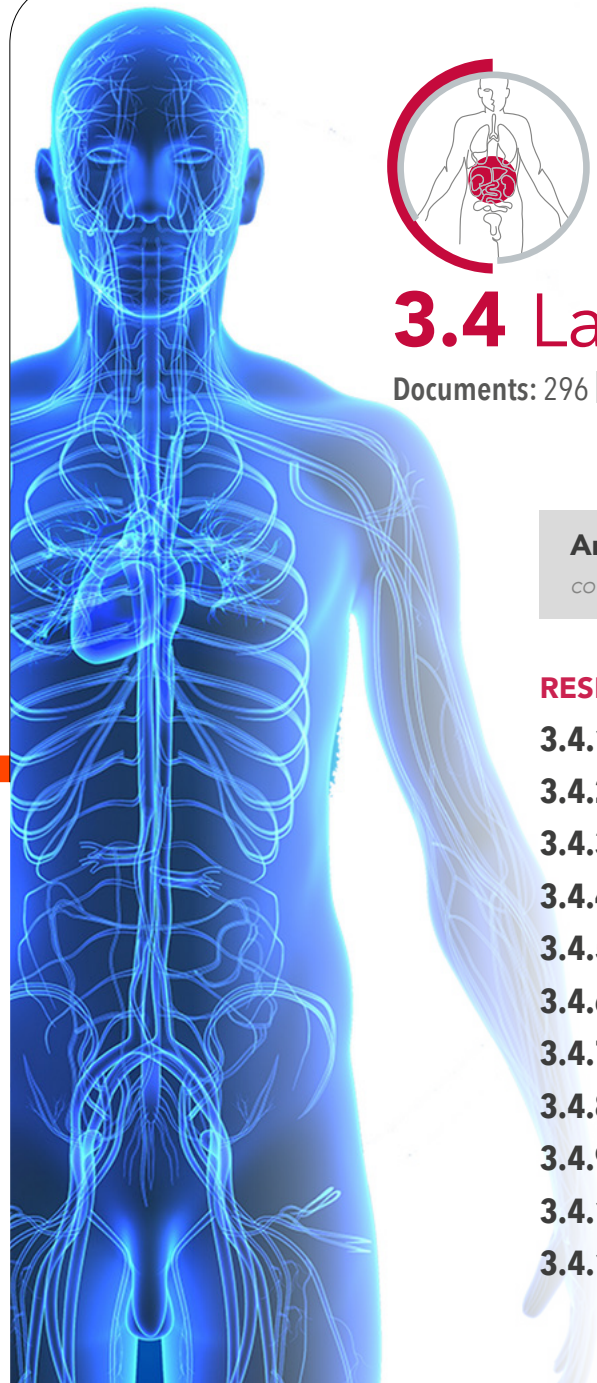

3.4 Large System Pathologies Area

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 Férnandez

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

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Strategic Objectives	Development forecast for the coming years:	Actions
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.	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.	Conduct seminars and coordination meetings among groups of different areas
	Incorporation of related groups from other areas (immunorheumatology, hepatology, among others) and consolidation of some emerging groups.	Promote work and synergies with other research groups of the institute with a deeper trajectory
	To ensure that 50% of the publications are in the first quartile of each thematic area.	Improve the annual number of publications in the first quartile
	To promote intramural collaborations between groups.	Promote work and synergies with other research groups of the institute with a deeper trajectory.

HIGH IMPACT PUBLICATIONS

Zamarrón E, Jaureguízar A, García-Sánchez A, Díaz-Cambriles T, Alonso-Fernández A, Lores V, Mediano O, Troncoso-Acevedo F, Cabello-Pelegrín S, Morales-Ruíz 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-Zapta 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-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

Domínguez-Ortega J, **Luna-Porta J**, Olaguibel JM, Barranco P, Arismendi E, Barroso B, Betancor D, Bobolea I, Caballero ML, Cárdaba 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

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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 Farmacologia y Terapeútica. 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.** Diirector 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.

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- **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 nicotinica7 and dup-a7 receptors expressed in human macrophages, neurons and lung carcinoma cells.
  • Identification of signalling pathways connecting nicotinic alpha7 receptors and negative regulators of TLRmediated 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 HMGCR-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, Arnalich-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 Latierro 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, Montaño-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, Caleya 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, Todolí 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 Ultrasound. 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 Infec 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. IEEEE 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**

3.4 Large System Pathologies Area

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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-Revuelta 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-Aguar R, Marí-Alfonso B, Feijoo-Massó C, Colunga-Argueelles D, Rubio-Rivas M, Trapiella-Martínez L, Iniesta-Arandia N, Callejas-Moraga E, García-Hernández FJ, Sáez-Comet L, González-Echávarri C, Ortego-Centeno N, Freire M, Vargas-Hitos JA, Rios-Blanco JJ, Todolí-Parra JA, Rodríguez-Pintó I, Chamorro AJ, Pla-Salas X, Madroñero-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, Tejeda-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. *Managment centre: FIBHULP*
- **Arnalich Fernández F.** Estudio de disfunción ventricular precoz en pacientes con esclerodermia. Glaxosmithkline S.A. 2011-Ongoing. *Managment centre: FIBHULP*
- **Escribano Subías MP.** Hacia una clasificación ómica en la hipertensión arterial pulmonar (PI21/01690). ISCIII. 2022-2024. *Managment centre: UCM*

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3.4.2 Organic Dysfunction and Failure in the Aggression Group

Publications:19 | **Q1:**14

COMPOSITION

José Manuel Añón Elizalde.
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- **Alejandro Agrifoglio Rotaeche.** Facultativo Especialista de Área en Medicina Intensiva. Hospital Universitario La Paz
- **Maria 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 Alvariño.** Facultativo Especialista de Área en Medicina Intensiva. Hospital Universitario La Paz
- **María Belén Estebánez 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
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- **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 en 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 Dysfuntion & 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

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RESEARCH LINES

- Biomarkers
- Resuscitation income
- Therapeutic support
- Mechanical ventilation
- Artificial airway
- Post-Intensive Care Syndrome
- Sedation

RESEARCH ACTIVITY

Publications

- **Andrés AM, Encinas JL, Sánchez-Galán A, Rodríguez JS, Estefania K, Sacristán 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
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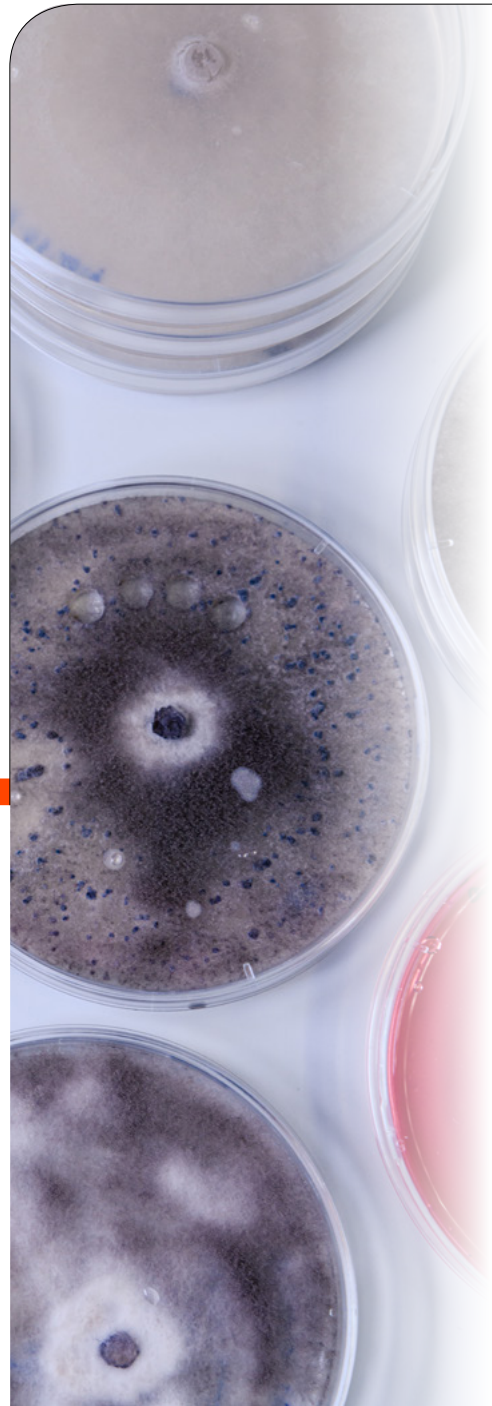

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- **Torres EC, Hernández-Tejedor A, Estañ PM, Fernández MV, Bollada MB, Díaz DP, Monforte-Escobar F, Gutiérrez JV, García LO, Pascual AD, Valcárcel CR, Leis CC.** Prognostic value of metabolic parameters measured by first responders attending patients with severe trauma: associations with the New Injury Severity Score and mortality. Emergencias. 2023; 35(2): 90-6. Article. IF: 5.4; D1
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- **Yébenes-Calvo R, Díez-Vidal A, Liras-Hernández MG, Civantos-Martín B.** Abdominal sepsis in an immunocompromised patient. Enferm Infec Micr Cl. 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: Biotest 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.

SINOIRES

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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. Contrtato 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
- **Raquel Casitas Mateo.** Facultativo Especialista de Área en Neumología. Hospital Universitario La Paz
- **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
- **Cristina López Fernández.** Técnico de Laboratorio. FIBHULP
- **Elisabet Martínez Cerón.** Facultativo Especialista de Área en Neumología. Hospital Universitario La Paz
- **Paula Pérez Moreno.** Investigadora Predoctoral. Hospital Universitario La Paz
- **Concepción Prados Sánchez.** Jefe de Sección de Neumología. Hospital Universitario La Paz
- **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

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SCIENTIFIC REPORT 2023

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 FJ, González-Barcala Francisco J, Jiménez-Ruiz CA, Muñoz X, Plaza V, Soto-Campos JG, Urrutia-Landa I, Almonacid C, Peces-Barba G, Álvarez-Gutiérrez FJ.** 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
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- **Cosío BG, Casanova C, Soler-Cataluña JJ, Soriano JB, García-Río F, de Lucas P, Alfageme I, González-Moro JMR, Sánchez G, Ancochea J, Miravitlles 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.** 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, Sánz-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-Zapta 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
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- **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, Miravitlles 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, Miravitlles 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-Rio 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, Formigon 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, Olveira C, Olveira 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 Granda-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

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4 Associated clinicians

- **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 Infec Micr Cl. 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, 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
- **Martínez-García MA, Méndez R, Olveira C, Girón R, García-Clemente M, Máiz L, Sibila O, Golpe R, Rodríguez-Hermosa JL, Barreiro E, Prados C, Rodríguez-López J, Oscullo G, Labarca G, de la Rosa D.** The U-shaped relationship between eosinophil count and bronchiectasis severity the effect of inhaled corticosteroids. Chest. 2023; 164(3): 606-13. Article. IF: 9.5; D1
- **Martínez-García MA, Oscullo G, Gómez-Olivas JD, Olveira C, Girón R, García-Clemente M, Maiz L, Sibila O, Golpe R, Rodríguez-Hermosa JL, Barreiro E, Méndez R, Pradosk C, Rodríguez-López J, Rosa DD.** Bronchiectasis: Changes in the characterization of patients during 20 years of follow-up. Data from the Spanish Bronchiectasis Registries. Arch Bronconeumol. 2023; 59(10): 688-90. Letter. IF: 8.7; D1
- **Morales-Suárez-Varela M, Toledo D, Fernández-Sierra M, Liébana M, Rubiera G, Navarro G, Prados C, Chamarro J, Peraita-Costa I, Domínguez A.** A profile of adult severe acute respiratory syndrome coronavirus 2 pneumonia patients according to pneumococcal vaccination status. Vaccines (Basel). 2023; 11(11): 1630. Article. IF: 5.2; Q1
- **Núñez-Fernández M, Ramos-Hernández C, García-Río F, Pérez-González A, Tilve-Gómez A, Rodríguez-Fernández P, Nodar-Germiñas A, Fernández-García A, Ruano-Raviña A, Fernández-Villar A.** Evolution and long-term respiratory sequelae after severe COVID-19 pneumonia: nitric oxide diffusion measurement value. Resp Res. 2023; 24(1): 48. Article. IF: 4.7; Q1
- **Resano-Barrio P, Alfaro E, Solano-Pérez E, Coso C, Cubillos-Zapata C, Díaz-García E, Romero-Peralta S, Izquierdo-Alonso JL, Barbe F, García-Rio F, Sánchez-de-la-Torre M, Mediano O.** Analysis of the ischemia-modified albumin as a potential biomarker for cardiovascular damage in obstructive sleep apnea patients with acute coronary syndrome. Int J Mol Sci. 2023; 24(10): 9019. Article. IF: 4.9; Q1
- **Rey-Brandariz J, Pérez-Ríos M, Ahluwalia JS, Beheshtian K, Fernández-Villar A, Represas-Represas C, Piñeiro M, Alfageme I, Ancochea J, Soriano JB, Casanova C, Cosío BG, García-Río F, Miravitlles M, de Lucas P, González-Moro JMR, Soler-Cataluña JJ, Ruano-Ravina A.** Tobacco patterns and risk of chronic obstructive pulmonary disease: results from a cross-sectional study. Arch Bronconeumol. 2023; 59(11): 717-24. Article. IF: 8.7; D1
- **Sánchez-de-la-Torre M, Cubillos C, Veatch OJ, García-Rio F, Gozal D, Martínez-García MA.** Potential pathophysiological pathways in the complex relationships between OSA and cancer. Cancers (Basel). 2023; 15(4): 1061. Review. IF: 4.5; Q1
- **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
- **Villamañán E, Uzquianoa EFD, García E, Sobrino C, del Pozo A, Carpio C, Herrerob A, 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
- **Zamarrón E, García-Río F.** Treatment of obstructive sleep apnea and diabetic kidney disease: can continuous positive airway pressure reduce albuminuria progression? Reply. Am J Resp Crit Care. 2023; 207(7): 956-8. Letter. IF: 19.3; D1
- **Zamarrón E, Jaureguizar A, García-Sánchez A, Díaz-Cambriles T, Alonso-Fernández A, Lores V, Mediano O, Troncoso-Acevedo F, Cabello-Pelegrín S, Morales-Ruíz 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

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. *Managment 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. *Managment 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. *Managment centre: FIBHULP*
- **Cubillos Zapata C.** Identificación del riesgo de cáncer en pacientes con apnea obstructiva del sueño con la detección de inmunocheckpoints (PI19/01363). ISCIII. 2020-2024. *Managment centre: FIBHULP*
- **Cubillos Zapata C.** Investigo Técnico. CM. 2022-2024. *Managment centre: FIBHULP*
- **Cubillos Zapata C.** Mecanismos de la activación y control del inflamasoma en la generación de comorbilidades en la apnea obstructiva del sueño (PI22/01257). ISCIII. 2022-2025. *Managment centre: FIBHULP*
- **Cubillos Zapata C.** Mecanismos de la activación y control del inflamasoma en la generación de comorbilidades en la apnea obstructiva del sueño (PI22/01257). ISCIII. 2023-2025. *Managment 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. *Managment 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. *Managment 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. *Managment 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. *Managment 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. *Managment 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. *Managment 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. *Managment 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. *Managment 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. *Managment centre: FIBHULP*

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- **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. *Managment 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. *Managment centre: FIBHULP*
- **Gómez Carrera L.** Auditoría clínica sobre manejo de fibrosis pulmonar idiopática en el area sanitaria del Hospital La Paz. Boehringer Ingelheim España S. A. 2016-Ongoing. *Managment 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 & Developpement
  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; FIHULP, CIBER, assignees.** Biomarcadores para el pronóstico de pacientes que han sufrido una hemorragia subaracnoidea aneurismática (SAH). P202130180; 2021 March 3.

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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 OBJETIVES

- 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 transcription-alregulation 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. *Managment 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. *Managment centre: UAM*

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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...

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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, Guldris 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 FJ, 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, Trujilloe H, Redondo-Pachón D, López V, Facundo C, Villanego F, Rodríguez M, Ruizk 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, Nuñoz 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-Roncero 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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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 SENEFRO. 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 factores 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 aplicacion de un programa grupal de atencion psicologica 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: EOm 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: EOm 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 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 epitelial 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.

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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/ angiooedema 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 angiooedema 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.

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SCIENTIFIC REPORT 2023

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
- **Amérigo 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, Galàn 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 , Cardaba B, Carmona MC, 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 , Cárdaba B, Carmona MJC, Curto E, Domínguez-Ortega J, González-Barcala FJ, Martínez-Rivera C, Mahíllo-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-il-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 , Cárdaba 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, Cárdaba 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
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Research projects

- **Caballero Molina MT.** Desarrollar las tareas necesarias para poner en marcha el proyecto angiocare 2021. Ediciones Mayo S.A. 2022-Ongoing. *Managment centre: FIBHULP*
- **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 Alergologia 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. Inmunotek. 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*

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- **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 diagnostico molecular como herramienta de identificación de perfiles de respuesta en pacientes con enfermedad respiratoria alergica y alergia a alimentos. Thermo Fisher Diagnostics S.L.U. 2017-Ongoing. *Managment centre: FIBHULP*
- **Rodríguez Pérez MR.** Caracterización alergénica 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 (PI22/00221). ISCIII. 2023-2025. *Managment centre: FIBHULP*
- **Rodríguez Pérez MR.** Evaluación de la capacidad alergénica 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 clinica 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 calicreína 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 oralde la calicreína 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: Fundacion De La Sociedad Espanola De Alergologia E Inmunologia Clinica (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.
  Type/Phase: III
  Sponsored by: Celgene International Ii -Sarl
  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 L

- **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 Dominguez 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.

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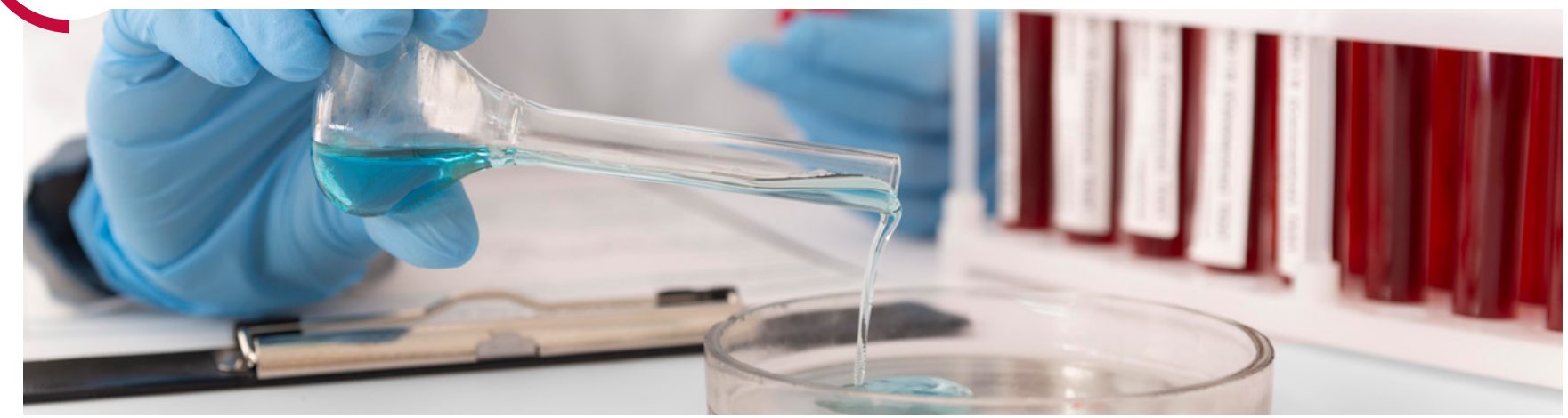
3.4.7 Patient Blood Management Group



Publications:34 | **Q1:**13

COMPOSITION

Manuel Quintana Díaz.
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- **Eva María Andrés Esteban.** Epidemióloga. Hospital Universitario La Paz
- **Aúrea Díez Tascón.** Facultativo Especialista de Radiodiagnóstico. Hospital Universitario La Paz
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- **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
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- **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 thromboembolis risk
  - Try to diagnose the potentially ill politraumatized 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

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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, Llompart-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, Llompart-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-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): 2002-9. Article. IF: 3.8; Q1
- **Castro-Olmo FJ, 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
- **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
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- **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-Arbués 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, Rafique 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, Echaniz-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.

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Front Public Health. 2023; 11: 1309094. Article. IF: 3.0; Q2

- **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, Cecconi M, Feldheiser A, Meier J, Müller MCA, Scheeren TWL, Mcquilten Z, Flint A, Hamid T, Piagnerelli M, Mahecic 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
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- **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 FJ, Peinado H, Elorza-Fernández D, Gómez EJ, Quintana-Díaz M, Sánchez-González P.** SIMUNEO: Control and monitoring system for lung ultrasound examination 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, Wlodarczyk A, Zatonska K, Juárez-Vela R, Witczak 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. *Managment centre: FIBHULP*
- **Oliver Sáez P.** Estudio de gasometría en el lugar de asistencia. Beneficio para el paciente. Asociación Española de Farmacéuticos Analistas. 2012-Ongoing. *Managment 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. *Managment 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. *Managment centre: FIBHULP*
- **Quintana Díaz M.** Identificaión de factores de gravedad en el paciente con traumatismo potencialmente grave. FIBHULP. 2013-Ongoing. *Managment centre: FIBHULP*
- **Quintana Díaz M.** Manejo inicial del paciente con hemorragia critica traumatica en urgencias y emergencias. Varios. 2021-Ongoing. *Managment centre: FIBHULP*
- **Quintana Díaz M.** Tratamientos de depuración extracorporea en pacientes criticos. de la investigación a la practica clinica. Nikkiso America Inc. 2016-Ongoing. *Managment centre: FIBHULP*
- **Quintana Díaz M.** Traumatismo y transfusión ¿una asociación necesaria?. Fundación Mutua Madrileña. 2019-Ongoing. *Managment centre: FIBHULP*
- **Quintana Díaz M.** Trombosis en el paciente crítico por COVID-19. Estudio Tromcco. Laboratorios Farmaceúticos Rovi S.A. 2022-Ongoing. *Managment centre: FIBHULP*

Patents and trademarks

- **Díaz García E, Laxman Nanwani K, Quintana Díaz M, García Río F, Cubillos-Zapata C, inventors; FIHULP, CIBER, assignees.** Biomarcadores para el pronóstico de pacientes que han sufrido una hemorragia subaracnoidea aneurismática (SAH). P202130180; 2021 March 3

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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-Zampaña 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. Managment centre: FIBHULP
- **Delgado Sandoval M.** Evaluación de la calidad de vida en personas con diabetes mellitus y sistema de monitorizació de glucosa Flash. Sin financiación. 2022-Ongoing. Managment centre: FIBHULP
- **Piqueras Rodríguez P.** Catéter permanente versus iyecciones en el confort del paciente pediátrico durante la administracion de heparina de bajo peso molecular: ensayo clinico cruzado. Pedro Piqueras Rodríguez. 2021-Ongoing. Managment centre: FIBHULP

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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

- **Gillermina Bejarano Redondo.** Médico Adjunto en Urgencias. Hospital Universitario La Paz
- **Lubna Dani Ben Abdel-Iah.** 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
- **Maria 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 decisión 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.

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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, 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
- **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 FJ, del Fresno C, López-Collazo E.** The prognostic impact of SIGLEC5-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, Fabbricatore 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 bemnifosbuvir 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-medicación 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

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3.4.10 Hospital Pharmacy Group

Publications:15 | **Q1:**1

COMPOSITION

Alicia Herrero Ambrosio.
Jefa de Servicio de Farmacia Hospitalaría. 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 Hsopitalaria. 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 Hospitalaría. 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

3.4 Large System Pathologies Area

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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, Benedi-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-Basteiro-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, Letéllez-Fernández J, de Rosales-Cabreraf AMM, Alonso-Herreros JM, SalaVilajosanah 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, Ibarguren 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, Herrerob A, 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. *Managment 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. *Managment centre: FIBHULP*
- **Herrero Ambrosio A.** Implantación del módulo epase en la elaboración de antineoplásicos (PI-1609). Amgen S.A. 2013-Ongoing. *Managment 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. *Managment 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. *Managment 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. *Managment 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. *Managment 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. *Managment centre: FIBHULP*
- **Villamañan 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. *Managment 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. *Managment centre: FIBHULP*
- **Villamañan 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. *Managment centre: FIBHULP*
- **Romero Garrido JA.** Fármacos que marcan un antes y un después: Resultados e implicaciones económicas de la incorporación de emcizumab al tratamiento de la hemofilia. Fundación Española de Farmacia Hospitalaria (FEFH). 2021-Ongoing. *Managment centre: FIBHULP*
- **Villamañan 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. *Managment centre: FIBHULP*
- **Villamañan 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. *Managment centre: FIBHULP*
- **Villamañan 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. *Managment centre: FIBHULP*
- **Sobrino Jiménez C.** Reto medicación sin daño. Bayer Hispania S.L. 2023-Ongoing. *Managment centre: FIBHULP*
- **Sobrino Jiménez C.** Proyecto Less Chron Validation. Sociedad Española de Farmacia Hospitalaria. 2023-Ongoing. *Managment 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. *Managment 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: Fundacion 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 Rioja R, authors; FIBHULP, assignee.** Trademark name: SINOIRES; CM 13.080.056; 2014 July 14

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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 Camblor 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 OBJETIVES

- 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.

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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, Olveira 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, Forns X, García F, García-Samaniego J, de Aguilar MHG, Jorquera F, Lazarus JV, Lens S, Martró E, García JMM, López MJP, Pineda JA, Rodríguez M, Romero-Gómez M, Antolín GS, Desfilis MAS, Turnes J.** Oportunistic 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, Forns 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-Barc. 2023; 46(2): 150-62. Article. IF: 2.2; Q3
- **García-Crespo C, Francisco-Recuero I, Gallego I, Camblor-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, Olveira 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-Campreciós 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-Barc. 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, Cussigh A, Cmet S, Escudero-García D, Stocco M, Natola LA, 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
- **Olveira 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
- **Palom A, Almandoz E, Madejón A, Rando-Segura A, Pérez-Castano Y, Vico J, Gándara S, Battulga N, Gómez-I-Prat J, Riveiro-Barciela M, Ruiz-Tapiador JA, García-Samaniego J, Buti M.** Communitystrategy for hepatitis b, c, and d screening and linkage to care in mongolians living in Spain. Viruses-Basel. 2023; 15(7): 1506. Article. IF: 3.8; Q2
- **Razavi HA, Buti M, Terrault NA, Zeuzem S, Yurdaydin C, Tanaka J, Aghemo A, Akarca US, Al Masri NM, Alalwan AM, Aleman S, Alghamdi AS, Alghamdi S, Al-Hamoudi WK, Aljumah 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, Duberg AS, Etzion O, Ferraz MLG, Ferreira PRA, Forns 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 CQ, 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
- **Razavi-Shearer DM, Gamkrelidze I, Pan CQ, Jia JD, Berg T, Gray RT, Lim YS, Chen CJ, Ocama P, Desalegn H, Abbas Z, Abdallah AR, Aghemo A, Ahmadbekova S, Ahn SH, Aho I, Akarca US, Al Masri NM, Alalwan AM, Alavian SM, Al-Busafi SA, Aleman S, Alfaleh FZ, Alghamdi AS, Al-Hamoudi WK, Aljumah AA, Al-Naamani K, Al-Rifai A, AlSerkal YM, Altraif IH, Amarsanaa J, Anderson M, Andersson M, Armstrong P, Asselah T, Athanasakis K, Baatarkhuu O, Ben-Ari Z, Bensalem A, Bessone F, Biondi MJ, Bizri ARN, Blach S, Braga WSM, Brandao-Mello CE, Brosgart CL, Brown KA, Jr RSB, Bruggmann P, Brunetto MR, Buti M, Cabezas J, Casanovas T, Chae CM, Chan HLY, Cheinquer H, Chen PJ, Cheng KJG, Cheon ME, Chien CH, Choudhuri G, Christensen PB, Chuang WL, Chulanov V, Garza LEC, Coffin CS, Contreras FA, Coppola N, Cornberg M, Cowie B, Cramp ME, Craxi A, Crespo J, Cui FQ, Cunningham CW, Dalgard**

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O, De Knegt RJ, De Ledinghen V, Dore GJ, Drazilova S, Duberg AS, Egeonu S, Elbadri M, El-Kassas M, El-Sayed MH, Estes C, Etzion O, Farag E, Ferradini L, Ferreira PRA, Flisiak R, Forns X, Frankova S, Fung J, Gane EJ, García V, García-Samaniego J, Gemilyan M, Genov J, Gheorghe LS, Gholam PM, Gish RG, Goleij P, Gottfredsson M, Grebely J, Gschwantler M, Guingane NA, Hajarizadeh B, Hamid SS, Hamoudi W, Harris AM, Hasan I, Hatzakis A, Hellard ME, Hercun J, Hernández J, Hockicková I, Hsu YC, Hu CC, Husa P, Janicko M, Janjua N, Jarcuska P, Jaroszewicz J, Jelev D, Jeruma A, Johannessen A, Kåberg M, Kaita KDE, Kaliaskarova KS, Kao JH, Kelly-Hanku A, Khamis F, Khan AG, Kheir OO, Khoudri I, Kondili LA, Konysbekova A, Kristian P, Kwon JA, Lagging M, Laleman W, Lampertico P, Lavanchy D, Lázaro P, Lazarus J, Lee AU, Lee MH, Liakina V, Luksic B, Malekzadeh R, Malu AO, Marinho RT, Mendes-Correa MC, Merat S, Meshesha BR, Midgard H, Mohamed R, Mokhbat JE, Mooneyhan E, Moreno C, Mortgat L, Müllhaupt B, Musabaev E, Muyldermans G, Naveira MCM, Negro F, Nersesov A, Nguyen VTT, Ning Q, Njouom R, Ntagirabiri R, Nurmatov ZS, Oguche S, Omuemu CE, Ong JP, Opare-Sem OK, Örmeci N, Orrego M, Osiowy C, Papatheodoridis G, Peck-Radosavljevic M, Pessoa MG, Pham TND, Phillips RO, Pimenov N, Pincay-Rodríguez LDR, Plaseska-Karanfilska D, Pop C, Poustchi H, Prabdial-Sing NN, Qureshi H, Ramji A, Rautiainen H, Razavi-Shearer K, Remak WM, Ribeiro S, Ridruejo E, Ríos-Hincapié CY, Robalino MC, Roberts LR, Roberts SK, Rodríguez M, Roulot D, Rwegasha J, Ryder SD, Sadirova S, Saeed U, Safadi R, Sagalova O, Said SS, Salupere R, Sanai FM, Sánchez-Avila JF, Saraswat VA, Sargsyants N, Sarrazin C, Sarybayeva G, Schréter I, Seguin-Devaux C, Seto WK, Shah SR, Sharara A, Sheikh M, Shouval D, Sievert W, Simojoki K, Simonova MY, Sinn DH, Sonderup MW, Sonneveld MJ, Spearman CW, Sperl J, Stauber RE, Stedman CAM, Sypsa V, Tacke F, Tan SS, Tanaka J, Tergast TL, Terrault NA, Thompson AJ, Thompson PJ, Tolmane I, Tomasiewicz K, Tsang TY, Uzochukwu BSC, Van Welzen B, Vanwolleghem T, Vince A, Voeller AS, Waheed Y, Waked I, Wallace J, Wang C, Weis N, Wong GLH, Wong VWS, Wu JC, Yaghi CG, Yesmembetov K, Yip TCF, Yosry A, Yu ML, Yuen MF, Yurdaydin C, Zeuzem S, Zuckerman E, Razavi HA. Global prevalence, cascade of care, and prophylaxis coverage of hepatitis B in 2022: a modelling study. Lancet Gastroenterol Hepatol. 2023; 8(10): 879-907. Article. IF: 30.9; D1

- **Romero-Gómez M, Aller R, Ampuero J, Rodríguez CF, Augustín S, Latorre R, Rivera-Esteban J, Urroz BM, García MLG, López SA, Albillos A, Hernández M, Graupera I, Benlloch S, Olveira A, Crespo J, Calleja JL.** AEEH ?Consensus about detection and referral of hidden prevalent liver diseases? Gastroent Hepat-Barc. 2023; 46(3): 236-47. Article. IF: 2.2; Q3

Research projects

- **García-Samaniego Rey J.** Búsqueda activa de pacientes con hepatitis crónica viral (VHC Y VHD) no diagnosticada, en población general, desde los Centros de salud de la Comunidad de Madrid. Gilead Sciences. 2022-2023. *Managment 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. *Managment 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. *Managment 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

- **Olveira Martín A.** A randomized double-blind placebo-controlled phase 3 study to evaluate the effect of resmetirom 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:
  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 bepirovirsen 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
- **Olveira 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
- **Olveira 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
- **Olveira 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 bepirovirsen 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 Aplication number (EPO): 20382336.4-1118. 2020 April 24.
- **Madejón A; inventor; Agile Life Sciences LTD, assignee.** Kit and methods Aplication number: GB202010372.A. 2020 July 6.

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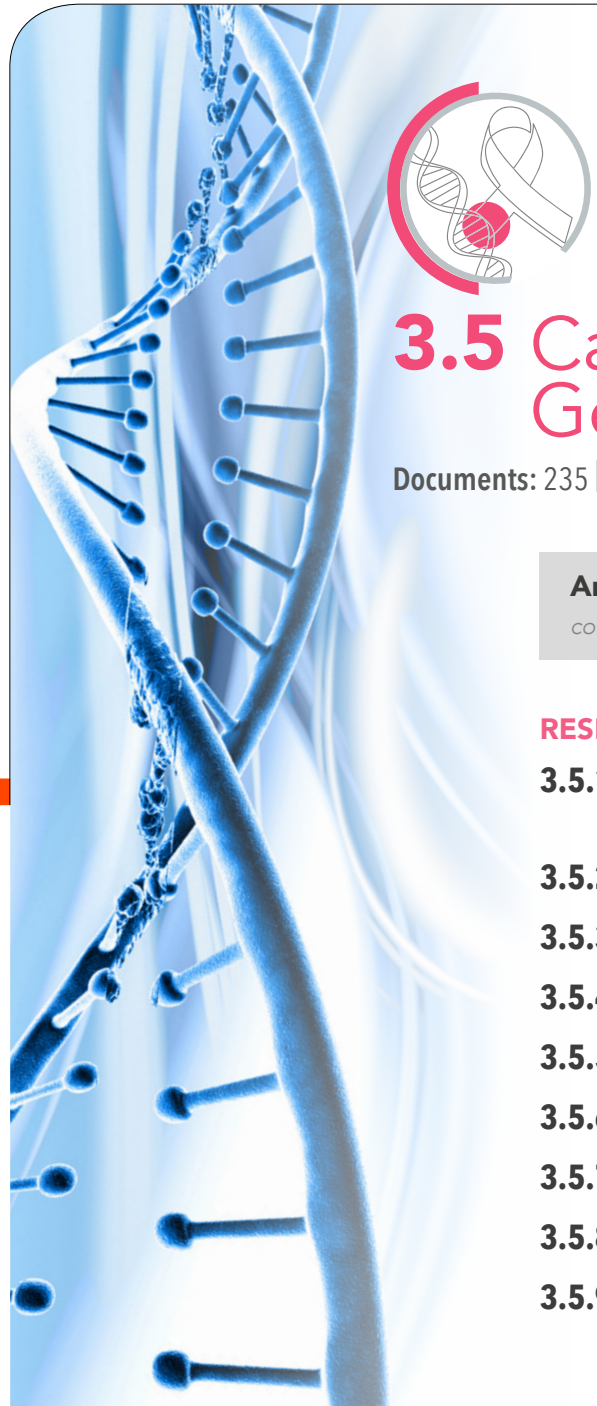

3.5 Cancer and Human Molecular Genetics Area

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 Hernáez

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

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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, Dapía 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-Pascau 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

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: SINOIRES
- **23/02/2023**. Session - Detección de mosaicismo en displasias esqueléticas
- **02/03/2023.** Session - miR-124 as a liquid biopsy prognostic biomarker in small extracellularvesicles 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

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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
- **María Sol Pérez Coto.** Técnico de Laboratorio. Hospital Universitario La Paz
- **Víctor Luis Ruiz Pérez.** Investigador Cientifico de OPIs. Jefe de laboratorio. IIB "Alberto Sols"
- **Carmen Sánchez Gómez.** Técnico de Laboratorio. Hospital Universitario La Paz
- **Jesús Solera García.** Facultativo Especialista de Área en Análisis Bioquímicos. Hospital Universitario La Paz
- **Mario Solís López.** Bioinformático. Hospital Universitario La Paz
- **Elena Vallespín García.** Jefa de Grupo de la Sección de Ofalmogenética Molecular. Hospital Universitario La Paz

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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 detrerminants of disglycaemia: hypoglycaemia, diabetes mellitus and hyperinsulinism
- Genetic determinants of congenital hypopitutarism
- SNPs arrays in pharmacogenetics, HIV patients and genetic associations.
- CGHarrays and genomic rearrangements in patients with congenital malformations, intelectual disability and tumores.
- Molecular genetics of hypertrophic myocardiopathy.
- 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 pharcogenomics.
- 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 Ontolgies 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, Montaño 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 correlationships. 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-Subias 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-Curieses 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, Sentchordi-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-Castano 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-los-Bueis A, García-Fernández L, Rodríguez-Solana P, Solís M, Vallespín E.** Posterior polymor-

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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 MGV, 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, 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, Montaño 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-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
- **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, Ahmad HF, Andrews S, Puoti KAV, Boer C, Boua PR, Butler-Laporte G, Cadilla CL, Chwialkowska K, Colombo F, Douillard V, Dueker N, Dutta AK, El-Sherbiny YM, Eltoukhy MM, Esmaeeli S, Faucon A, Fave MJ, Cadenas IF, Francescatto M, Francioli L, Franke L, Fuentes M, Durán RG, Cabrero DG, Harry EN, Jansen P, Szentpéteri JL, Kaja E, Kanai M, Kirk C, Kousathanas A, Krieger JE, Patel SK, Lemaçon A, Limou S, Lió P, Marouli E, Marttila MM, Medina-Gómez C, Michaeli Y, Migeotte I, Mondal S, Moreno-Estrada A, Moya L, Nakanishi T, Nasir J, Pasko D, Pathak GA, Pearson NM, Pereira AC, Priest J, Prijatelj V, Prokic I, Teumer A, Várnai R, Romero-Gómez M, Roos C, Rosenfeld J, Ruolin L, Schulte EC, Schurmann C, 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Forgetta V, Laurent L, Afrasiabi Z, Bouab M, Tselios C, Xue XQ, Afilalo M, Oliveira M, St-Cyr J, Boisclair A, Ragoussis J, Auld D, Kaufmann DE, Lathrop GM, Bourque G, Décary S, Falcone EL, Montpetit A, Piché A, Renoux C, Tremblay K, Tse SM, Zawati MH, Davis LK, Cox NJ, Below JE, Sealock JM, Faucon AB, Shuey MM, Polikowsky HG, Petty LE, Shaw DM, Chen HH, Zhu WY, Schmidt A, Ludwig KU, Maj C, Rolker S, Balla D, Behzad P, Nöthen MM, Fazaal J, Keitel V, Keitel V, Jensen BEO, Feldt T, Marx N, Dreher M, Pink I, Cornberg M, Illig T, Lehmann C, Schommers P, Rybniker J, Augustin M, Knopp L, Kurth I, Eggermann T, Volland S, Berger MM, Brenner T, Hinney A, Witzke O, Konik MJ, Bals R, Herr C, Ludwig N, Walter J, Latz E, Schmidt SV, Brooks JD, Bull S, Elliott LT, Gagnon F, Greenwood CMT, Hung RJ, Lawless JF, Paterson AD, Sun L, Rauh M, Briollais L, Gingras AC, Bombard Y, Pugh TJ, Simpson J, Goneau LW, Halevy AR, Maslove DM, Borgundvaag B, Devine L, Bearss E, Richardson D, Arnoldo S, Friedman SM, Taher A, Stern S, Dagher M, Vasilevska-Ristovska J, Biggs CM, Mickiewicz B, Strug LJ, Scherer SW, Aziz N, Jones SJM, Knoppers BM, Lathrop M, Turvey SE, Yeung RSM, Allen U, Cheung AM, Herridge MS, Hunt M, Lerner-Ellis J, Taher J, Parekh RS, Hiraki LT, Cowan J, Ducharme FM, Ostrowski M, Bernier FP, Kellner J, Garg E, Yoo S, Vlasschaert C, Frangione E, Chung M, Noor A, Greenfeld E, Colwill K, Clausen M, Chao G, Yue F, Fritzler M, Whitney J, Thiruvahindrapuram B, Garant JM, Abraham R, Davis A, Campigotto A, Papenburg J, Niranjan K, Betschel S, Sadarangani M, Barton-Forbes M, Hanley M, Fung CYJ, Lapadula E, MacDonald G, Puopolo M, Kaushik D, Nirmalanathan K, Wong I, Khan Z, Zarei N, Michalowska M, Modi BP, Persia P, Estacio A, Buchholz M, Cheatley PL, Lorenti M, Aman NF, Matveev V, Budylowski P, Upton J, Morris S, Boyd T, Chowdhary S, Casalino S, Morgan G, Mighton C, McGeer A, Mazzulli T, McLeod SL, Binnie A, Faghfoury H, Chertkow H, Racher H, Serbanescu MA, Pavenski K, Esser M, Thompson G, 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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

- **INGEMM, author; FIBHULP, assignee.** Brand name: INGEMM INSTITUTO DE GENÉTICA MÉDICA 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.

KaryoArray

- **INGEMM, author; FIBHULP, assignee.** Brand name: KaryoArray; USM 79.078.751, CM 8.512.907; 2010 January 07, 2009 August 27.

OverGrowthArray

- **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.

MetabolArray

- **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.

OncoHematoArray

- **Palomares M, Lapunzina P, Nevado J, Vallespin 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.

OncoArray

- **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.

ONCOSeq

- **Lapunzina P, Nevado J, Solera J, Vallespin 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.

ThyroArray

- **Moreno JC, Moya CM, Vallespin E, Lapunzina P, Nevado J, authors; FIBHULP, assignee.** Brand name: ThyroArray; USM 85.686.688, CM 10.904.951; 2012 July 25, 2012 May 23.

PharmArray

- **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.

ClinPharmarray

- **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.

RD-Seq Sequencing Rare Diseases

- **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.

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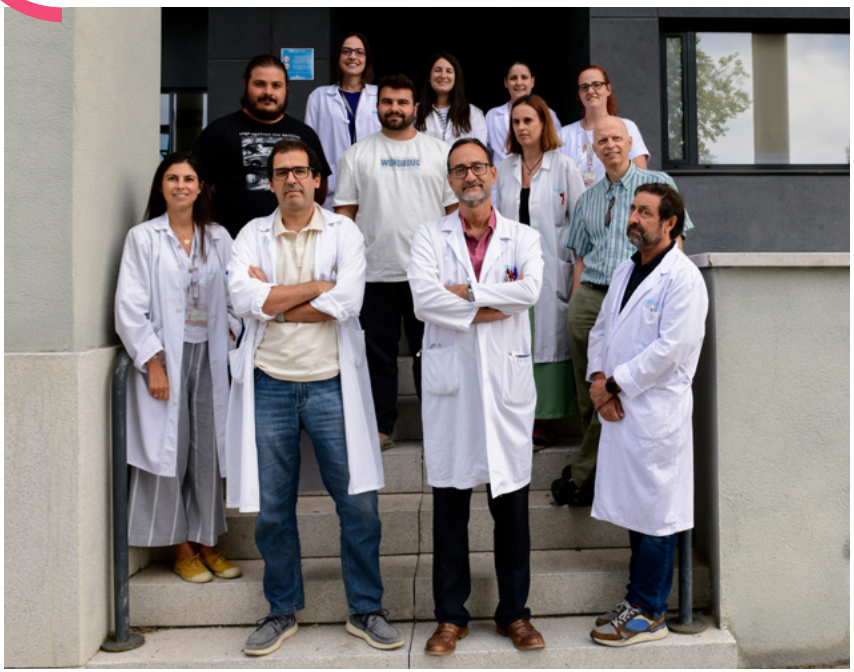
3.5.2 Translational Oncology Group



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 Feijoó.** 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 Area 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

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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 micrornas (BIOMIR), 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 Marin A, Gamez Pozo A.*

Publications

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- **Aziz HM, Saida L, de Koning W, Stubbs AP, Li YL, Sideras K, Palacios E, Feliú J, Mendiola M, van Eijck CHJ, Mustafa DAM.** Spatial genomics reveals a high number and specific location of B cells in the pancreatic ductal adenocarcinoma microenvironment of long-term survivors. Front Immunol. 2023; 13: 995715. Article. IF: 5.7; Q1
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- **Feliú J, Custodio AB, Pinto-Marín A, Higuera O, Pérez-González M, del Pino L, Ruiz-Jiménez L, Sánchez-Cabero D, Viera I, Jurado A, Espinosa E.** Predicting risk of severe toxicity and early death in older adult patients treated with chemotherapy. Cancers (Basel). 2023; 15(18): 4670. Article. IF: 4.5; Q1
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- **González-Cao M, Rosell R, Martín Algarra S, Puertolas T, Espinosa E.** Sequence of therapies for advanced BRAFV600E/K melanoma. Ann Transl Med. 2023; 11(6): 270. Editorial Material. Not indexed
- **González-Martín A, Pothuri B, Vergote I, Graybill W, Lorusso D, McCormick CC, Freyer G, Backes F, Heitz F, Redondo A, Moore RG, Vulsteke C, O'Cearbhaill RE, Malinowska IA, Shtessel L, Compton N, Mirza MR, Monk BJ.** Progression-free survival and safety at 3.5 years of follow-up: results from the randomised phase 3 PRIMA/ENGOT-OV26/GOG-3012 trial of niraparib maintenance treatment in patients with newly diagnosed ovarian cancer. Eur J Cancer. 2023; 189: 112908. Article. IF: 7.6; Q1
- **Gutiérrez-Sainz L, Martínez-Fdez S, Pedregosa-Barbas J, Peña J, Alameda M, Viñal D, Villamayor J, Martínez-Recio S, Pérez-Wert P, Pertejo-Fernández A, Gallego A, Martínez-Marín V, Zamora P, Espinosa E, Mendiola M, Feliú J, Redondo A.** Efficacy of second and third lines of treatment in advanced soft tissue sarcomas: a real-world study. Clin Transl Oncol. 2023; 25(12): 3519-26. Article. IF: 2.8; Q2
- **Hafez AI, Soriano B, Elsayed AA, Futami R, Ceprian R, Ramos-Ruiz R, Martínez G, Roig FJ, Torres-Font MA, Naya-Catala F, Calduch-Giner JA, Trilla-Fuertes L, Gámez-Pozo A, Arnau V, Sempere-Luna JM, Pérez-Sánchez J, Gabaldon T, Llorens C.** Client Applications and Server-Side Docker for Management of RNASeq and/or VariantSeq Workflows and Pipelines of the GPRO Suite. Genes (Basel). 2023; 14(2): 267. Article. IF: 2.8; Q2
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- **Hindi N, Razak A, Rosembaum E, Jonczak E, Hamacher R, Rutkowski P, Bhadri VA, Skryd A, Brahmi M, Alshibany A, Jagodzinska-Mucha P, Bauer S, Connolly E, Gelderblom H, Boye K, Henon C, Bae S, Bogefors K, Vincenzi B, Martínez-Trufero J, López-Martín JA, Redondo A, Valverde C, Blay JY, Moura DS, Gutiérrez A, Tap W, Martín-Broto J.** Efficacy of immune checkpoint inhibitors in alveolar soft-part sarcoma: results from a retrospective worldwide registry. ESMO Open. 2023; 8(6): 102045. Article. IF: 7.1; Q1
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- **Jiménez-Fonseca P, Foy V, Raby S, Carmona-Bayonas A, Macía-Rivas L, Arrazubi V, Lavin DC, Gil RHS, Custodio A, Cano JM, Montes AF, Mirallas O, Declara IM, Tocino RV, Visa L, Limón ML, Pimentel P, Lago NM, Sauri T, Richard MM, Mangas M, Raga MG, Calvo A, Reguera P, Granja M, Carnicero AM, Pérez CH, Cerdá P, González LG, Navalon FG, Barcia VP, Abad D, Martín MR, Weaver J, Mansoor W, Gallego J.** The AGAMENON-SEOM model for prediction of survival in patients with advanced HER2-positive oesophagogastric adenocarcinoma receiving first-line trastuzumab-based therapy. Ther Adv Med Oncol. 2023; 15: 17588359231157600. Article. IF: 4.3; Q2
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- **López-Janeiro A, Rodríguez AM, Mendiola M, Sabbagh Rula N, Feliú J, Villadoniga A, Méndez MC.** Pancreatic intraductal papillary mucinous neoplasm with sarcomatous transformation. A case report. Rev Esp Patol. 2023; 56(2): 124-8. Article. Not indexed
- **López-Plaza B, Gil A, Menéndez-Rey A, Bensadon-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
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- **Trilla-Fuertes L, Gámez-Pozo A, Prado-Vázquez G, López-Vacas R, Zapater-Moros A, López-Camacho E, Lumbreras-Herrera M, Soriano V, Garicano F, Lecumberri MJ, de la Borbolla MR, Majem M, Pérez-Ruiz E, González-Cao M, Oramas J, Magdaleno A, Fra J, Martín-Carnicero A, Corral M, Puértolas T, Ramos R, Vara JAF, Espinosa E.** Sorting transcriptomics immune information from tumor molecular features allows prediction of response to anti-pd1 therapy in patients with advanced melanoma. Int J Mol Sci. 2023; 24(1): 801. Article. IF: 4.9; Q1

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Research projects

- **Castelo Fernández B.** Construyendo desde la vulnearibilidad en el cancer: de la investigación a la practica clinica. EISAI Farmaceutica S.A. 2022-Ongoing. *Managment centre: FIBHULP*
- **Castelo Fernández B.** Identification of new biomarkers to predict patient progression in ductal salivary cancer. Gilead Sciences S.L. 2023-Ongoing. *Managment centre: FIBHULP*
- **Cejas Guerrero P.** Análisis dinámico de la cromatina en el adenocarcinoma de páncreas mediante análisis fit-seq de la marca de histona H3K4ME2 (PI18/01604). ISCIII. 2019-2023. *Managment centre: FIBHULP*
- **Custodio Carretero A.** Perfiles transcriptómicos implicados en el pronóstico y las resistencias terapéuticas a quimioterapia perioperatoria en adenocarcinoma gástrico localmente avanzado. FIBHULP. 2022-Ongoing. *Managment centre: FIBHULP*
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- **Espinosa Arranz E.** Antitumor effects o anti PD-Ll immunotherapy atezolizumab plus metformin and chemotherapy in triple negative breast cáncer. Roche Farma S. A. 2021-Ongoing. *Managment centre: FIBHULP*
- **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*
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- **Fresno Vara JA.** Caracterización molecular del cáncer de mama mediante TaqMan Low Density Arrays: Aplicación al diagnósitico. FIBHULP. 2014-Ongoing. *Managment centre: FIBHULP*
- **Fresno Vara JA.** Contrato Miguel Servet Categoria 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 sanguineo 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 (EPIC-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 leiomiosarcoma. 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: interaccion 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 oncologia 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 oncologia 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

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Clinical trials

- **Martínez Marin V.** BO25430 (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 lb-100 más doxorrubicina vs. doxorrubicina sola en primera línea de sarcomas de tejidos blandos avanzados.
  Type/Phase: I
  Sponsored by: Grupo Español De Investigacion 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 concominante 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 Auñon 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 resecado, 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 ecteribulina (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 Investigacion Cancer De Ovario
  Signed date: 02/02/2023

- **Pinto Marín A.** Estudio de fase III aleatorizado y abierto de xl092 + nivolumab en comparación con sunitinib en participantes con carcinoma de células renales no claras metastásico o avanzado.
  Type/Phase: III
  Sponsored by: Exelisis 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 afectos de una polineuropatía palmoplantar secundaria al tratamiento con quimioterapia o agentes quimioterapéuticos fusionados a anticuerpos monoclonales (inmunocitostáticos).
  Type/Phase:
  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

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- **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 Investigacion 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 nectina-4.
  Type/Phase: I
  Sponsored by: Bicycletx, 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: EOm 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 Auñon 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: Immutep, 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 multiples cohortes para evaluar la eficacia y la seguridad del sar408701 en pacientes con tumores solidos avanzados positivos a ceacam5.
  Type/Phase: II
  Sponsored by: Sanofi Aventis S.A
  Signed date: 23/03/2023

- **Zamora Auñon 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: EOm 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 frα-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

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- **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 Auñon 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 xl092 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: Exelisis 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 qith doxorubicin versus boxorubicin alone as first-line treatment in pacients 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 xl092 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 Auñon 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 Investigacion 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 deruxtecán 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

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- **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: Bicycletx, 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/metastásico.
  Type/Phase: I
  Sponsored by: Prestige Biopharma Limited
  Signed date: 16/10/2023

- **Feliú Batlle J.** Estudio abierto en fase ib/iipara 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 metastásico.
  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 concominante 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 Auñon 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 linfaticos 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; FIBH12O, 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), assigne.** In vitro method for the prognosis of anal squamous cell carcinoma. EP19382982.7; 2019; 2019 November 11.

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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.** Bioinfórmática. 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 OBJETIVES

- 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.

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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. 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

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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 Methylseq 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, Higueras 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, Manzaneque 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, Manzaneque 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 platin-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
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- **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
- **Salloum FN, Tocchetti CG, Ameri P, Ardehali H, Asnani A, de Boer RA, Burridge P, Cabrera JA, de Castro J, Córdoba R, Costa A, Dent S, Engelbertsen D, Fernández-Velasco M, Fradley M, Fuster JJ, Galán-Arriola C, García-Lunar I, Ghigo A, González-Neira A, Hirsch E, Ibáñez B, Kitsis RN, Konety S, Lyon AR, Martín P, Mauro AG, Vega MMM, Meijers WC, Neilan TG, Rassaf T, Ricke-Hoch M, Sepulveda P, Thavendiranathan P, van der Meer P, Fuster V, Ky B, López-Fernández T.** Priorities in cardio-oncology basic and translational science gcos 2023 symposium proceedings: JACC: CardioOncology State-of-the-Art Review. JACC Cardiooncol. 2023; 5(6): 715-31. Review. IF: 12.0; Q1
- **Sánchez-Cabrero D, García-Guede A, Burdiel M, Pernia O, Colmenarejo-Fernández J, Gutiérrez L, Higuera O, Rodríguez IE, Rosas-Alonso R, Rodríguez-Antolín C, Losantos-García I, Vera O, de Castro-Carpeño J, de Cáceres II.** miR-124 as a liquid biopsy prognostic biomarker in small extracellular vesicles from NSCLC patients. Int J Mol Sci. 2023; 24(14): 11464. Article. IF: 4.9; Q1
- **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, Montaño VEF, Dios-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
- **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

- **Burdiel Herencia M.** Contrato predoctoral (FI19/00061). ISCIII-MICINN. 2021-2023. *Managment centre: FIBHULP*
- **Cruz Castellanos p.** App respira. Boehringer Ingelheim España, S.A. 2019-Ongoing. *Managment 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. *Managment 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 histologia de adenocarcinoma en españa. Roche Farma S. A. 2018-Ongoing. *Managment centre: FIBHULP*
- **de Castro Carpeño J.** Determinación mediante inmunohistoquímica de la expresion de PDL-1 en carcinoma de célula no pequeña de pulmón. Fundación ECO. 2016-Ongoing. *Managment 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. *Managment 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. *Managment 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. *Managment centre: FIBHULP*
- **de Castro Carpeño J.** Identificación de nuevos mecanismos genéticos y epigenéticos de resistencia a la inmunoterapia de primera linea en pacientes con cáncer de pulmón no microcítico metastásico (cpnmm) con alta expresión pd-l1. estudio keypredict. Fundación Mutua Madrilena. 2022-Ongoing. *Managment 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. *Managment centre: FIBHULP*
- **de Castro Carpeño J.** Prestación de servicios para el desarrollo de las tareas necesarias en el estudio Estudio observacional de alectinib en pacientes con CPNM ALK+ en el programa de acceso precoz en España. Roche Farma S. A. 2018-Ongoing. *Managment 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. *Managment centre: FIBHULP*

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3.5 Cancer and Human Molecular Genetics Area

- **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-l1 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-l1 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 Validate. 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.** Ultracentrífuga 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 dificil clasificaicón 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). Fundación 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 (DIAGBI) (PLEC2021-008034). MICIIN. 2021-2024. *Managment centre: FIBHULP*
- **Vera Puente O.** Evalución y puesta a punto del biomarcardor 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 Infraestructure 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.

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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: Fundacion Gecp
  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 irresecable o metastásico no tratado previamente, con expresión de pd-l1 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 nsclc 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-labelstudy 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-l1, 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 & Developpement
  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 (morpheus pulmonar.
  Type/Phase: I
  Sponsored by: Genentech Inc
  Signed date: 18/10/2023

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- **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 cpnm 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 domvanalimab 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 quinasa 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 (l)1 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 cáncer. 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, Pintado 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 FJD, 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.

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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

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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 declive, 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 celular senescence in the development of the inner ear and the audithory 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[dissertation]. 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[dissertation]. 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[dissertation]. 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 [dissertation]. 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[dissertation]. Madrid: UCM: 2023(01/09/2023). Director: Cediel R, Murillo Cuesta S
- **Merlano Castellanos S.** Factores predictivos de la función del nervio facial tras la cirugía del schwannoma vestibular[dissertation]. 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. Angiologia. 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, CIs, 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 intratemporal hypoglossal-to-facial transfer. Atlas Oral Maxillofac Surg Clin North Am. 2023; 31(1): 9-17. Review. Not indexed

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- **Morales-Puebla JM, Gómez-Camacho H, Gavilán J, Lassaletta L.** Otorhynolaryngology 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
- **Sprinzl 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. *Managment centre: IDIBAPS*
- **Castro Calvo A.** Estudio sobre la utilidad del tubo de derivación salivar ("by-pass") en la prevención de la fístula faringo-cutánea tras laringectomía total. (PI-5952). SEORL - CCC. 2022-2024. *Managment 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. *Managment 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. *Managment centre: FIBHULP*
- **Isabel Varela Nieto.** CAM Investigo (09-PIN1-00004.3/2022). CAM. 2022-2023. *Managment centre: CSIC*
- **Isabel Varela Nieto.** Programa CAM ayudas para la contratación de ayudantes de investigación y técnicos de laboratorio (PEJ-2020-TL/BMD-17631). CAM. 2022-2023. *Managment centre: CSIC*
- **Lassaletta Atienza L.** Análisis de las habilidades musicales y de la voz en niñoz y adultos con IC (PI21/0147). ISCIII. 2022-2024. *Managment centre: FIBHULP*
- **Lassaletta Atienza L.** Leespq en niños con implante coclear en español (PI-4725). Med-El Elektromedizinische Gerate Gmbh. 2021-Ongoing. *Managment centre: FIBHULP*
- **Marco-Contelles JL.** MINA-CM Madrid Innovative Neurotech Alliance (P2022/BMD-7236). CAM. 2023-2026. *Managment centre: UPM*
- **Murillo Cuesta S.** of Antisense RNA Therapeutics (DARTER) (CA 17103 Delivery). EU Framework Programme Horizon 2020. COST. 2023-2023. *Managment centre: CSIC*
- **Rey Herranz JA.** Contrato Miguel Servet Categoria A (CES05/027). ISCIII. 2006-2025. *Managment 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. *Managment 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. *Managment centre: CIBERER*
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- **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 addedums (CIBERER-SPIRAL THERAPEUTICS ERP17PE12). Spiral Therapeutics. 2017-2024. *Managment 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. *Managment 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. *Managment 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. Aloda Farmaceútica S.L. 2020-2023. *Managment 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. Aloda Farmaceútica S.L. 2020-2023. *Managment 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. *Managment centre: Department of Biochemistry and Institute of Biomedical Research.*
- **Varela Nieto I.** Conexion Nanomedicina del CSIC (NANOMED-CSIC). Agencia Estatal CSIC. 2021-2024. *Managment 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 ormulación 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 Geraete 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, Cediel 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, Cediel 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.** Quinolylnitrone derivatives for use in the prevention and/or treatment of hearing loss. EP22382706.4; 2023 July 22

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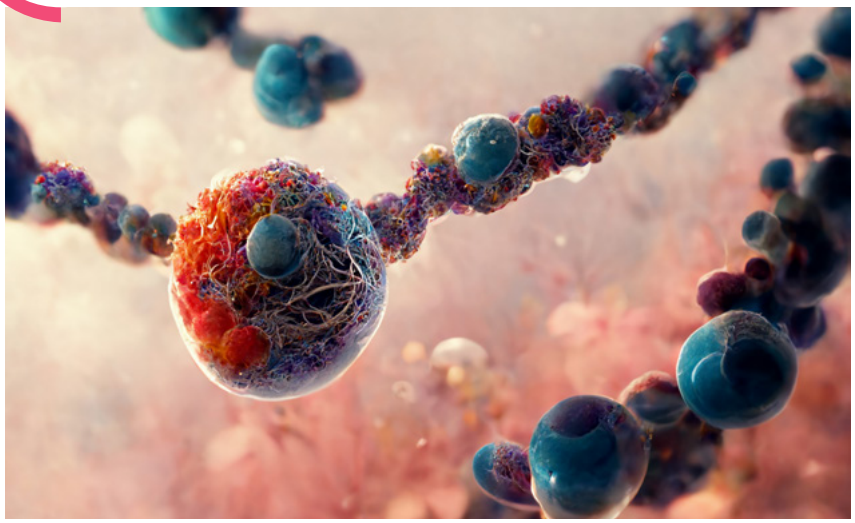
3.5.5 Cancer Molecular Pathology and Therapeutic Targets Group



Publications:24 | **Q1:**7

COMPOSITION

David Hardisson Hernáez.
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 Pastrián.** 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 cáncer patients.
  - Endometrial cancer Research Line
- Endometrial carcinoma is the fourth most common cancer in women in the developed world. Histomorphologic criteria are not strongly enouygh 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.

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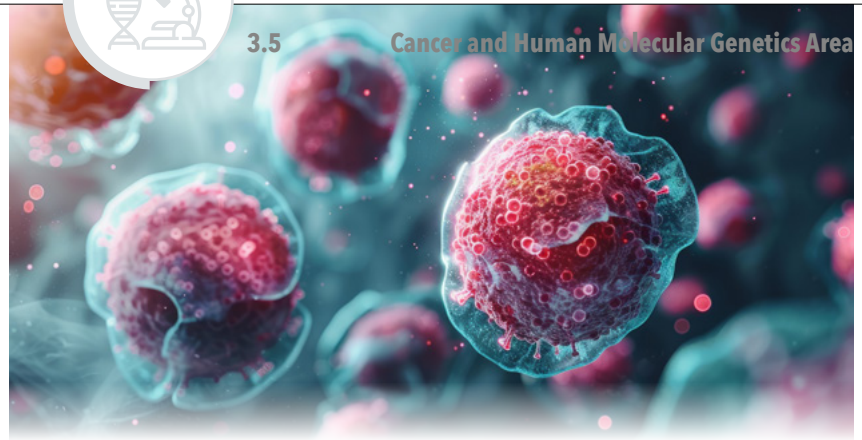

3.5 Cancer and Human Molecular Genetics Area

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 Hernáez DA.

Publications

- **Aragón-Niño I, Cuesta-Urquia C, González-Martín-Moro J, Moran-Soto MJ, Pozo-Kreilinger 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
- **Aziz HM, Saida L, de Koning W, Stubbs AP, Li YL, Sideras K, Palacios E, Feliú J, Mendiola M, van Eijck CHJ, Mustafa DAM.** Spatial genomics reveals a high number and specific location of B cells in the pancreatic ductal adenocarcinoma microenvironment of long-term survivors. Front Immunol. 2023; 13: 995715. Article. IF: 5.7; Q1
- **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
- **García-Calvo L, Álvarez CM, Gutiérrez AH, García AB, Muñoz RA, Sánchez-Méndez JI.** Sentinel node biopsy in patients with breast carcinoma without axillary involvement at diagnosis receiving primary systemic therapy. Clin Breast Cancer. 2023; 23(6): 672-9. Article. IF: 2.9; Q2
- **Goldaracena JMO, Chicote VC, Navarro MJR, Álvarez CM, Alonso DG, Monforte YN, de Bustamante TD, Martínez FG, Yébenes L, Pineda EY, Marín VM, Auñón PZ, Méndez JIS.** Percutaneous cryoablation of clinical stage I/II breast cancer in patients without indication for axillary surgery. Rev Senol Patol Mamar. 2023; 36(3): 100493. Article. IF: 0.3; Q4
- **Gutiérrez-Sainz L, Martínez-Fdez S, Pedregosa-Barbas J, Peña J, Alameda M, Viñal D, Villamayor J, Martínez-Recio S, Pérez-Wert P, Pertejo-Fernández A, Gallego A, Martínez-Marín V, Zamora P, Espinosa E, Mendiola M, Feliú J, Redondo A.** Efficacy of second and third lines of treatment in advanced soft tissue sarcomas: a real-world study. Clin Transl Oncol. 2023; 25(12): 3519-26. Article. IF: 2.8; Q2
- **Heredia-Soto V, Gutiérrez-Sainz L, Ghanem I, Guerra L, Palacios E, de Uribe M, Trilla-Fuertes L, de Miguel M, Cejas P, Medina L, Calderón JM, Viñal D, Mendiola M, Feliú J.** The relationship between the expression of GATA4 and GATA6 with the clinical characteristics and prognosis of resectable pancreatic adenocarcinoma. Biomedicines. 2023; 11(2): 252. Article. IF: 3.9; Q2
- **Jiménez-Sánchez D, López-Janeiro A, Villalba-Esparza M, Ariz M, Kadioglu E, Masetto I, Goubert V, Lozano MD, Melero I, Hardisson D, Ortiz-de-Solórzano C, de Andrea CE.** Weakly supervised deep learning to predict recurrence in low-grade endometrial cancer from multiplexed immunofluorescence images. NPJ Digit Med. 2023; 6(1): 48. Article. IF: 12.4; D1
- **Jungen SH, Noti L, Christe L, Galvan JA, Zlobec I, Müller M, Imboden S, Siegenthaler F, Carlson JW, Pellinen T, Heredia-Soto V, Ruz-Caracuel I, Hardisson D, Redondo A, Mendiola M, Rau TT.** Spatial distribution of CD3-and CD8-positive lymphocytes as pretest for POLE wild-type in molecular subgroups of endometrial carcinoma. Front Med (Lausanne). 2023; 10: 1110529. Article. IF: 3.1; Q1
- **López-Janeiro A, Rodríguez AM, Mendiola M, Sabbagh RN, Feliú J, Villadoniga A, Méndez MC.** Pancreatic intraductal papillary mucinous neoplasm with sarcomatous transformation. A case report. Rev Esp Patol. 2023; 56(2): 124-8. Article. Not indexed
- **Mendiola M, Heredia-Soto V, Ruz-Caracuel I, Baillo A, Ramón-Patiño JL, Escudero FJ, Miguel M, Peláez-García A, Hernández A, Feliú 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
- **Montero-Calle A, de Ocaña SJ, Benavente-Naranjo R, Rejas-Gonáalez R, Bartolomé RA, Martínez-Useros J, Sanz R, Dziaková J, Fernández-Aceñero MJ, Mendiola M, Casal JI, Peláez-García A, Barderas R.** Functional proteomics characterization of the role of SPRYD7 in colorectal cancer progression and metastasis. Cells. 2023; 12(21): 2548. Article. IF: 5.1; Q2
- **Montero-Calle A, Garranzo-Asensio M, Rejas-González R, Feliú J, Mendiola M, Peláez-García A, Barderas R.** Benefits of FAIMS to improve the proteome coverage of deteriorated and/or cross-linked tmt 10-PLEX FFPE tissue and plasma-derived exosomes samples. Proteomes. 2023; 11(4): 35. Article. IF: 4.0; Q2
- **Montero-Calle A, López-Janeiro A, Mendes ML, Pérez-Hernández D, Echevarría I, Ruz-Caracuel I, Heredia-Soto V, Mendiola M, Hardisson D, Argüeso P, Peláez-García A, Guzman-Aranguez A, Barderas R.** In-depth quantitative proteomics analysis revealed C1GALT1 depletion in ECC-1 cells mimics an aggressive endometrial cancer phenotype observed in cancer patients with low C1GALT1 expression. Cell Oncol. 2023; 46(3): 697-715. Article. IF: 4.9; Q2
- **Okuno K, Kandimalla R, Mendiola M, Balaguer F, Bujanda L, Fernández-Martos C, Aparicio J, Feliú J, Tokunaga M, Kinugasa Y, Maurel J, Goel A.** A microRNA signature for risk-stratification and response prediction to FOLFOX-based adjuvant therapy in stage II and III colorectal cancer. Mol Cancer. 2023; 22(1): 13. Letter. IF: 27.7; D1
- **Peña-Burgos EM, Carpio GSD, Tapia-Viñe M, Urraca CI, García JMC, Ortiz-Cruz EJ, Pozo-Kreilinger JJ.** Primary aneurysmal bone cyst of hands and feet: A series of 14 cases. Ann Diagn Pathol. 2023; 66: 152169. Article. IF: 1.5; Q3

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- **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 myod1 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
- **Peña-Burgos EM, Serra-del Carpio G, Tapia-Viñe M, Ortiz-Cruz EJ, Pozo-Kreilinger JJ.** Giant thigh glomus tumor of uncertain malignant potential: Case report with pathologic-radiologic correlation. J Cutan Pathol. 2023; 50(5): 390-5. Article. IF: 1.6; Q3
- **Peña-Burgos EM, Tapia-Viñe M, Rodríguez-García AM, Ortiz-Cruz EJ, Pozo-Kreilinger JJ.** Cytopathological findings of intranodal palisaded myofibroblastoma: Case report and review of the literature. Diagn Cytopathol. 2023; 51(8): E248-54. Review. IF: 1.0; Q4
- **Pizarro D, Romero I, Pérez-Mies B, Redondo A, Caniego-Casas T, Carretero-Barrio I, Cristóbal E, Gutiérrez-Pecharromán A, Santaballa A, D'Angelo E, Hardisson D, Vieites B, Matías-Guiu X, Estévez P, Guerra E, Prat J, Poveda A, López-Guerrero JA, Palacios J.** The prognostic significance of tumor-infiltrating lymphocytes, pd-l1, brca mutation status and tumor mutational burden in early-stage high-grade serous ovarian carcinoma-a study by the spanish group for ovarian cancer research (GEICO). Int J Mol Sci. 2023; 24(13): 11183. Article. IF: 4.9; Q1
- **Sánchez MDC, Carrascoso 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
- **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
- **Stolnicu S, Brito MJ, Karpathiou G, Hoang L, Felix A, Mateoiu C, Fanni D, Reques A, García A, Hardisson D, Talu CK, Furtado A, Abu-Rustum N, Soslow RA, Park KJ.** Villoglandular pattern in HPV-associated endocervical adenocarcinoma is associated with excellent prognosis: a reappraisal of 31 cases using IECC and silva pattern classification. Int J Gynecol Pathol. 2023; 42(3): 270-7. Article. IF: 1.6; Q3
- **Tarragona J, Martínez-Ciarpaglini C, Matias-Guiu X, Hardisson D.** Undergraduatepathology: results of a survey on undergraduate teaching of pathology in spanish medical schools. Rev Esp Patol. 2023; 56(1): 21-31-. Article. Not indexed

Research projects

- **Guerra Pastrián 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. *Managment centre: FIBHULP*
- **Hardisson Hernáez 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. *Managment centre: FIBHULP*
- **Hardisson Hernáez D.** Identificación de biomarcadores en cáncer de pulmón no microcítico (cpnm). Astrazeneca Farmaceutica Spain S.A. 2020-Ongoing. *Managment centre: FIBHULP*
- **Hardisson Hernáez D.** Puesta en marcha del ensayo clínico "idyllatm"genefusion panel 1.x clinical performance study. Biocartis NV. 2022-Ongoing. *Managment centre: FIBHULP*
- **Hardisson Hernáez D.** Realización de las tareas necesarias para el desarrollo del ensayo clínico "a phase ib/iia, radomized, 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. *Managment centre: FIBHULP*
- **Hardisson Hernáez 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. *Managment centre: FIBHULP*
- **Mendiola Sabio M, Hardisson Hernáez D.** Identificación de biomarcadores en cáncer de pulmón no microcítico. Astrazeneca Farmacéutica Spain S. A. 2020-Ongoing. *Managment centre: FIBHULP*
- **Mendiola Sabio M.** Establecimiento y caracterización de modelos in vitro de sarcoma. FIBHULP. 2022-Ongoing. *Managment 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. *Managment 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. *Managment 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. *Managment 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. *Managment 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. *Managment centre: FIBHULP*
- **Mendiola Sabio M.** Realización de técnicas de detección de expresión proteica el IGTP. Construcción de matrices tisularees y tinciones con anticuerpos específico. Fundacio Institut Dínvestigació Én Ciéncies de la S. A.lut Germans Trias I Pujol. 2015-Ongoing. *Managment centre: FIBHULP*

Clinical trials

- **Hardisson Hernáez 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 (mmr) o inestabilidad alta de microsatélites.
  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 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.
- **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.
- **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.

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3.5.6 Mechanisms of Tumour Progression Group

Publications:11 | **Q1:**9

COMPOSITION

José Manuel González Sancho.
Profesor Titular. Universidad Autónoma de Madrid

- **David Albandea 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, Martínelli P, Sánchez-Tomero P, Sánchez-Palomo C, González-Santamaría P, Yuste L, Wörmann SM, Kabacaoglu D, Earl J, Martín A, Salvador F, Valle S, Martín-Hijano L, Carrato 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, Morillo-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,**

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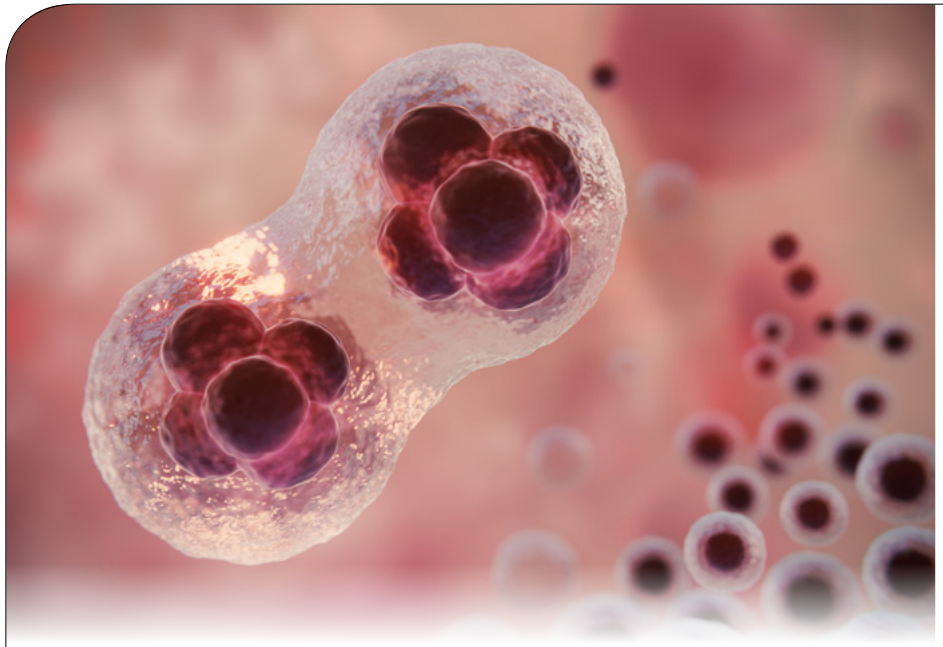

Oliva JL, Muñoz A, Santos E, Zarich N, Rojas-Cabañeros JM. PKD phosphorylation and COP9/Signalosome modulate intracellular Spry2 protein stability. Oncogenesis. 2023; 12(1): 20. Article. IF: 5.9; Q1

- **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, Pastrián 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
- **Olivencia MA, Villegas-Esguevillas M, Sancho M, Barreira B, Paternoster E, Adao R, Larriba MJ, Cogolludo A, Pérez-Vizcaino F.** Vitamin D receptor deficiency upregulates pulmonary artery kv7 channel activity. Int J Mol Sci. 2023; 24(15): 12350. Article. IF: 4.9; Q1
- **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, Maiques O, Monger J, Lam H, Candido J, George S, Ferrari N, Kohihammer 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. *Managment 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. *Managment 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. *Managment 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. *Managment 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. *Managment 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. *Managment 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. *Managment 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. *Managment centre: CSIC*
- **Portillo Pérez F.** LOXL2 y LOXL3:Descubriendo nuevas vulnerabilidades terapéuticas en la progresión tumoral (PID2019-111052RB-100). Ministerio de Ciencia e Innovación, Proyectos del Programa Estatal de I+D+i orientada a los Retos de la Sociedad. 2020-2023. *Managment 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. *Managment 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.

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3.5.7 Research and Diagnosis of Inherited Metabolic Diseases

Publications:8 | Q1:5

COMPOSITION

María Belén Pérez González.
Catedrática Bioquimica y Biología Molecular. Universidad Autónoma de Madrid. CBM "Severo Ochoa"

- **Patricia Alcaide Alonso.** Investigadora Senior. CEDEM
- **Margarita Castro Reguera.** Tecnico 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"
- **Fernando García Muñoz.** Técnico de Laboratorio. CEDEM
- **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 Bioquimica 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 biogénesis.
- 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 iPS from patient-derived fibroblast with organic acidemia and congenital defects of glycosylation. Differentiation to hepatocytes, neural progenitors or cardiomyocytes.

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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; Achleitner, MT; Merritt, JL; Pérez, B; Ugarte, M; Grünewald, S; Riela, 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 phosphopantothenoylcysteine 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, Spaull R, Sykut-Cegielska J, Tabarki B, Tangeraas T, Thoeny B, Wassenberg 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-Mínguez S, Serramito-Gómez I, Ruiz-Sala P, Peñnarrubia 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 macrothrombocytopenia by disrupting glycosylation and thrombopoiesis. Blood. 2023; 141(4): 406-21. Article. IF: 21.0; D1
- **Musokhranova U, Grau C, Vergara C, Rodríguez-Pascau 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-Sannaa 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. *Managment 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. *Managment centre: UAM*
- **Ruiz Desviat LM.** Mecanismos responsables del fenotipo patológico en enfermedades neurometabólicas raras y aproximaciones terapéuticas personalizadas (PID2019-105344RB-I00). MCINN. 2020-2023. *Managment 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. *Managment centre: FIBHULP*
- **Ruiz Desviat LM.** Rare neurometabolic diseases: from research in novel disease models to targeted therapies- (PID2022-137238OB-I00 MCINN). MCINN. 2023-2026. *Managment 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, assignes; Splice shifting oligonucleotides for use in the treatment of diseases characterized by altered inclusion of microexons.** PCT/EP2022/077882, EP4163373A1 2023 April 12

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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 Genetica. 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 dominat 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 stablish 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.

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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 platin-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

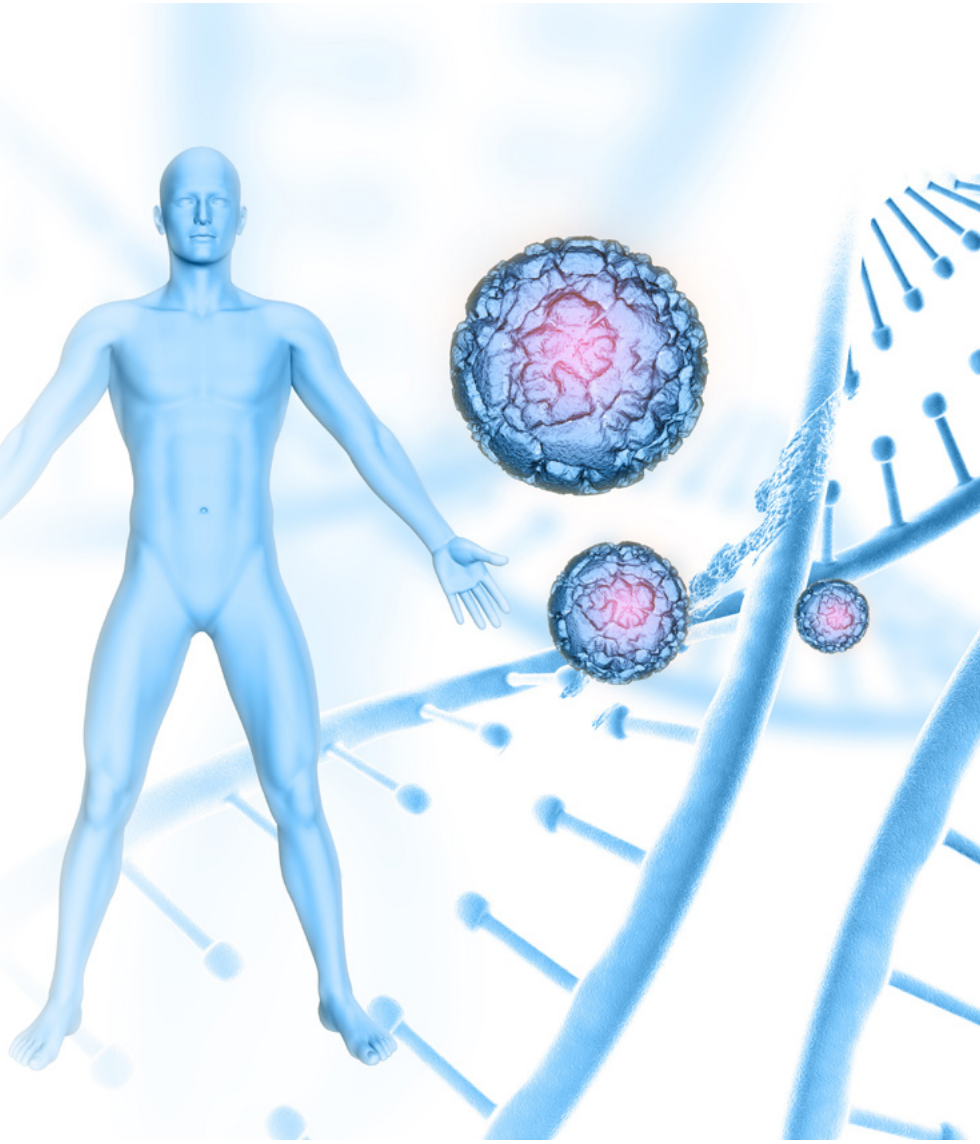
- **Rodríguez Novoa SM.** Diagnóstico genético de la hipercolesterolemia familiar mediante secuenciación masiva. Estudio funcional de nuevas variantes y detección de mosaicismo. Estudio de miRNAs (PI18/00917). ISCIII. 2019-2023. Managment centre: FIBHULP
- **Rodríguez Novoa SM.** Impacto de las variantes 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. Managment centre: FIBHULP
- **Rodríguez Novoa SM.** Renal tubular and markers of bone turnover in hbv monoinfected patients during long term tretament 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.

PHARMA GENFINDER

- **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.



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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, Marin-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, Graválos-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 polimorfimos 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 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*

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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

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Strategic Objectives	Development forecast for the coming years:	Actions
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	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, Boscà 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, Martíns 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

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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.** Ténico de Laboratorio. FIBHULP
- **Eduardo García Cimbrelo.** 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 Orotopédica 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 OBJETIVES

- 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 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.

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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

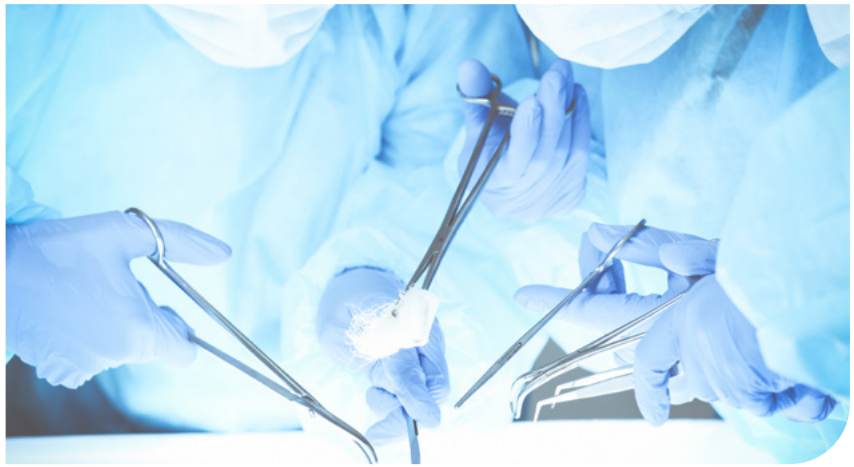
- **Beatriz García Brihuega.** Contrato garantía juvenil (PEJ-2021-TL/BMD-22184). CM. 2022-2024. *Managment centre: FIBHULP*
- **Escudero-Duch C.** Films de PLA con patrón microestructurado para promover la cicatrización de heridas. CIBER-BBN. 2023-2024. *Managment centre: CIBER-BBN*
- **Lerma Juarez 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 Categoria 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 (RADIOPROTECT-CM) (P2022/BMD-7406). CM. 2023-2026. *Managment centre: FIBHULP*
- **Vilaboa Díaz NE.** Potencial traslacional de inhibidores del factor de transcripción HSF1 como drogas anticancerigenas (PID2021-126325OB-I00). Ministerio de Ciencia e Innovación. 2022-2024. *Managment centre: FIBHULP*

Cibers and Retics

- **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, Gónzalez 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.



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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 targetsfor 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 biofabricadas 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, 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
- **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, Lizasoaín 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 endoletio corneal humano expandido en cultivo. Roche Farma S.A. 2016-Ongoing. *Managment centre: FIBHULP*
- **de Miguel González MP.** Contrato Miguel Servet Categoria A (CP03/0007). CM. 2010-2025. *Managment centre: FIBHULP*
- **de Miguel González MP.** Contribución de la modificación metabólica a la reprogramación celular y la transformación oncogénica. Fundación Domingo Martínez. 2017-Ongoing. *Managment centre: FIBHULP*
- **de Miguel González MP.** Generación de estroma corneal bio-mimético por impresión 3D de colageno y celulas madre mesenquimales. Stem Vision S. L. 2021-Ongoing. *Managment centre: FIBHULP*
- **de Miguel González MP.** Contratos de Ayudante de Investigación financiados por el Fondo Social Europeo. Fondo Social Europeo. 2023-2025. *Managment centre: FIBHULP*
- **de Miguel González MP.** Estudios de biocompatibilidad con células madre mesenquimales (MSC) aisladas de tejido adiposo. AJL Ophthalmic S.A. 2023-2023. *Managment 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.

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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. 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

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).

RESEARCH LINES

- Therapeutic drug monitoring (TDM) – Development of individualised therapeutic drug monitoring programmes and pharmacogenetics.
- Getting quality evidences for the stablishment of drug efficacy, safety and adecuate use of medicines in humans

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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, Raïch-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, 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, 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-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, 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
- **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
- **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, Yeghiazaryan 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 FJ.** 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, Koniordou 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, Naucler 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, 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
- **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 controllled clinical trial (PIC18/00016). ISCIII. 2019-2024. *Managment 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. *Managment centre: FIBHULP*
- **Borobia Pérez A.** Corona Accelerated R&D in Europe (H2020-JTI-IMI2-2020-21-single-stage). UE. 2020-2025. *Managment centre: FIBHULP*
- **Borobia Pérez A.** Ensayo clínico aleatorizado y multicéntrico para evaluar la efectividad y la eficiencia de una estrategia de genotipado an-

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ticipado de voriconazol en pacientes con riesgo de aspergilosis (PI18/01322). ISCIII. 2019-2023. *Managment centre: FIBHULP*

- **Borobia Pérez A.** Ensayo clínico de fase II, comparativo, aleatorizado, adaptativo para evaluar la seguridad e immunogenicidad de una dosis de cominarty® en sujetos que hayan recibido una dosis de vaxzeria (5859 CombiVacS). ISCIII. 2021-Ongoing. *Managment centre: FIBHULP*
- **Borobia Pérez A.** ERA4HEALTH_Fostering a European Research Area for Health Research (ERA-4HEALTH_ALBERTO BOROBIA). UE. 2023-2029. *Managment centre: FIBHULP*
- **Borobia Pérez A.** European Regimen Accelerator for Tuberculosis - ERA4TB (H2020-JTI-IMI2-2018-15). UE. 2019-Ongoing. *Managment 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. *Managment centre: FIBHULP*
- **Borobia Pérez A.** Marie Skłodowska-Curie Actions - Individual Fellow (CareInTrials). UE. 2019-2023. *Managment 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. *Managment centre: FIBHULP*
- **Borobia Pérez A.** Proyecto ipharmgx: estudio colaborativo nacional para evaluaar la efectividad y eficiencia de la implementación de biomarcadores farmacogenéticos mediante una estrategia de genotipado anticipado en el sns (PMP22/00055). ISCIII. 2023-2025. *Managment 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. *Managment 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 limite de normalidad de la cantidad de xilosa excretada en orina. Venter Pharma S.L. 2022-Ongoing. *Managment 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. *Managment 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. *Managment centre: FIBHULP*
- **Borobia Pérez A.** Puesta en marcha y realización del EE.CC.: ensayo clinico aleatorizado controlado 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. *Managment centre: FIBHULP*
- **Borobia Pérez A.** Puesta en marcha y realización del ensao clínico: european discovery for solidarity: an adaptative pandemic and emerging infection platform trial. ECRIN European Clinical Research Inf. 2022-Ongoing. *Managment 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. *Managment centre: FIBHULP*
- **Borobia Pérez A.** Puesta en marcha y realización del ensayo consistentes principalmente en las que se describen a continiación: 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. *Managment 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. *Managment 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 clínical trial- nimbus. Fundación para la Investigación de la Asociación Europea de Urologia. 2017-Ongoing. *Managment 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. *Managment centre: FIBHULP*
- **Borobia Pérez A.** ZODIAC Coordinación. Imperial College of Science, Technology and Medicine. 2023-2029. *Managment 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. *Managment centre: FIBHULP*
- **Carcas Sansuán AJ.** Eficacia a cuatro años de las vacunas COVID-19 frente a enfermedad graves e infecciones asintomáticas: estudio COVIDVAC @

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España (ICI21/00065). ISCIII. 2022-2024. *Managment 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. *Managment 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). ISCIII. 2019-2023. *Managment centre: FIBHULP*
- **Carcas Sansuán AJ.** Unidad clínica de Investigación y Control de Ensayos Clínicos. CM. 2011-Ongoing. *Managment centre: FIBHULP*
- **Frias Iniesta J.** Población en riesgo de hipertermia maligna: cohorte ambispectiva (PI20/01444). ISCIII. 2021-2023. *Managment centre: FIBHULP*
- **Frias Iniesta J.** VACCELERATE_European Corona Vaccine Trial Accelerator Platform (VACCELERATE_JESÚS FRÍAS). UE. 2021-2025. *Managment 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. *Managment centre: FIBHULP*

Cibers and Retics

- **Carcas Sansuán A.** Unidad de Investigación clínica y ensayos clínicos del Hospital Universitario la Paz (PT20/00036). ISCIII. (31/12/2023). FIBHULP
- **Carcas Sansuán A.** European Clinical Research Infraestructures Network. (ECRIN). EU. (31/12/2023). FIBHULP
- **Carcas Sansuán A.** Plataforma ISCIII de soporte para la Investigación Clínica (PTC20/00018). ISCIII. (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: EOm 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 Sl
  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.
- **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.**

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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 Traumatologí. 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

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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, Siccardi 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 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

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- **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 ultronography 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
- **Tabeayo 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.** Artoplastía 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 Cirugia Ortopedica y Traumatologia. 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, Sarnago H, Lucía Gil O, Acero Acero J, Burdío JM.** Portable desinfection system based on induction heating; September 2022.

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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 Cirgía Oral y Maxilofacila. 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).

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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 PI22/01512, (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

- **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, Higueras 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 JJZ, 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 Cevallos 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 (PI22/01512). ISCIII. 2023-2025. *Managment 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. *Managment centre: FIBHULP*
- **del Castillo Pardo de Vera JL.** Expresión de moléculas inmunoreguladoras pd1/ pd-llen el carcinoma oral de células escamosas. Osteoplac Innovations S.L.U.. 2021-Ongoing. *Managment 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. *Managment centre: FIBHULP*
- **Sastre Perona A.** Contrato garantía juvenil Ayudante de Investigación (PEJ-2020-AI/BMD-17846). CM. 2021-2023. *Managment centre: FIBHULP*
- **Sastre Perona A.** Contrato garantía juvenil Ayudante de Investigación (PEJ-2023-AI/SAL-GL-27700). CM. 2023-2025. *Managment centre: FIBHULP*
- **Sastre Perona A.** Contrato garantía juvenil Técnico (PEJ-2021-TL/BMD-21631). CM. 2022-Ongoing. *Managment centre: FIBHULP*
- **Sastre Perona A.** Desarrollo de herramientas predictivas y terapeúticas para combatir la resistencia a cisplatino en carcinomas escamosos de cabeza y cuello (PI20/00329). ISCIII. 2021-2023. *Managment centre: FIBHULP*
- **Sastre Perona A.** Desarrollo de métodos de predicción de la respuesta a inmunoterapia en tumores orales. (PI-5102). FIBHULP. 2022-Ongoing. *Managment centre: FIBHULP*
- **Sastre Perona A.** Devoloping therapeutic and predictive tools to overcome cisplatin resistance in head and neck squamous cell carcinomas (CP19/00063). ISCIII. 2020-2023. *Managment 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. *Managment 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. *Managment centre: FIBHULP*
- **Sastre Perona, A.** Contrato Sara Borrel (CD23/00167). ISCIII. 2024-2026. *Managment 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. *Managment centre: CSIC*

Clinical trials

- **Cebrian 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

- **Cebrian 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

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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 Fisica 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 Area en Inmunología. Hospital Universitario La Paz
- **Alberto Martín Vega.** Facultativo Especialista de Area 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 Vascular. 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 Sanabría 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 ocurrence 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.

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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-norcholesterol 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. Cir 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,**

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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 m RNA 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 Endocr Metab. 2023; 109(1): e379-88. Article. IF: 5.0; 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
- **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, toxicologia y farmacogenética (HUL-VIT-2018). FIBHULP. 2019-Ongoing. *Managment centre: FIBHULP*
- **Ramírez García E, Sanabria Carretero P, Peiró Vallejo C.** Registro de parada cardiorespiratoria perioperatoria (HUL-PCP-2017). FIBHULP. 2017-Ongoing. *Managment centre: FIHULP*
- **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. *Managment centre: FIHULP*
- **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. *Managment centre: FIHULP*
- **Ramírez García E.** Cohorte Retrospectiva De Registro De Alergias En Atención Primaria Y En HCIS En El Hospital Universitario La Paz (HUL-AL-RA-2023). FIBHULP. 2023-2024. *Managment centre: FIBHULP*
- **Ramírez García E.** Estudio de casos y controles anidado en una cohorte para evaluar el efecto de la co-medicación 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. *Managment centre: FIHULP*
- **Ramírez García E.** Estudio de incidentes y eventos adersos en el hospital (ESINEA). FIBHULP. 2023-Ongoing. *Managment centre: FIHULP*
- **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. *Managment centre: FIBHULP*
- **Ramírez García E.** Tareas de consultoría relacionadas con la evaluación de viabilidad de un potencial esudio observacional para evaluar el riesgo de anafilaxis en usuarios de hierro endovenoso. Research Triangle Institute, Rti Health Solucions. 2021-2022. *Managment centre: FIBHULP*
- **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. *Managment centre: FIBHULP*
- **Sanabria Carretero P.** Población en riesgo de hipertemia maligna: cohorte ambispectiva (Código HULP:: PI-3528) (HUL-RHM-2019). FIBHULP. 2019-Ongoing. *Managment centre: FIBHULP*
- **Sanabria Carretero P.** Población en riesgo de hipertemia maligna: cohorte ambispectiva (PI20/01444). ISCIII. 2021-2025. *Managment 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.

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3.6.7 Translational Research and Innovation in General and Digestive Surgery Group

Publications:58 | **Q1:**34

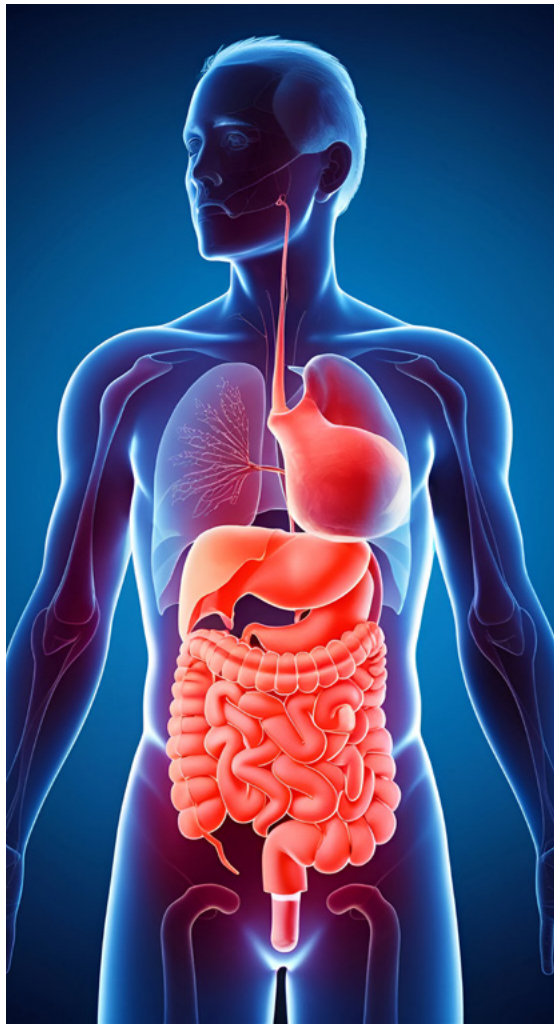
COMPOSITION

Constantino Fondevila Campo.
Jefe de Servicio de Cirugía General y Digestiva. Hospital Universitario La Paz

- **Ramón Cantero Cid.** Facultativo Especialista de Área en Cirugía General y de Aparato Digestivo. Hospital Universitario La Paz
- **Francisca García-Moreno Nisa .** Jefe de Sección de Cirugía de Urgencias. Hospital Universitario La Paz
- **Joaquín Gómez Ramírez.** Coordinador Unidad de Cirugía Endocrina. Hospital Universitario La Paz
- **Jenny Rosario Guevara Martínez.** Facultativo Especialista de Área en Cirugía General y de Aparato Digestivo. Hospital Universitario La Paz
- **Amelia Hessheimer.** Facultativo Especialista de Área en Cirugía General y de Aparato Digestivo. Hospital Universitario La Paz
- **Arnau Paniselló Roselló.** Investigador Postdoctoral. Institute George Lopez
- **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
- **Inés Rubio Pérez.** Facultativo Especialista de Área en Cirugía General y de Aparato Digestivo. Hospital Universitario La Paz
- **Isabel Pascual Miguelañez.** Facultativo Especialista de Área en Cirugía General y de Aparato Digestivo. Hospital Universitario La Paz
- **Maria 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. Univerisidad 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.
- **APROACH:** 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
- Guanguong 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.



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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
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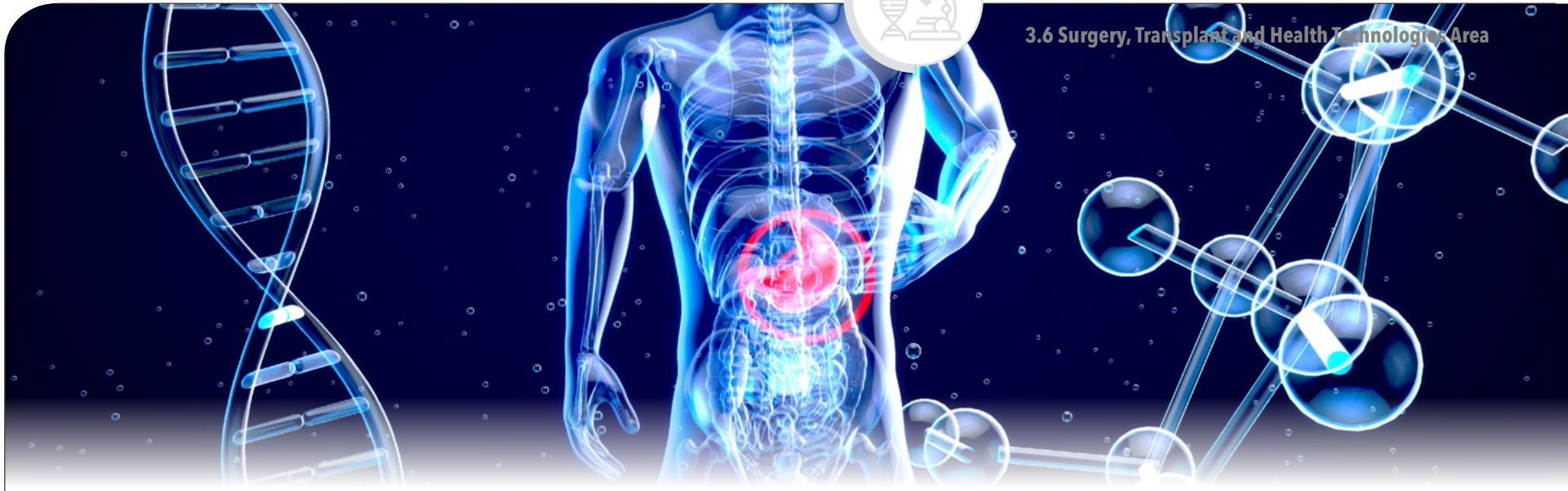

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- **Primavesi F, Maglione M, Cipriani F, Denecke T, Oberkofler CE, Starlinger P, Dasari BVM, Heil J, Sgarbura O, Soreide K, Díaz-Nieto R, Fondevila C, Frampton AE, Geisel D, Henninger B, Hessheimer AJ, Lesurtel M, Mole D, Oellinger R, Olthof P, Reiberger T, Schnitzbauer AA, Schwarz C, Sparrelid E, Stockmann M, Truant S, Aldrighetti L, Braunwarth E, D'Hondt M, DeOliveira ML, Erdmann J, Fuks D, Gruenberger T, Kaczirek K, Malik H, Öfner D, Rahbari NN, Göbel G, Siriwardena**

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- **Tejedor P, Pastor C, Pellino G, Di Saverio S, Gorter-Stam M, Sylla P, Francis N.** Management of acute diverticulitis with pericolic free gas (ADIFAS): an international multicenter observational study. Int J Surg. 2023; 109(4): 689-97. Article. IF: 12.5; D1
- **Valls-Esteve A, Tejo-Otero A, Lustig-Gainza P, Buj-Corral I, Fenollosa-Artés F, Rubio-Palau J, de la Torre IBM, Munuera J, Fondevila C, Krauel L.** Patient-specific 3D printed soft models for liver surgical planning and hands-on training. Gels. 2023; 9(4): 339. Article. IF: 5.0; Q1
- **Vera BM, Rubio-Pérez I, Frias NB, Migueláñez IP.** Persistent intra-operative bleeding in sacral neuromodulation electrode placement: what can we do? Colorectal Dis. 2023; 25(1): 156-7. Letter. IF: 2.9; Q2

Research projects

- **Cantero Cid R.** Desarrollo de biomodelos de organoides en 3D in vitro de cáncer de colon. FIBHULP. 2022-Ongoing. *Managment centre: FIBHULP*
- **Cantero Cid R.** Generación de microtejidos de colon tridimensionales automatizada para evaluación de farmacos antitumorales. Roche Farma S.A. 2017-Ongoing. *Managment centre: FIBHULP*
- **Fondevila Campo C.** Estudio para la validación clínica de un nuevo biomarcador para determinar la predisposición a infecciones en pacientes sometidos a cirugía mayor abdominal programada (BIOMAS-001/ PI-5419). Crazy Science & Business S.L. 2022-2024. *Managment centre: FIBHULP*
- **Fondevila Campo C.** Precondicionamiento portal en injertos hepáticos pequeños mediante perfusión normotérmica ex situ en un model porcino (PI18/00894). ISCIII. 2019-2023. *Managment centre: FIBHULP*
- **Fondevila Campo C.** Prolonged perfusions of porcine livers on lps device followed by transplantation. Guangdong Shunde Innovative Design Institute. 2021-Ongoing. *Managment centre: FIBHULP*
- **Fondevila Campo C.** Proyecto ORGALIVE. FIBHULP. 2022-Ongoing. *Managment centre: FIBHULP*
- **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 outmes study". European Foundation for the Study of Chronic Liver Failure. 2021-Ongoing. *Managment centre: FIBHULP*
- **Hessheimer AJ.** Estudio piloto sobre la implementacion de resultados reportados por el paciente en la cirugía general mayor (PI22/00847). ISCIII. 2023-2025. *Managment centre: FIBHULP*
- **Rubio Pérez I.** Estudio piloto prospectivo titulado: sutura continua subcuticular versus grapas cutáneas en pacientes de cirugía colorrectal ¿existen diferencias en la incidencia de infección quirúrgica según la técnica de cierre empleada?. Surgical Infection Society-Europe. 2013-Ongoing. *Managment centre: FIBHULP*

Cibers and Retics

- **Fondevila Campo C.** CIBER de Enfermedades Hepáticas y Digestivas. (CIBERehd). ISCIII. (31/12/2023). FIBHULP

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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

coordinadormaterno@idipaz.es

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

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Strategic Objectives	Development forecast for the coming years:	Actions
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.	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.	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.
	Promote the search for both public and private funding for cooperative research within the MIA area. Promote participation in international projects.	Facilitate the application request for European projects through the IdiPAZ Internalization Platform.
	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.	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

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, Estefania 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

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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. Hopsital Universitario la Paz
- **Susana Ares Segura.** Facultativo Especialista de Área en Neonatología. Hospital Universitario La Paz
- **Maria 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 Serviciode Pediatría y Neonatología. Hospital Universitario Quironsalud 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, mycrobiota and Milkbank. Lead: Miguel Saenz-Pipaón/ Marta Cabrera
- Perinatal and neonatal infectology. Inmunology 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 percusisión 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,**

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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 correlationships. 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
- **Domachowske 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
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- **Buño Soto A.** Estudio en población cognitivamente sana (sin demencia) para la determinacion de valores de referencia de una nueva técnica diagnóstica basada en espectroscopia Raman. Raman Health Technologies S. L. 2016-Ongoing. *Managment centre: FIBHULP*
- **Buño Soto A.** Recogida de muestras en deportistas de alto rendimiento para la evaluación de su variación biológica. Fundación para la Investigación Biomédica Hospital Universitario La Paz. 2016-Ongoing. *Managment centre: FIBHULP*
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Cibers and Retics

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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
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- **Pellicer Martínez A.** Integrating families at neonatal intensive care units for empowering them as primary caregivers: the impact of the programme.
  Sponsored by: Fundacion Para La Investigacion Biomedica Hospital Universitario La Paz
  Signed date: 21/02/2023
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  Sponsored by: Elgan Pharma, Ltd
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Patents and trademarks

- **Segovia Iñigo C, Montes Bueno MT, inventors; Segovia Iñigo C, assignee.** Positioning device for neonates (Utility model). U201330102; 2013 January 31.

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3.7.2 Molecular Hepatology

Publications:9 | **Q1:**3

COMPOSITION

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- **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
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- **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

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- **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, Brecelj J, Dezsofi A, Calvo PL, Grabhorn E, Hartleif S, van der Woerd WJ, Kamath BM, Wang JS, Li LT, Durmaz Ö, Kerkar 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 FJ, 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
- **Gardín A, Ruiz M, Beime J, Cananzi M, Rathert M, Rohmer B, Grabhorn E, Almes M, Logarajah V, Pena-Quintana L, Casswall T, Darmellah-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.** Δ4-3-oxo-5β-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, Chichelnitskiy 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, Barrero 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, Janciauskiene 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 referencia en enfermedades rara hepáticas. R-liver. UE. 2019-Ongoing. *Managment centre: FIBHULP*
- **Hierro Llanillo L.** Validación de marcadores genéticos y moleculares para el diagnostico 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 Categoria 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

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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

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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: Antolin 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, Fioravantti 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, Pardilla 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 Ginecol 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.

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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 hysterosapingo-foam-sonography (hyfosy): 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, Díaz 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 Ginecologia (SEGO) y el Comité Español Interdisciplinario para la Prevención Vascular (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
- **Miranda MT, Burgos EMP, Córcoles GC, Zapata RMR, Merino MB, de la Calle M, Rasero JLB.** Immunofluorescence study of the placenta in a case of pemphigoid gestationis: Pathophysiological bases. Clin Invest Ginecol Obstet. 2023; 50(1): 100798. Article. IF: 0.1; Q4
- **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, Goncé A, Valdés-Bango M, Viñuela-Benéitez MC, Gutiérrez MMC, Saavedra-Lozano J, Pérez IC, Encinas B, Vilella LC, Martínez MD, Tagarro A, Rodríguez-Molino P, Quiles EG, Alcázar DG, Burguillo AG, Folgueira 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, Antolin 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 FJ.** 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

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. Biologia de sistemas (PI19/00904). ISCIII. 2020-2024. *Managment centre: FIBHULP*
- **Bartha Rasero JL.** Biología de sistemas para la búsqueda de marcadores precoces de placentacion deficiente (PI19/00915). ISCIII. 2020-2024. *Managment centre: FIBHULP*
- **Bartha Rasero JL.** Implicación de la oxidación mitocondrial de ácidos grasos placentaria en la patogenesis y clínica de la preeclampsia. Laboratorios Farmaceúticos Rovi S. A. 2016-Ongoing. *Managment centre: FIBHULP*
- **Bartha Rasero JL.** Diagnóstico intraparto de la infección materna por estreptococo del grupo B. Cepheid Iberia S.L.U. 2023-Ongoing. *Managment centre: FIBHULP*
- **Bartha Rasero JL.** Validación de Nuevos Biomarcadores en Diabetes Gestacional de Inicio Tardío (PI23/01837). ISCIII. 2023-Ongoing. *Managment 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 ehrn 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 nipocalimab 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

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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
- **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.** Cientifico 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 Cientifico 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.** Cientifico Titular de OPIs. Unidad de Virus Respiratorios y Gripe. Instituto de Salud Carlos III
- **Clara Udaondo Gascón.** Facultativo Especialista en Reumatologa 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 achieve 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 deseases…) is also a priority in our group. Emerging areas of research in our group are zoonosis an 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…). Torquteno 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.

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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

- **Alarcón-Linares ME, Moreno-Docón A, Pérez-Serna L, Camacho J, Rodríguez DS, Gutiérrez-Martín ML, Broncano-Lavado A, Echevarría JE, Cabrerizo M, Fernández-García MD.** Rare recombinant GI.5[P4] norovirus that caused a large foodborne outbreak of gastroenteritis in a hotel in spain in 2021. Microbiol Spectr. 2023; 11(2): e0485722. Article. IF: 3.7; Q2
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4 Associated clinicians

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- **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. *Managment 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. *Managment centre: Fundación Puerta de Hierro*
- **Gianquinto C, Calvo Rey C.** SARS-coV2 variants Evaluation in pRegnancy and paeDIatrics cohorts. Project acronym (Project 101045989). EU Horizon . 2021-Ongoing. *Managment centre: PENTA , FIBHULP*
- **Grasa Lozano CD.** A multicenter study of carbapenem-resistant or carbapenemase-producing gram-netative bacteremia in pediatrics. European Society for Paediatric Infectious Diseases. 2022-Ongoing. *Managment 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. *Managment centre: SEIMC*
- **Grasa Lozano CD.** Estudio de infecciones por bacterias resistentes a carbapenémicos en pediatría - CARBA-PED. Fundación SEIP . 2022-Ongoing. *Managment centre: FIBHULP*
- **Grasa Lozano CD.** Perfect. estudio de infección fúngica invasiva en pediatría. Gilead Science S.L. 2021-Ongoing. *Managment centre: FIBHULP*
- **Méndez Echecarría AM.** Colonización por s.aureus resistente a meticilina en niños sanos de la comunidad (Estudio Cosaco): estudio multicéntrico nacional (PI18/00372). ISCIII. 2019-2022. *Managment 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. *Managment centre: FIBHULP*
- **Oteo J, Calvo Rey C.** La medicina de precisión contra la resistencia a antimicrobianos: Proyecto MePRAM. (PMP22/00092). ISCIII. 2023-Ongoing. *Managment centre: CIBERINFEC*
- **Udaondo Gascón C.** Banco de imagenes de capilaroscopias en población pediátrica. Sociedad Española de Reumatología Pediatrica. 2019-Ongoing. *Managment centre: FIBHULP*
- **Udaondo Gascón C.** Contrato Rio Hortega (CM21/00012). ISCIII. 2022-2023. *Managment centre: FIBHULP*

Cibers and Retics

- **Calvo Rey C.** Centro de Investigación Biomédica en Red en Enfermedades Infecciosas. (CIBERINFEC). ISCIII. (31/12/2024). FIBHLP
- **Casas Flecha I.** Red de Laboratorios Españoles de secuenciación Genómica de SA%RS-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 sisunatovir 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

- **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 bimervax® 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 reactogenicidad, 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 Echevarria 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

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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 Autonoma 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. Univesidad 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. Univesidad 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 is 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 ate the corssroad of immunity and allergy
8. Health-care associated Infections. Resistant bacteria and antimicrobial stewardship / Infecciones asociadas con la assitencia sanitaria. Resistencias a antimicrobioanos 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, cardioascular 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 traslocation 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 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 diagnostis of pediatric TB
  - New fixed-dosed combinations. Off label drugs in children. Pharmacodinamic 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.

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- Epidemiology of imported and emergent diseases in children
  - Paediatric International Outbreaks: Epidemiology and public health impact: Zika. Rabies. Dengue. Chikungunya. Haemorragic 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 challengies 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-Julián 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-Artigaod F.** Intermittent bladder irrigation with liposomal amphotericin B for the treatment of fluconazole-resistant Meyerozyma 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, 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, Pano-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 Infec Micr Cl. 2023; 41(4): 238-42. Editorial Material. IF: 2.6; Q3
- **Cobo-Vázquez E, Aguilera-Alonso D, Carbsyo T, Figueroa-Ospina LM, Sanz-Santaeufemia F, Baquero-Artigao F, Vázquez-Ordoñez C, Carrasco-Colom J, Blázquez-Gamero D, Jiménez-Montero B, Grasa-Lozano C, Cilleruelo MJ, Álvarez A, Comín-Cabrera C, Penin M, Cercenado E, Del Valle R, Roa MA, García-De Diego I, Calvo C, Saavedra-Lozano J.** Epidemiology and clinical features of Streptococcus pyogenes bloodstream infections in children in Madrid, Spain. Eur J Pediatr. 2023; 182(7): 3057-62. Article. IF: 3.0; Q1
- **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.** Immunocompromisedchildren 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.** Adenovirusinfection in hematopoietic and solid organ paediatric transplant recipients: treatment, outcomes, and use of cidofovir. Microorganisms. 2023; 11(7): 1750. Article. IF: 4.1; Q2
- **Hernández-Villarroel AC, Ruiz-García A, Manzanaro C, Echevarría-Zubero R, Bote-Gascón P, González-Bertolín I, Sainz T, Bueno-Campaña M, Calvo C.** Lung ultrasound: a useful prognostic tool in the management of bronchiolitis in the emergency department. J Pers Med. 2023; 13(12): 1624. Article. IF: 3.0; Q2
- **Hernanz-Lobo A, Noguera-Julian A, Minguell L, López-Suárez A, Soriano-Arandes A, Espiau M, Gil EC, Medina EML, Bustillo-Alonso M, Aguirre-Pascual E, Baquero-Artigao F, Garsaball OC, Gomez-Pastrana D, Falcón-Neyra L, Santiago-García B.** Prevalence and clinical characteristics of children with nonsevere tuberculosis in Spain. Pediatr Infect Dis J. 2023; 42(10): 837-43. Article. IF: 2.9; Q3
- **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-Linares R, Chehayeb-Morán J, Chorda-Ribelles J, García-Rubio S, García-de-Casasola G, Gil-Rodrigo A, Henríquez-Camacho C, Hernández-Píriz A, Hernández-Quiles C, Llamas-Fuentes R, Luordo D, Marín-Baselga R, Martínez-Díaz MC, Mateos-González M, Méndez-Bailón M, Miralles-Aguiar F, Nogue R, Nogué M, de Urbina-Antia BO, Oviedo-García AA, Porcel JM, Rodríguez S, Rodríguez-Serrano DA, Sainz T, Sánchez-Barrancos IM, Torres-Arrese M, Torres-Macho J, Vicente AT, Villén-Villegas T, Zafra-Sánchez JJ, Tung-Chen Y.** Inter-rater variability in the evaluation of lung ultrasound in videos acquired from covid-19 patients. Appl Sci(Basel). 2023; 13(3): 1321. Article. IF: 2.5; Q2
- **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 antituberculosis 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

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- **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, Grauh 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, Goncé A, Valdés-Bango M, Viñuela-Benéitez MC, Gutiérrez MMC, Saavedra-Lozano J, Pérez IC, Encinas B, Vilella LC, Martfnez MD, Tagarro A, Rodríguez-Molino P, Quiles EG, Alcázar DG, Burguillo AG, Folgueira 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
- **Tarancón-Díez L, Peraire J, de Ory SJ, Guirro M, Escosa L, Tato LMP, Antón MP, Piqueras 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 (PI13/ 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: FIBHLP*
- **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: FIBHLP*
- **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.** Capacitacion 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: IIa
  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, Piñeiro R, authors; ASOCIACION ESPAÑOLA DE PEDIATRIA (AEPED), assignee.** Brand name: PEDIAMÉCUM; ESM 3079824; 2013 June13.

PEDIAMÉCUM

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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 Artacoz.** 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"

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 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 CAR T 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 citokine 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.

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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, Knelange 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 Immun. 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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SCIENTIFIC REPORT 2023

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-Lluva 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 FJ, 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
- **Marin-Bejar O, Romero-Moya D, Rodríguez-Ubreva J, Distefano M, Lessi F, Aretini P, Liquori A, Castaño J, Kozyra E, Kotmayer L, Bueno C, Cervera J, Rodríguez-Gallego JC, Nomdedeu JF, Murillo-Sanjuán L, de Heredia CD, Pérez-Martínez A, López-Cadenas F, Martínez-Laperche C, Dorado-Herrero N, Marco FM, Prósper F, Menendez P, Valcárcel D, Ballestar E, Bödör C, Bigas A, Catalá A, Wlodarski MW, Giorgetti A.** Epigenome profiling reveals aberrant DNA methylation signature in GATA2 deficiency. Haematologica. 2023; 108(9): 2551-7. Letter. IF: 8.2; Q1
- **Mestre-Durán C, Martín-Cortázar C, García-Solís B, Pernas A, Pertíñez L, Galán V, Sisinni L, Clares-Villa L, Navarro-Zapata A, Al-Akioui K, Escudero A, Ferreras C, Pérez-Martínez A.** Ruxolitinib does not completely abrogate the functional capabilities of TLR4/9 ligand-activated NK cells. Front Immunol. 2023; 13: 1045316. Article. IF: 5.7; Q1
- **Moreno C, Ramos-Elbal E, Velasco P, Aguilar Y, Martínez BG, Fuentes C, Molinos A, Guerra-García P, Palomo P, Verdu J, Pedroso RMA, Vagace JM, López-Duarte M, Regueiro A, Tasso M, Dapena JL, Salinas JA, Navarro S, Bautista F, Lassaletta A, Lendínez F, Rives S, Pascual A, Rodríguez A, Pérez-Hurtado JM, Fernández JM, Pérez-Martínez A, González-Vicent M, de Heredia CD, Fuster JL.** Haploidentical vs. HLA-matched donor hematopoietic stem-cell transplantation for pediatric patients with acute lymphoblastic leukemia in second remission: A collaborative retrospective study of the Spanish Group for Bone Marrow Transplantation in Children (GETMON/GETH) and the Spanish Childhood Relapsed ALL Board (ReALLNet). Front Pediatr. 2023; 11: 1140637. Article. IF: 2.1; Q2
- **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
- **Ochoa-Fernández B, Galán-Gómez V, Guerra-García P, Sanromán S, Martínez I, Bueno D, Mozo Y, Sisinni L, Losantos I, González B, Pérez-Martínez A.** Younger age and induction failure predict outcomes in infant leukemia: 30 years of experience in a tertiary center. Front Pediatr. 2023; 11: 1166176. Article. IF: 2.1; Q2
- **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 myod1 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
- **Quintero V, Bueno-Sánchez D, Mozo-del-Castillo Y, Urtasun-Erburu A, Sisinni L, López-Duarte M, Pérez-Hurtado JM, Fuster JL, González-Vicent M, Pérez-Martínez A, Díaz-de-Heredia C.** Haploidentical hematopoietic stem cell transplantation in pediatric patients with acquired hypocellular bone marrow failure. Transplant Cell Ther. 2023; 29(10): e1-e6. Article. IF: 3.6; Q2
- **Sánchez MDC, Carrascoso 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
- **Sánchez-Guijo F, Avendaño-Solá C, Badimón L, Bueren JA, Canals JM, Delgadillo J, Delgado J, Eguizábal C, Fernández-Santos ME, García-Olmo D, González-Aseguinolaza G, Juan M, Martín F, Mata R, Montserrat N, Pérez-Martínez A, Pérez-Simón JA, Prósper F, Urbano-Ispizua A, Zapata AG, Sureda A, Moraleda JM.** Role of hospital exemption in europe: position paper from the spanish advanced therapy network (TERAV). Bone Marrow Transpl. 2023; 58(6): 727-8. Letter. IF: 4.5; Q1
- **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
- **Solano C, Castro-Rebollo P, Pérez-Martínez A, López-Corral L, Barba-Suñol P, Kwon M, Ortiz V, Sanz-Caballer J, Caballero AC, Martínez J, Cedillo A, Sureda A.** Quantifying the available capacity and resource needs for provision of CAR-T therapies in the National Health Service in Spain: a survey-based study. BMJ Open. 2023; 13(7): e071371. Article. IF: 2.4; Q1
- **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
- **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

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- **Velasco P, Bautista F, Rubio A, Aguilar Y, Rives S, Dapena JL, Pérez A, Ramírez M, Saiz-Ladera C, Izquierdo E, Escudero A, Camós M, Vega-García N, Ortega M, Hidalgo-Gomez G, Palacio C, Menéndez P, Bueno C, Montero J, Romecín PA, Zazo S, Álvarez F, Parras J, Ortega-Sabater C, Chulián S, Rosa M, Cirillo D, García E, García J, Manzano-Muñoz A, Minguela A, Fuster JL.** The relapsed acute lymphoblastic leukemia network (ReALLNet): a multidisciplinary project from the spanish society of pediatric hematology and oncology (SEHOP). Front Pediatr. 2023; 11: 1269560. Article. IF: 2.1; Q2

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). ISCIII. 2022-2024. *Managment centre: FIBHULP*
- **Mañas Núñez A.** IronKiller_Joining the forces of Natural Killer Cells and Ferroptosis to treat Refractory Neuroblastoma. UE. 2023-2025. *Managment 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. *Managment 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). ISCIII. 2023-2025. *Managment centre: FIBHULP*
- **Pérez Martínez A.** Análisis genético, trasnscriptomico y proteomico para identificar antigenos diana de terapia car t en leucemia mielomonocitica juvenil. Fundación Cris Contra el Cáncer. 2021-Ongoing. *Managment centre: FIBHULP*
- **Pérez Martínez A.** Aproximación académica mediante car-t en hemopatías malignas con necesidad médicas no cubiertas en niños y aya: estudio de viavilidad, seguridad y eficacia (REALL_CAR-T) (PI22/01226). ISCIII. 2023-2025. *Managment 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. *Managment centre: FIBHULP*
- **Pérez Martínez A.** Diseño del receptor antigenico quimerico NKG2D (CAR-NKG2D) como terapia celular en los sarcomas infantiles. Ong Otromundoesposible. 2019-Ongoing. *Managment centre: FIBHULP*
- **Pérez Martínez A.** Ensayo clinico en fase t memoria expresando un receptor chimerico antigenico con especificidad nkg2d en niños, adolescentes y adjultos jovenes 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. *Managment centre: FIBHULP*
- **Pérez Martínez A.** Ensayo clinico en fase t memoria expresando un receptor chimerico antigenico con especificidad NKG2D en niños, adolescentes y adjultos jovenes 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. *Managment centre: FIBHULP*
- **Pérez Martínez A.** Ensayo clinico fase I/II, multicentrico abierto, de infusión de celulas nk activadas para el tratamiento de niños, adolescentes y adultos jovenes con sarcomas. estudio sankoma. Fundación la Sonrisa de Alex. 2017-Ongoing. *Managment 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) (ICI19/00052). ISCIII. 2020-2025. *Managment centre: FIBHULP*
- **Pérez Martínez A.** Entrenamiento cognitivo a través del juego tecnologico para mejorar los efectos cognitivos relacionados con el tratamiento del cáncer infantil(winners o super-vivientes). Fundación Juegaterapia. 2022-Ongoing. *Managment centre: FIBHULP*
- **Pérez Martínez A.** Estudio mediante tecnologia de alto rendimiento de la predisposición hereditaria al cancer infantil. Fundación Cris Contra el Cáncer. 2017-Ongoing. *Managment centre: FIBHULP*
- **Pérez Martínez A.** Genetic, transcriptomic and proteomic analysis for the identification of target antigen for CAR T therapy in juvenile myelomonocytic leukemia (CART-JMML). Fundación Cris Contra el Cáncer. 2022-Ongoing. *Managment 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. *Managment centre: FIBHULP*
- **Pérez Martínez A.** Implementing magnetic targeting of nano-guided immune cells (IMAGINE). Fight Kids Cancer-European Cancer Foundation. 2021-Ongoing. *Managment centre: FIBHULP*
- **Pérez Martínez A.** Infusión de células natural killer aloreactivas o estimuladas post trasplante haploidéntico de progenitores hematopoyéticos en pacientes pediátricos con neoplasias hematológicas (PHINK) (PI18/01301). ISCIII. 2019-2023. *Managment centre: FIBHULP*
- **Pérez Martínez A.** Inmunoterapia en neusoblastomas pediátricos: tratamiento dirigido a las celulas tumorales iniciadoras de la metástasis. Fundación Cris Contra el Cáncer. 2019-Ongoing. *Managment centre: FIBHULP*
- **Pérez Martínez A.** Inmunoterapia en sarcomas: combinación del anticuerpo anticxcr4 y la terapia celular nk. Fundación la Sonrisa de Alex. 2016-Ongoing. *Managment centre: FIBHULP*
- **Pérez Martínez A.** Inmunovacter-CM. Regulation of the inflammatory response and dynamics of immunity in COVID-19 and immunocompromised patients from different risk populations. New therapeutic approaches. Fondo Europeo de Desarrollo Regional. 2022-Ongoing. *Managment centre: FIBHULP*
- **Pérez Martínez A.** Memory-like NK cells: a new therapy for ewing sarcoma (MEMO4ewing). Fundación Cris Contra el Cáncer. 2022-Ongoing. *Managment centre: FIBHULP*
- **Pérez Martínez A.** Nueva Generación de Inmunoterapias STAb y CART Multidianas (Next Generation CART MAD) (S2022/BMD-7225). CM. 2023-2026. *Managment centre: FIBHULP*
- **Pérez Martínez A.** Optimización diagnóstica y terapéutica del cáncer infantil mediante su caracterización genética avanzada utilizando tecnología de alto rendimiento. suproyecto: caractaerizacion molecular avanzada de la leucemia linfoblástica aguda en pediatria.. Fundación Asociación Española contra el Cáncer. 2022-Ongoing. *Managment centre: FIBHULP*
- **Pérez Martínez A.** Receptor antigénico quimérico nkg2d para el tratamiento de pacientes pediatricos con leucemia aguda y leucemia mielomonocítica juvenil: validación escala clinica y primer estudio de seguridad en pacientes. Fundación Cris Contra el Cáncer. 2019-Ongoing. *Managment centre: FIBHULP*
- **Pérez Martínez A.** Sehop-Pencil Study Personalised Medicine for Cancer in Children in Spain (PMP21/00073). ISCIII. 2022-2025. *Managment centre: FIBHULP*
- **Pérez Martínez A.** Unidad de investigación y de terapias avanzadas en hematooncologia infantil. Fundación Cris Contra el Cáncer. 2016-Ongoing. *Managment centre: FIBHULP*
- **Rubio Aparicio PM.** Actualización y renovación de la actividad en el servicio de oncología

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pediátrica del Hospital Universitario La Paz. Varios. 2012-Ongoing. *Managment centre: FIBHULP*

Cibers and Retics

- **Pérez Martínez A.** RICORS - Terapias avanzadas. ISCIII. (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 mieloide 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 coestimulad.
  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.** Phase 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 disbalance 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

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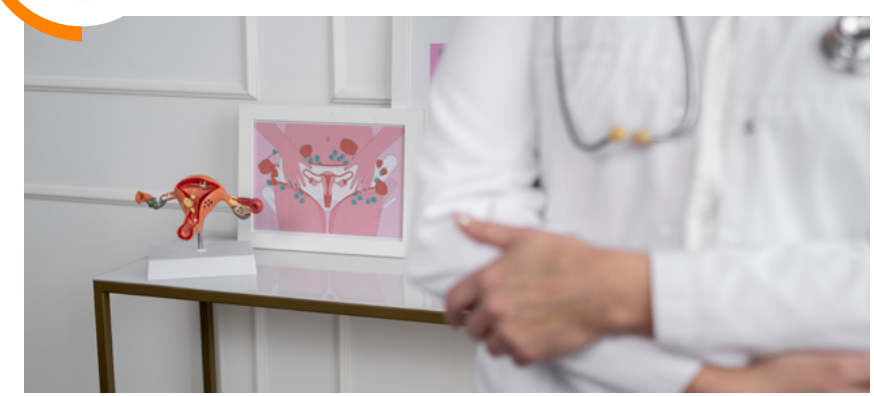
3.7.7 Congenital Malformations and Transplantation



Publications:51 | **Q1:**17

COMPOSITION

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- **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. Pediátrica Profesor Asociado. Universidad Autónoma de Madrid
- **Sara Cabezuelo Ballestero.** Facultativo Especialista de Área en Anestesiología. Hospital Universitario La Paz
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- **Álvaro González Rocafort.** Facultativo Especialista de Cirugía Cardiovascular. Hospital Universitario Infantil La Paz
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- **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
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- **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 anesthesic 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 anesthesic 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.
- Oftalmologic 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*

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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
- **Alonso-Prieto M, Pujol D, Salmerón MA, Vivas-Lacalle MD, Villalobos AO, Moreno MM, Morán GG, Torres-Luna R, Miró J, Reinoso-Barbero F.** Clinical differences in a multidisciplinary pediatric pain unit between primary and secondary chronic pain. Rev Esp Anestesiol Reanim. 2023; 70(3): 148-55. Article. IF: 0.9; Q3
- **Andrés AM, Encinas JL, Sánchez-Galán A, Rodríguez JS, Estefania 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
- **Andrés Moreno AM, Ramos Boluda E, Hernández Oliveros F.** Pediatric intestinal failure: an update. Cir Pediatr. 2023; 36(3): 97-109. Article. Not indexed
- **Arruti N, Rodríguez-Solana P, Nieves-Moreno M, Guerrero-Carretero M, del Pozo A, Montaño 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): 465-478. Article. IF: 2.8; Q3
- **Delgado-Miguel C, Camps JI.** Robotic-assisted versus laparoscopic redo antireflux surgery in children: A cost-effectiveness study. Int J Med Robot Comp. 2023; 19(6): e2541. Article. IF: 2.3; Q2
- **Delgado-Miguel C, de la Torre C, Castro L, Oliveros FH.** Type III laryngo-tracheo-oesophageal cleft repair without tracheostomy in neonate with long-gap oesophageal atresia. Acta Otorhinolaryngo. 2023; 43(4): 291-3. Letter. IF: 2.1; Q2
- **Delgado-Miguel C, Estefania K, Basilio MS, Oliveros FH.** Indocyanine green navigation in minimally invasive resection of multiple metachronous pulmonary metastases of hepatoblastoma. Thorac Cancer. 2023; 14(5): 528-32. Article. IF: 2.3; Q3
- **Delgado-Miguel C, Fernández P, Muñoz-Serrano A, Aguado P, Fuentes E, Díez R.** Minimally invasive resection of symptomatic bifid intrathoracic rib. Pediatr Pulm. 2023; 58(6): 1818-20. Letter. IF: 2.7; Q1
- **Delgado-Miguel C, López-Pereira P.** Response to commentary re simultaneous bladder augmentation and artificial urinary sphincter placement in children with neuropathic urinary incontinence. Is it safe to perform? Long-term results. J Pediatr Urol. 2023; 19(3): 306-7. Letter. IF: 2.0; Q2
- **Delgado-Miguel C, López-Santamaría M, Oliveros FH.** The role of indocyanine green navigation in choledochal cyst surgery. Indian J Surg. 2023; 85(5): 1272-4. Article. IF: 0.4; 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
- **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
- **Delgado-Miguel C, Miguel-Ferrero M.** Preliminary results of the use of carboxytherapy in the treatment of pathologic scars: A minimally invasive alternative. J Pediatr Surg. 2023; 58(4): 679-83. Article. IF: 2.4; Q1
- **Delgado-Miguel C, Miguel-Ferrero M, Basilio MS, Ramírez C, Camps J, Oliveros FH.** How does the number of training years in pediatric surgery affect appendectomy outcomes? Pediatr Surg Int. 2023; 39(1): 168. Editorial Material. IF: 1.5; Q2
- **Delgado-Miguel C, Miguel-Ferrero M, De Lucas-Laguna R.** Misdiagnosis in epidermolysis bullosa: yet another burden on patients and their families. Actas Dermosifiliogr. 2023; 114(9): 825-6. Editorial Material. IF: 3.8; Q1
- **Delgado-Miguel C, Miguel-Ferrero M, De Miguel B, Díaz M, López-Gutiérrez JC, De Ceano-Vivas M.** Pediatric burns debridement under sedoanalgesia during the covid-19 pandemic: a cost-effective alternative. Clin Pediatr. 2023; 62(9): 1080-6. Article. IF: 1.0; Q3
- **Delgado-Miguel C, Miguel-Ferrero M, Delgado B, Albero GE, Camps J, López-Santamaría M, Oliveros FH.** Mucosal appendicitis : How can it be differentiated from nonappendicitis? Am J Clin Pathol. 2023; 160(5): 500-6. Article. IF: 2.3; Q2
- **Delgado-Miguel C, Miguel-Ferrero M, Díaz M, Camps J, López-Gutiérrez JC.** Acellular flowable dermal matrix for ostomy reconstruction: a safe and effective minimally invasive technique. Wound Manag Prev. 2023; 69(4): 22080. Article. IF: 1.0; Q4
- **Delgado-Miguel C, Miguel-Ferrero M, Díaz M, Triana P, Beato M, de Lucas-Laguna R, López-Gutiérrez JC.** Multifocal rapidly involuting congenital haemangiomas. J Eur Acad Dermatol. 2023; 37(8): E1025-7. Letter. IF: 8.4; D1
- **Delgado-Miguel C, Miguel-Ferrero M, Ezquerra A, Díaz M, de Ceano-Vivas M, López-Gutiérrez JC.** Sedoanalgesia in the debridement of pediatric burns in the emergency department: is it effective and safe? Children (Basel). 2023; 10(7): 1137. Article. IF: 2.0; Q2
- **Delgado-Miguel C, Miguel-Ferrero M, García A, Delgado B, Camps J, Martínez L.** Neutrophil-to-lymphocyte ratio as a predictor of postoperative complications and readmissions after appendectomy in children. Updates Surg. 2023; 75(8): 2273-8. Article. IF: 2.4; Q2
- **Delgado-Miguel C, Muñoz-Serrano A, Amesty V, Rivas S, Lobato R, Martínez-Urrutia MJ, López-Pereira P.** Simultaneous bladder augmentation and artificial urinary sphincter placement in children with neuropathic urinary incontinence. Is it safe to perform? Long-term results. J Pediatr Urol. 2023; 19(3): 297-303. Article. IF: 2.0; Q2
- **Delgado-Miguel C, Muñoz-Serrano A, Basilio MS, Miguel-Ferrero M, de Ceano-Vivas M, Martínez L.** The role of the neutrophil-to-lymphocyte ratio in avoiding negative appendectomies. An Pediatr. 2023; 98(1): 12-8. Article. IF: 1.5; Q2
- **Delgado-Miguel C, Muñoz-Serrano A, Delgado B, Miguel-Ferrero M, Camps J, Díez R, López-Santamaría M, Martínez L.** Neutrophil-to-lymphocyte ratio: correlation with length of hospital stay in children with acute appendicitis. Indian J Pediatr. 2023; 90(10): 1049. Letter. IF: 2.1; Q2
- **Delgado-Miguel C, Muñoz-Serrano AJ, Estefania K, Velayos M, Miguel-Ferrero M, Martínez L.** Matrix cauterization with silver nitrate in the treatment of ingrown toenails in children: pilot study. Actas Dermosifiliogr. 2023; 114(1): 19-24. Article. IF: 3.8; Q1
- **Delgado-Miguel C, Muñoz-Serrano AJ, Moratilla L, Miguel-Ferrero M, Delgado B, Camps J, López-Santamaría M, Martínez L.** Neutrophil-to-lymphocyte ratio as a predictor of surgical site infection in acute appendicitis. Transl Pediatr. 2023; 12(4): 552-9. Article. IF: 1.5; Q2
- **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
- **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
- **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, Montaño 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
- **Hernández Oliveros F, Alcolea Sánchez A, Ramos Boluda E, Andrés Moreno A.** Intestinal and multivisceral transplantation. Cir Pediatr. 2023; 36(2): 50-9. Article. Not indexed
- **Lasa-Lázaro M, Ramos-Boluda E, Mancebo E, Castro-Panete MJ, González-Sacristán R, Serra-**

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dilla J, Andrés-Moreno AM, Hernández-Oliveros F, Paz-Artal E, Talayero P.** Antibody-removal therapies for de novo DSA in pediatric intestinal recipients: Why, when, and how? A single-center experience. Front Pediatr. 2023; 10: 1074577. Article. IF: 2.1; 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
- **Miguel-Ferrero M, Delgado-Miguel C, Díaz M, López-Gutiérrez JC.** Toxic epidermal necrolysis management with Suprathel™. An Pediatr. 2023; 99(6): 449-50. Editorial Material. IF: 1.5; Q2
- **Miro J, Sole E, Castarlenas E, Ingelmo P, Nolla MC, Escribano J, Reinoso-Barbero F.** The Treatment of pediatric pain in Spain: A survey study. Int J Env Res Pub He. 2023; 20(3): 2484. Article. Not indexed
- **Moreno-Alfonso JC, Berenguer MS, Caldas MDS, Cayón JG, de la Puente S, Triana P, López-Gutiérrez JC.** Successful sirolimus treatment for recurrent pericardial effusion in a large cervicomediastinal provisionally unclassified vascular anomaly: a case report. European J Pediatr Surg Rep. 2023; 11(1): E20-4. Article. IF: 0.6; Q4
- **Moreno-Alfonso JC, Triana-Junco PE, Miguel-Ferrero M, Díaz-González M, López-Gutiérrez JC.** Sequelae of surgery for lymphatic malformations. An Pediatr. 2023; 99(4): 266-7. Letter. IF: 1.5; Q2
- **Peiro JL, Duru S, Fernández-Tome B, Peiro L, Encinas JL, Sánchez-Margallo FM, Oria M.** Fetal endoscopic third ventriculostomy is technically feasible in prenatally induced hydrocephalus ovine model. Neurosurgery. 2023; 92(6): 1303-11. Article. IF: 3.9; Q1
- **Pérez Costoya C, Gomez Farpon A, Hernández Oliveros F, Soto Verdugo V, Álvarez Munoz V, García Bernardo C M.** Conservative treatment of suprahepatic pseudoaneurysm in a pediatric patient. Cir Pediatr. 2023; 36(2): 93-6- Article. Not indexed
- **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
- **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
- **San Basilio M, Delgado-Miguel C, Ramírez-Amorós C, Sarmiento M, Moratilla-Lapeña L, Almeyda A, Mejía R, Martínez L.** Does the timing of appendectomy affect outcomes and postoperative complications?. Pediatr Surg Int. 2023; 39(1): 90. Article. IF: 1.5; Q2
- **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, Montaño VEF, Dios-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
- **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
- **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
- **Stringa P, Dezillio LEV, Talayero P, Serradilla J, Errea A, Machuca M, Papa-Gobbi R, Ortega OC, Molineris MP, Lausada N, Moreno AMA, Rumbo M, Oliveros FH.** Experimental assessment of intestinal damage in controlled donation after circulatory death for visceral transplantation. Transpl Int. 2023; 36: 10803. Article. IF: 2.7; Q1
- **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.** Nativespleen 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
- **Tomás-Velázquez A, López-Gutiérrez JC, Reyes-Múgica M, Salgado CM, Hervás-Stubbs S, de Andrea C, Basu D, Andrés EM, Triana P, Ceballos C, Reina G, Redondo P.** Serum levels of S-100 protein are directly proportional to the size, number, thickness and degree of cellularity of congenital melanocytic nevi. J Am Acad Dermatol. 2023; 89(5): 1074-77. Letter. IF: 12.8; D1
- **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
- **Velayos M, Estefania-Fernández K, Fernández Bautista A J, Delgado-Miguel C, Sarmiento Caldas M C, Moratilla Lapena L, Serradilla J, Largo Aramburu C, López-Santamaria M V, Hernández-Oliveros F.** Towards a standardized initial training program in experimental microsurgery for pediatric surgeons. Cir Pediatr. 2023; 36(2): 83-9. Article. Not indexed
- **Velayos M, Serradilla J, Estefanía-Fernández K, Munoz-Serrano A J, Ramírez Amoros C, San Basilio Berenguer M C, Vilanova-Sánchez A, López-Santamaria M V, Hernández-Oliveros F.** Sequential teratoma in pediatric patients: causation or coincidence? Cir Pediatr. 2023; 36(1): 40-3. Article. Not indexed

Research projects

- **Andrés Moreno AM.** Influencia del higado en el injerto intestinal. estudio de su papel protector de rechazo. Sociedad Madrileña de Trasplantes. 2023-Ongoing. *Managment centre: FIBHULP*
- **Delgado Miguel C.** Trasplante capilar de unidades foliculares en ratas sprague dawley con alopecia cicatricial secundaria a quemaduras. FIBHULP. 2022-Ongoing. *Managment centre: FIBHULP*
- **Hernández Oliveros F.** Papel protector del hígado frente al rechazo en el trasplante multivisceral. 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). ISCIII. 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 genetico, clinico e inmunohistoquimico 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, pronostico y genetico. 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 asses 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.

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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
- **Martína 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 Guisasola.** 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 Malmo (Stockolm)).

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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
- **Angeles MA, Spagnolo E, Cabarrou B, Pérez-Benavente A, Moreno AG, Guyon F, Rychlik A, Migliorelli F, Bataillon G, Navarro AS, Betrian S, Ferron G, Hernández A, Martínez A.** Impact of pattern of recurrence on post-relapse survival according to surgical timing in patients with advanced ovarian cancer. Int J Gynecol Cancer. 2023; 33(1): 50-6. Article. IF: 4.1; D1
- **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, Hernáez-Alsina T, Bernal-Monterde V, Lorente S, Masnou H, Bonet L, Soto S, Gisbert C, Valer MP, Gomez J, Pacheco G, Morillas J, González M, Dominguez N, Lazaro M, Pascual S, Castelló I.** Significant heterogeneity in the diagnosis and long-term management of Wilson disease: Results from a large multicenter Spanish study. Gastroent Hepat-Barc. 2023; 46(8): 577-84. Article. IF: 2.2; Q3
- **Correa-Paris A, Ochoa VG, Gutiérrez AH, Estellés JG, Díaz-Feijoo B, Gil-Moreno A.** Simple radiologic assessment of visceral obesity and prediction of surgical morbidity in endometrial cancer patients undergoing laparoscopic aortic lymphadenectomy: A reliability and accuracy study. J Obstet Gynaecol Re. 2023; 49(3): 988-97. Article. IF: 1.6; Q3
- **de las Casas SG, Spagnolo E, Di Saverio S, Álvarez-Gallego M, Carrasco AL, López MC, Cobos ST, Campo CF, Gutiérrez AH, Migueláñez**

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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

- **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-Espías 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, Pelaez-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, Marí-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. Managment 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. Managment 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. Managment centre: FIBHULP
- **Hernández Gutiérrez A.** Dinamización de Ciencia Disruptiva en Predictores de Enfermedades Tumorales Infecciosas y Hereditarias como base de la Medicina Personalizada (FORT23/00006). ISCIII. 2022-2024. Managment 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 baci.
  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® (ligilactobacillus salivarius ps11610) sobre la microbiota del tracto genital femenino en parejas o mujeres con problemas de fertilidad.
  Type/Phase: Producto Sanitario Sponsored by: Probisearch, 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

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3.7.9 Research on Comprehensive Care for Transplanted Children and Adolescents

Publications:3 | **Q1:**2

COMPOSITION

María Jesús Pascau González-Garzón.
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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 phases5: (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 of 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-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 m RNA 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

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3.7.10 Food Oxidative Stress and Cardiovascular Health*

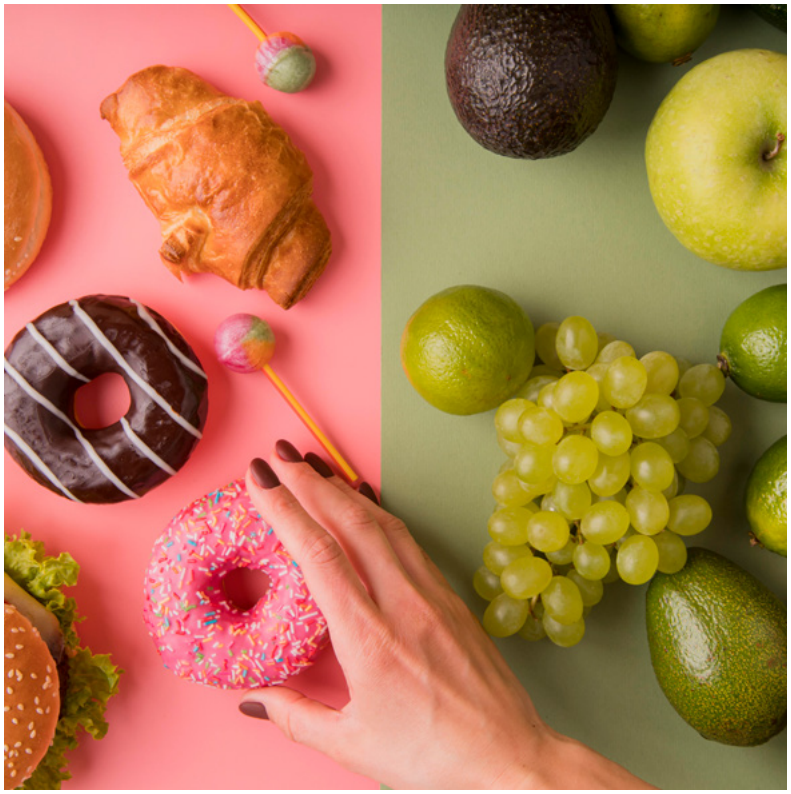
COMPOSITION

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

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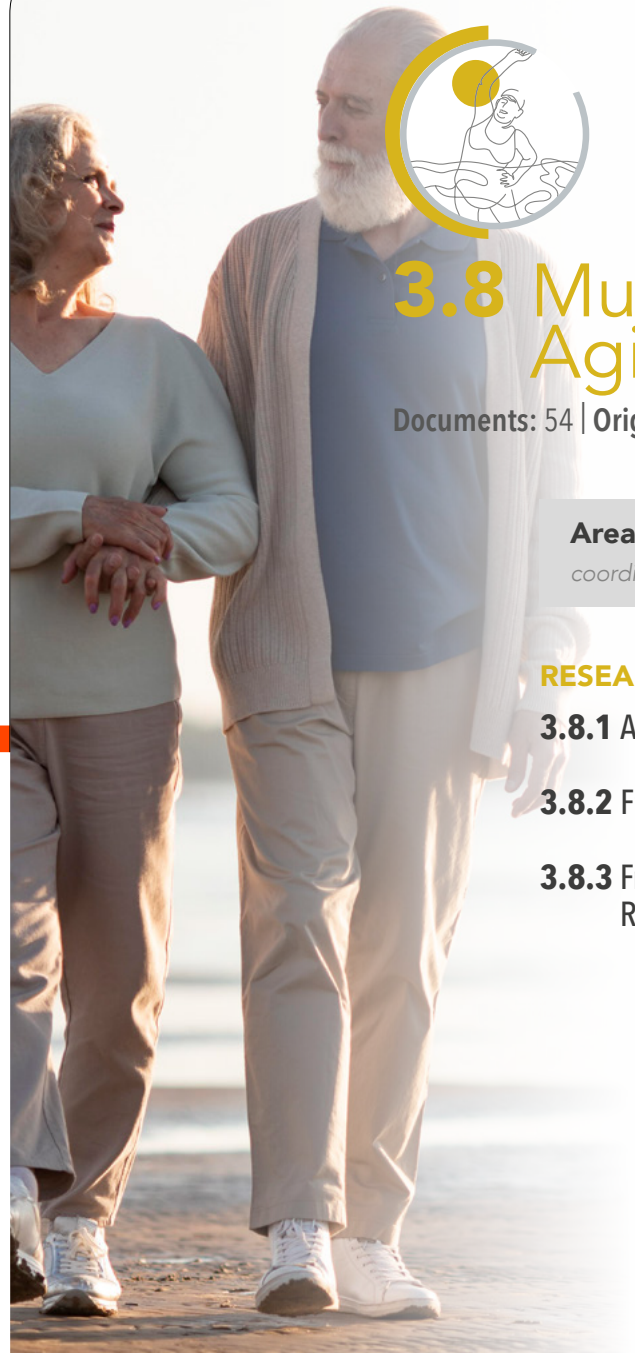

3.8 Multidisciplinary Research in Healthy Aging Area

Documents: 54 | **Originals:** 46 | **D1:** 2 | **Q1:** 21

Area coordinator: Rocío Menéndez Colino

coordinadorenvejecimiento@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

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Strategic Objectives	Development forecast for the coming years:	Actions
The Multidisciplinary Research in Healrhy 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	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 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-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

Scientific Events by Multidisciplinary Research in Healthy Aging

- **01/12/2023** 4ª Jornada de Geriatría Trasversal

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3.8.1 Aging and Fragility in the Elderly

Publications:15 | **Q1:**1

COMPOSITION

Rocío Menéndez Colino.
Facultativo Especialista de Área en Geriatría. Hospital de Cantoblanco - Hospital Universitario La Paz

- **Francesca Argentina.** Facultativo Especialista en Geriatría. Hospital Universitario La Paz
- **Patricia Ysabel Condorhuamán Alvarado.** Facultativo Especialista de Área en Geriatría. Hospital Universitario La Paz
- **Victoria María Déniz González.** Enfermera Especialista en Geriatría. Hospital Universitario La Paz
- **Javier Gómez Pavón.** Jefe de Servicio de Geriatría y de Cuidados Paliativos. Hospital Central Cruz Roja San José y Santa Adela
- **Silvia Martín Martín.** Enfermera Especialista en Geriatría. FIBHULP
- **Ana Merello de Miguel.** Facultativo Especialista de Área en Geriatría. Hospital Universitario La Paz
- **Raquel Ramírez Martín.** Facultativo Especialista de Área en Geriatría. Hospital Universitario La Paz
- **Paola Pastora Reinoso Párraga.** Facultativo Especialista de Área en Geriatría. Hospital Universitario La Paz
- **Peggy Paola Ríos Germán.** Médico Interno Residente en Geriatría. Hospital Universitario La Paz
- **María del Pilar Sáez López.** Facultativo Especialista de Área en Geriatría. 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 abouy 80 Spanish hospitals.
- Study of the influence of frailty in the implantation of transcateter aortic valve. Multicenter project that includes data fron five Spanis hospitals
- Cross-specility Geriatrics: Co-management of old patients diagnosed of cancer in colaboration con the General Surgery, Medical and Radioterapic Oncology, Urology and Vacular Surgery Departments of the La Paz Hospital.
- Observational study of the evolution of old patients affected of a traumatic intracranial hemorage, in colaboration with the Neurosurgery Department of the La Paz Hospital.
- Point of care ultrasound sonography

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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-Thíes 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-Vasquez 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, Cordoba 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-Pavon 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 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. (PI19/01010). ISCIII. 2020-2023. *Managment centre: FIBHULP*
- **González Montalvo JI.** Geriatría transversal: detección y manejo de la fragilidad en pacientes adultos mayores con patología quirúrgica. Varios. 2019-Ongoing. *Managment 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 Servicios de Ortogeriatría. Amgen S. A. 2019-Ongoing. *Managment centre: FIBHULP*
- **González Montalvo JI.** Proyecto del registro nacional de fracturas de cadera por fragilidad en el anciano. Amgen S. A. 2017-Ongoing. *Managment centre: FIBHULP*
- **González Montalvo JI.** Registro nacional de fracturas de cadera estudio RNFC. Fundación Mutua Madrileña. 2018-Ongoing. *Managment centre: FIBHULP*

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3.8.2 Frailty and Healthy Aging

Publications:19 | **Q1:**11

COMPOSITION

Leocadio Rodríguez Mañas.
Jefe Servicio de Geriatría. Hospital Universitario de Getafe

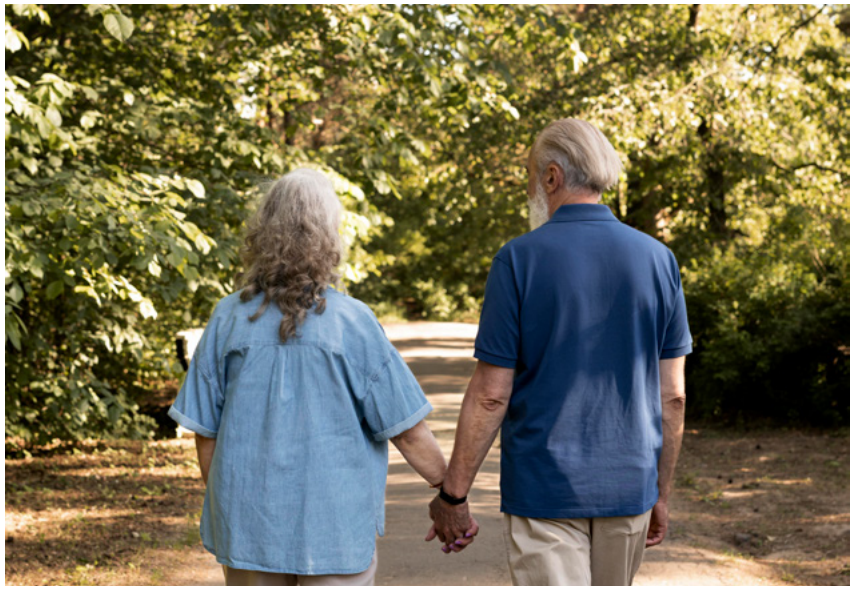
- **David Bernal López.** Gestor de proyectos europeos de investigación. Fundación de investigación Biomédica del Hospital Universitario de Getafe
- **José Antonio Carnicero Carreño.** Data Manager. Investigador Senior. Fundación de investigación Biomédica del Hospital Universitario de Getafe
- **Betty Davies Urizar.** Médico Adjunto en Geriatría. 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.** Framacóloga 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, magnetoelectroencephalography, 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 an 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-Mencía 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

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- **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
- **Fougére B, Morley JE, Arai H, Bauer JM, Bernabei R, Cherubini A, Dong B, Martín FC, Flicker L, Merchant RA, Manas LR, Woo J, Vellas 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-Rodrá-Guez 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. *Managment 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. *Managment centre: IdiPAZ*
- **Rodríguez Mañas L .** ActiveUP: Dimensión Científica y clínica PID2019-108408RB-C22 (). Agencia Estatal De Investigación. Retos de la Sociedad 2019.. 2021-2023. *Managment 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 (Proyctos generación de conocimiento 2022). 2023-2026. *Managment 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 º Programa Marco HEALTH.2011.2.2.2-1-1 HEALTH.2011.2.4.3. 2019-2024. *Managment 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. *Managment 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 SORIA MELGUIZO. 2021-2023. *Managment centre: FIBHUG*
- **Rodríguez Mañas L .** Ecosistema INTEGRA-CAM: Sistema de monitorización domiciliaria para prevención y tratamiento de la fragilidad (). FEDER/ Minsterio de Ciencia e Innovación . 2021-2023. *Managment centre: FIBAP*
- **Rodríguez Mañas L .** Asistente virtual para la prevención del delirium en personas mayores hospitalizadas. ADELA (). Fundación Mapfre. 2022-2023. *Managment 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. *Managment 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

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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.** Biologo. 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 Ténica 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 funcionamineto 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.*

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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, Yévenes-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, Yévenes-Briones H, Cárdenas-Valladolid J, Salinero-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-MADVEVA 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, Ibrahimi 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, Trajkovik 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, Milesevic J, Espinosa-Salinas I, de Molina AR, Laguna T, de Santa Pau EC.** FooDrugs: 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, Díaz-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, Karaduzovic-Hadziabdic K, Klammsteiner T, Ibrahimi E, Lahti L, Loncar-Turukalo T, Dhamo X, Simeon A, Nechyporenko A, Pio G, Przymus P, Sampri A, Trajkovik V, Lacruz-Pleguezuelos B, Aasmets O, Araujo R, Anagnostopoulos I, Aydemir Ö, Berland M, Calle ML, Ceci M, Duman H, Gündogdu 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, Tolosana 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.** Harmonizationanndpre-standarization 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.** Metabolómica, 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 Cronicidad, Atención Primaria y Promoción de la Salud. (RICAPPS). ISCIII. (31/12/2023). FIIBAP
- **Castell Alcalá V.** Rede de Investigación en Cronicidad, Atención Primaria y Promoción de la Salud. (RICAPPS). ISCIII. (31/12/2023). FIIBAP
- **Gómez Campelo P.** Plataforma de biobanco y biomodelos (organoides) del Instituto de Investigación Sanitaria del Hospital Universitario La Paz PT20/00004. ISCIII. (31/12/2024). FIBHULP

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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

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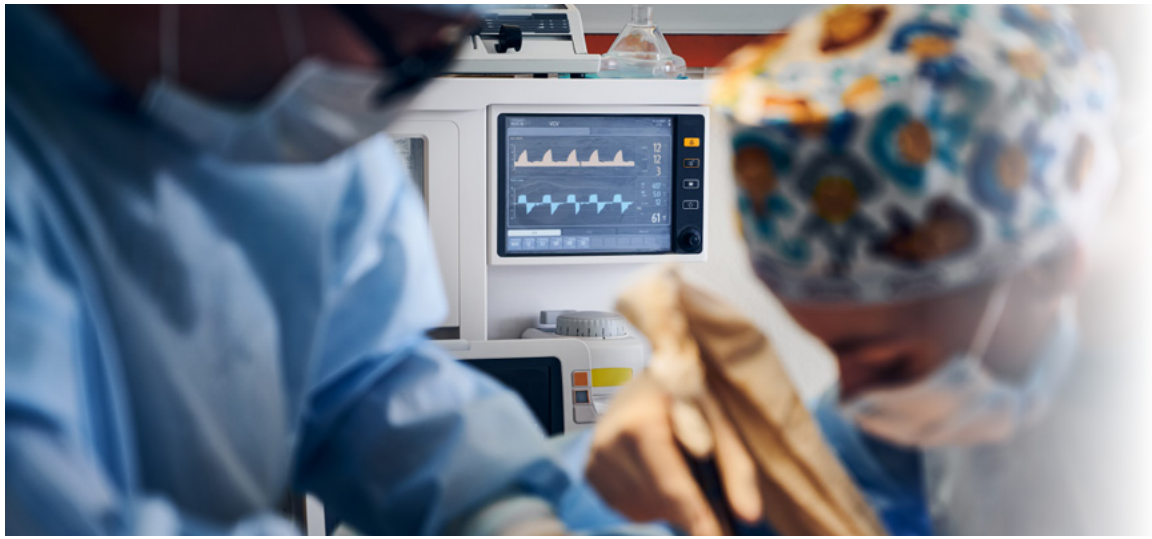
4.1 Angiology and Vascular Surgery Group



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[disertation]. 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.** A yoga 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

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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 Sufrate 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 FJR, 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 FJ, 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 Laboroatorio clínico. 2023-Ongoing. *Managment centre: FBHULP*
- **Molero Luis M.** Utilidad de la medición de zonulina fecal como biomarcador de permeabilidad intestinal en pacientes con enfermedad celiaca (PI-4948). Fundación José Luis Castaño-Sociedad Española de Laboroatorio clínico. 2021-Ongoing. *Managment 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 Laboroatorio clínico. 2022-2023. *Managment centre: FBHULP*

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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-norcholesterol 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, 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 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,**

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4.1 Angiology and Vascular Surgery Group

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, 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, Ganesananthan 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-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
- **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
- **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

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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
- Marlhyn 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, Bensadon-Naeder L, Hummel T, Feliú-Batlle J, Palma-Milla S.** Effect ofregular 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, 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
- **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
- **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. Managment centre: FIBHULP
- **Palma Milla S.** Estudio para evaluar la efiacia de un algoritmo de práctica clínica asistencial en el tratamiento de la desnutrición relacionada con la enfermedad. Lima Farma S.A. 2023-2024. Managment 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 Sl
  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

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4.5 Ophtalmology Group

Publications:12 | **Q1:**4

Group Leader

Felix Armada Maresca

Composition

- Gloria Amorena Santisteban
- Mónica Asencio Duran
- Beatriz Manzano Muñoz
- Pino Cidad 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, Montaño 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
- **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, Montaño 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
- **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 Oftalmol (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, Montaño VEF, Dios-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
- **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 Oftalmol (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 Laboratoires Thea
  Signed date: 21/09/2023

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4.6 Pediatric Nephrology Group

Publications:9 | Q1:4

Group Leader

Laura Espinosa Román

Composition

- Juan Bravo Feíto
- Carlota Fernández Camblor
- 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, 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
- **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, Csaicsich D, Decramer S, Dorresteijn E, Drozynska-Duklas M, Eid LA, Espinosa L, Ferraris V, Flogelova H, Forero-Delgadillo J, Gianviti A, Gracchi V, González ML, Hansen M, Hattori M, Hong X, Hooman N, Ivanov D, Kang HG, Karava V, Kazyra I, Lungu A, Marks S, Maxted 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, Luithle T, Tönshoff B, Weitz M.** 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.** 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

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4.7 Urology Group

Publications:10 | **Q1:**4

Group Leader

Luis Martínez-Piñeiro

Composition

- Pablo Abad López
- Alfredo Aguilera Bazan
- José Maria Alonso Dorrego
- Cristina Ballesteros Ruiz
- Ramon Cansino Alcaide
- Cristina De Castro Guerin
- Esau Fernández Pascual
- Maria Jesús García-Matres Cortes
- Manuel Giron De Francisco
- Asier Leivar Tamayo
- Estefania 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, Carrión 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, Briers E, Van den Broeck TV, De Meerleer G, De Santis M, Eberli D, Farolfi A, Gillessen 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, Willemse 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, Djinovic 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 CGJI, 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, Kiemeney 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 celulas de carcinoma renal a traves de la inhibicion del factor inducible por la hipoxia (hif) (hif-vhl).
  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 (prosfit).
  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 hlhl 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

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Instituto de Investigación
Hospital Universitario La Paz

SCIENTIFIC REPORT

2023

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