

2023

Annual
Scientific Report



Instituto de Investigación
Hospital 12 de Octubre

2023
Annual
Scientific Report





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01

PRESENTATION

Once again, it is my pleasure to present to you the Annual Activity Report of the Instituto de Investigación Hospital 12 de Octubre (Instituto i+12), corresponding on this occasion to the year 2023. As with every annual report, the aim is to report on the scientific activity carried out at the Institute during the year.

Firstly, I would like to mention that the Strategic Plan of the Instituto i+12, throughout this year the Instituto i+12 has carried out an in-depth reflective analysis. The conclusions reached have been reflected in the strategic formulation of the new Strategic Plan for the period 2024-2028. This new plan is structured around 5 strategic objectives: 1. Institutional Processes, 2. Innovation and Development, 3. National and International Collaboration, 4. Translational R&D and 5. People.

Among the activities related to the i+12 Integration Plan developed by the Instituto i+12 in 2023, it is worth highlighting the proposal to incorporate the Universidad Politécnica de Madrid (UPM) into the Instituto i+12 as a full member. To this end, a report was prepared on the convenience and justification of incorporating the UPM into the Instituto i+12. This report will be presented to the ISCIII for analysis and for the evaluation of the proposal.

At the same time, at the beginning of 2023, seven applications were received for the incorporation of new emerging research groups into the Instituto i+12. Of these, six belonged to the Cancer Area and one to the Rare and Genetic Diseases Area. All were positively evaluated by the advisory bodies of i+12. The creation of these new groups constitutes a clear commitment by i+12 to favor and support the generational change. In addition, their integration represents a boost to the principles of gender equality in our organization, since 5 of these 7 new groups are led by women.

Finally, the Management considers that the restructuring of the Primary Care (PC) research groups that form part of i+12 should be addressed. To this end, in addition to the internal analysis of their composition and scientific activity, an external analysis of all the PC groups that form part of the IIS in the Comunidad de Madrid, is being carried out, with the aim of resolving the process with the greatest possible coherence.

Regarding the activities of the i+12 Teaching Committee throughout the year, I would like to highlight the launch of the First Edition of the i+12 Junior Researchers Conference. This conference has a dual purpose: to encourage young researchers to present their work in different forums, and to advise and guide them in their research careers. The conference was a great success as it fulfilled its objective of creating a benchmark forum for researchers and healthcare professionals who are at an early stage in their research career.

Similarly, we cannot fail to mention the consolidation in 2023 of the basic-clinical research sessions (Transfiere12 Sessions), organized since the previous year by the Teaching Committee and which were very well received.

Aware of the importance of bringing the activity carried out at i+12 closer to society, of disseminating the work we do and awakening scientific vocations among the youngest, i+12 has participated throughout 2023 in different activities to achieve this objective. Among them, the following are worth highlighting:

- 4th year of ESO + Company Program. From i+12, 2 training programs were offered that included different activities so that students could learn about the activity carried out at the Instituto i+12.
- As part of the activities to commemorate the 50th anniversary of the H12O, the Instituto i+12 organized the i+12 EXPO, consisting of 7 stands where representatives of the 9 research areas of the i+12 explained the research activity of the Institute to the general public. In parallel, 5 meetings were organized between patients and clinical researchers from different areas of knowledge (cancer, cardiovascular, hematology, neurovascular and nephrology).
- i+12, through its Innovation Support Unit, joined the 23rd Science and Innovation Week in Madrid, offering the public the chance to participate in seven different activities.
- In addition, i+12 participated in the "European Night of Researchers" with the initiative "All Science. The Night of the CSIC at 12".

On another note, with the aim of implementing possible improvement measures, satisfaction surveys have once again been carried out this year aimed at the management staff and professionals who make up the Institute, as well as satisfaction surveys derived from training and dissemination activities organized by the Instituto.

In relation to the implementation of the European human resources standard HRS4R in our institution, in 2023 the European Commission approved with the highest possible rating the interim evaluation report that we presented, which indicates that the HRS4R Strategy is perfectly integrated into the institution's policies and plans and that work is being carried out in line with the action plan initially presented. In addition, work on professional development continues and the changes introduced in the recently developed mentoring and tutoring program will be implemented.

During 2023, work has also been done on the maintenance and revision of the actions foreseen in the Equality Plan of the i+12, and a communication channel has been created to deal with all issues related to this matter.

I must emphasize that the results of the scientific activity presented in this report show, year after year, the clear consolidation of the scientific excellence of the Instituto i+12. The evaluation of the Institute is fundamentally measured by the number and quality of its scientific publications and research projects. And in this respect, we can say that the objective data for the year 2023 are, once again, very positive.

The total number of publications by the consolidated and emerging research groups and by the clinical researchers associated with the Instituto i+12, whether original articles or reviews and editorials, continues to be excellent. In total, 1,174 indexed publications have been achieved in the year 2023, with a cumulative impact factor of 12,063 points (CIF which increases for another year). 60.14% of all publica-



tions were published in first quartile (Q1) journals. Of these, 43.20% correspond to first decile (D1) journals (27.68% of the total). As the data shows, our researchers are truly productive, which highlights the consolidated and excellent scientific activity they carry out.

Furthermore, over the last year our researchers have obtained funding to develop more than 70 research projects in competitive public and private, national and international calls for proposals. At the same time, 372 research projects are still active and 319 clinical trials and observational studies have been contracted. During the 2023 academic year, the results of the research work carried out at the Instituto i+12 have led to the publication of 30 clinical practice guidelines. In addition, members of the Institute have directed and/or defended 37 doctoral theses, 4 of them with international mention.

Likewise, the activity carried out by the Innovation Support Unit (UAI) of i+12 is also worth mentioning. Thanks to the good work carried out by its members, we have a growing portfolio of innovation projects. In 2023, we have 30 families of patents in force, which means a total of 62 patents in force. In addition, work has been done on the management of 13 new patent applications: 7 Priority Patent applications, 1 application for International Extension Via PCT and 5 entries in National Phases or validations of European Patents. In addition, we have participated in the registration of 1 Software Product in the Intellectual Property Registry of the Basque Country, we have signed 15 agreements with third parties (alliances, framework and specific agreements, CDAs and MTAs), we have participated in different national and international innovation calls, we have provided advice to healthcare professionals from the Instituto i+12 on the strategy for setting up 2 spin-offs in the hospital environment, etc.

Aware of the need to establish measures and mechanisms to stimulate and promote research activity at the Institute and to encourage the training of i+12 professionals, once again this year intramural calls for applications for grants to intensify research and innovation activity have been published, aimed at different professional profiles, as well as the call for applications for a grant to recruit a chief resident/researcher, the new call for applications for a grant to recruit a specialist doctor with research experience to develop specific healthcare innovation programs (TRANSFORMA12) and the first call for applications for pre-doctoral research training grants and the first edition of grants for associations of patients with rare diseases. From i+12, work is being done on the review and analysis of intramural calls for proposals to include possible improvement actions, such as the inclusion of the gender perspective in their evaluation.

Once again, the Annual Activity Report gives us the opportunity to publicly show the achievements and improvements made by our institution thanks to the daily effort and complete dedication of all the professionals who form part of the Instituto i+12. For this reason, I would like to thank and congratulate all our researchers, collaborators, managers and other members for the magnificent work carried out throughout the year and for the results obtained.

Thank you very much to everyone. Kind regards.

Dr. Joaquín Arenas Barbero
Scientific Director, Instituto i+12

02

PARTICIPATING
ENTITIES

PARTICIPATING ENTITIES

The Instituto de Investigación Hospital 12 de Octubre (Instituto i+12) is a functional structure for multidisciplinary and translational biomedical research oriented towards basic, clinical and epidemiological research and health services. It was established in 2009 following the association of different entities with common interests. The entities that currently make up the Instituto i+12, in accordance with the provisions of article 3 of RD 279/2016, are as follows:



- Servicio Madrileño de Salud, through the Hospital Universitario 12 de Octubre and Primary Care.
- Universidad Complutense de Madrid.
- Universidad Autónoma de Madrid.
- Centro de Investigaciones Energéticas, Medioambientales y Tecnológicas (CIEMAT).
- Universidad Europea de Madrid (UE).
- Fundación para la Investigación Biomédica del Hospital 12 de Octubre.



MISION

"To develop research and innovation activities aligned with state and European quality standards, adapted to social and business demands, and aimed at achieving a direct impact on improving the health of the population, in collaboration with patients, research centers and related companies."



VISION

"The Instituto i+12 aspires to become a center of reference in multidisciplinary biomedical research, and is recognized as a driving force for the generation and dissemination of knowledge, thanks to its ability to incorporate the most cutting-edge techniques and its alliances with other agents in the sector, especially in the university environment and other health research institutes."



VALUES

Commitment to patients and the institution.

Sensitivity to the needs of society.

Orientation towards excellence through continuous evaluation and improvement.

Transparency with its members and third parties.

Collaboration with other agents.

03

ORGANIZATIONAL
STRUCTURE

In accordance with the requirements stipulated in article 3 of RD 279/2016, of July 5, on the accreditation of biomedical or health research institutes, and according to the provisions of the sixth clause of the Collaboration Agreement, the organizational structure of the Instituto i+12 consists of governing, management, advisory and operational bodies. The highest governing body is the Governing Council, which includes among its members Patronato de la Fundación para la Investigación Biomédica del Hospital 12 de Octubre. Both the Governing Council and the Executive Committee of the Instituto i+12 have representatives from all the entities that make it up.

The Fundación para la Investigación Biomédica del Hospital 12 de Octubre (FIBH12O), as the managing body of the Institute, is encompassed within the general organizational structure of the Instituto i+12, and is complemented by the Scientific Management Area.

GOVERNMENT BODIES

GOVERNING COUNCIL

The Governing Council is the governing body responsible for the representation, direction and administration of the Instituto i+12. All the entities that make up the Institute are represented on this body, as reflected in the Collaboration Agreement and as established by the requirements of RD 279/2016. The composition of the Governing Council is stipulated in the seventh clause of the Collaboration Agreement for the creation of the Instituto i+12. Currently, its composition is as follows:

Chair

Ms. M.ª Luz de los Mártires Almingol.

General Director of Research, Teaching and Documentation (by delegation of the Deputy Minister of Health. Servicio Madrileño de Salud).

First Vice-Chair

Mr. Ignacio Lizasoain Hernández.

Professor, Dept. of Pharmacology and Toxicology, Facultad de Medicina (UCM). Representative of the Universidad Complutense de Madrid (UCM).

Second Vice-Chair

Mr. Daniel Jarque García.

Director of Science Policy (UAM). Representative of the Universidad Autónoma de Madrid (UAM) by delegation of the Rector).

Members

Ms. Carmen Martínez de Pancorbo González.

Managing Director of the Hospital Universitario 12 de Octubre and President of the Board of Trustees of the Fundación para la Investigación Biomédica del Hospital 12 de Octubre (FIBH12O).

Mr. Julio Pascual Santos.

Member of the FIBH12O Board of Trustees.

Mr. José Nieves González.

Member of the FIBH12O Board of Trustees.

Ms. María Andión Goñi Olangua.

Member of the FIBH12O Board of Trustees.

Mr. Joaquín Arenas Barbero.

Miembro del Patronato de la FIBH12O and Director del Instituto i+12.

Ms. M.ª del Puy Goyache Goñi.

Member of the FIBH12O Board of Trustees.

Mr. Ignacio Lizasoain Hernández.

Member of the FIBH12O Board of Trustees.

Mr. José Luis Pablos Álvarez.

Member of the FIBH12O Board of Trustees and representative of the Research Commission of the Instituto i+12.

Mr. Javier Arias Díaz .

Dean of the Facultad de Medicina de la UCM.

Prof. Mr. José Manuel Cuezva Marcos.

Representative of the UAM.

Mr. Jesús M.ª Paramio González.

CIEMAT representative.

Mr. Óscar García López.

UE representative.

Secretary

Ms. M.ª del Mar López Martín.

Director of FIBH12O.

DELEGATED COMMISSION

The Executive Committee is the executive governing body of the Instituto i+12. All the entities of the centers that make up the Institute are represented on it, as is the case with the Governing Council, as reflected in the Collaboration Agreement and as established by the requirements of RD 279/2016. The Executive Committee is made up of the following members of the Governing Council:

Chair

Ms. Carmen Martínez de Pancorbo González.

Managing Director of the Hospital Universitario 12 de Octubre.

Members

Mr. Joaquín Arenas Barbero.

Scientific Director of the Instituto i+12.

Mr. Julio Pascual Santos.

Representative of the Hospital Universitario 12 de Octubre.

Mr. José Nieves González.

Representative of the Hospital Universitario 12 de Octubre.

Mr. Javier Arias Díaz.

UCM representative.

Prof. Mr. José Manuel Cuezva Marcos.

Representative of the UAM.

Mr. Jesús M.ª Paramio González.

CIEMAT representative.

Ms. Óscar García López.

UE representative.

Mr. José Luis Pablos Álvarez.

Representative of the Research Commission of the Instituto i+12.

Secretary

Ms. M.ª del Mar López Martín.

Director of FIBH12O.

DIRECTORATE

In accordance with the guidelines of RD 279/2016, the organisational structure of the Instituto i+12 includes a Scientific Director, who acts as the Director of the Institute. The Director of the Institute is the person in charge, among other functions, of the executive management of the Institute.

He is appointed and dismissed by the Institute's Governing Council.

He currently holds the position of Director of the Instituto i+12:

Mr. Joaquín Arenas Barbero.

SUBDIRECTORATE

Due to the growth and development experienced by the Instituto i+12 in recent years, the Scientific Directorate identified the need to create the post of Deputy Scientific Director of the Institute.

Its main function is to support the Institute's Management in all those activities that may require it, thus speeding up the work of the Scientific Directorate and guaranteeing the correct development of its functions.

The Deputy Scientific Director is proposed by the Directorate of the Institute and appointed and dismissed by the Governing Council.

He currently holds the position of Deputy Scientific Director:

Mr. Ignacio Lizasoain Hernández.

Head of the Neurovascular Research Group at the Hospital 12 de Octubre Research (i+12). Professor, Dept. of Pharmacology

and Toxicology, Facultad de Medicina (UCM).

ADVISORY BODIES

SCIENTIFIC ADVISORY BOARD

The Scientific Advisory Board is the main advisory body of the Instituto i+12. Its primary mission is to ensure the scientific quality of the Institute and to advise the Scientific Directorate and the governing bodies in this regard.

It is made up of highly qualified professionals with recognised experience in the field of research.

The members of the External Scientific Committee are appointed and dismissed by the Governing Council of the Instituto i+12. Their membership of the Committee is for a period of 4 years, and they can be re-elected for the same period. After this second period, the Scientific Management of the Instituto i+12 will consider the possibility of re-electing the members of the Committee.

The current members of the Instituto i+12's Scientific Advisory Board are:

Chair

Dr. Jerónimo Pachón Díaz.

Professor of Medicine at the Universidad de Sevilla with a post attached to the Hospital Universitario Virgen del Rocío. Sevilla.

Members

Dr. Álar Agustí García-Navarro.

Professor at the Facultad de Medicina and Ciencias de la Salud. Senior consultant at the Institut Respiratori del Hospital Clínic. Barcelona

Dr. Antonio L. Andreu Pérez.

Scientific Director EATRIS-Europe.

Dr. Joaquín Vicente Arribas López.

Director of Preclinical Research at the Instituto de Oncología Vall D'Hebron - VHIO. Barcelona.

Dr. Carmen Ayuso García.

Scientific Director of the Institute for Health Research of the Fundación Jiménez Díaz. Madrid.

Dr. Rafael Bañares Cañazares.

Scientific Director of the CIBER de Hepatic and digestive diseases (CIBEREHD), Head of the Digestive System Department of the Hospital General Universitario Gregorio Marañón. Madrid.

Dr. Ángel Gil de Miguel.

Professor of Preventive Medicine and Public Health and Director of the Chair of Innovation and Health Management at the Universidad Rey Juan Carlos. Madrid

Dr. Santiago Moreno Guillén.

Head of the Infectious Diseases Department at the Hospital Universitario Ramón and Cajal. Professor of Medicine at the Universidad de Alcalá. Madrid.

Dr. Eduard Vieta Pascual.

Scientific Director of CIBERSAM. Head of the Psychiatry and Psychology Department at Hospital Clínic de Barcelona. Professor at the Universidad de Barcelona.

Dr. Empar Lurbe i Ferrer.

Professor of Paediatrics at the Universidad de Valencia. Head of the Paediatrics Service of the Hospital General de Valencia. Head of the Reference Unit against obesity and cardiovascular risk in children and adolescents in the Comunidad Valenciana.

Dr. Erika Fernández- Vizarra Bailey.

Research Associate at University of Glasgow.

Mr. Diego Megía Zuzarren.

President of the Fundación CRIS

Dr. Isabel del Cura González.

Coordinator of the Unidad de Investigación de la Gerencia Asistencial de Atención Primaria.

Ms. M.ª Teresa Moreno Casbas.

Director of the Unidad de Investigación en Cuidados and Servicios de Salud (Investén-ISCIII).

Coordinator

Dr. Joaquín Arenas Barbero.

Scientific Director of the Instituto i+12.

Secretary

Ms. Isabel de Mier Barragán.

Quality and Strategic Planning Unit of the Instituto i+12.

RESEARCH COMMITTEE

The Research Commission is the body that advises and supports the Scientific Directorate of the Institute in the development of its functions.

It is composed of a minimum of 8 members and a maximum of 17 members. The Chair of the Research Committee is held by the Management of the Instituto i+12.

The 9 areas of the Instituto i+12 are represented in the Research Commission through the Area Coordinators and the Institute's researchers. The Training Coordinator and the Quality Coordinator of the Research Institute also form part of the Committee.

The members of the Instituto i+12's Research Committee are appointed and dismissed by the Governing Council, at the proposal of the Institute's research groups and the Scientific Directorate. Their membership of the Research is for a period of 4 years, and they can be re-elected for the same period.

Currently, the Research Committee of the Instituto i+12 is composed of the following members:

Chair

Dr. Joaquín Arenas Barbero.
Director of the Instituto i+12.

Members

Dr. José Luis Rodríguez Peralto.

Coordinator of the Cancer Research Area of the Instituto i+12.

Dr. Guillermo Martínez Díaz-Guerra.

Coordinator of the Chronic Diseases and Transplantation Research Area of the Instituto i+12.

Dr. Julia Carracedo Añón.

Coordinator of the Chronic Diseases and Transplantation Research Area of the Instituto i+12.

Dr. Miguel Ángel Martín Casanueva.

Coordinator of the Rare and Genetically Based Diseases Research Area of the Instituto i+12.

Dr. Carmen Rosa Pallás Alonso.

Coordinator of the Health Outcomes Research and Digital Transformation Area of the Instituto i+12.

Dr. Héctor Bueno Zamora.

Coordinator of the Cardiovascular Research Area of the Instituto i+12.

Dr. José Luis Pablos Álvarez.

Coordinator of the Inflammatory Diseases and Immune Disorders Research Area of the Instituto i+12.

Dr. Rafael Delgado Vázquez.

Coordinator of the Infectious Diseases and AIDS Research Area of the Instituto i+12.

Dr. Gabriel Rubio Valladolid.

Coordinator of the Neurosciences and Mental Health Area of the Instituto i+12.

Dr. Francisco Javier Fernández Martínez.

Coordinator of the Transversal Research Area of the Instituto i+12.

Dr. José M.^a Aguado García.

Training Coordinator of Instituto i+12.

Dr. Gema Ruiz Hurtado.

Head of the Translational Research Group in Hypertension and Cardiorenal Disease of the Instituto i+12. Staff researcher representatives.

Dr. Irene Ferrer Sánchez.

Head of the Targeted Therapies for Precision Oncology Research Group at the Instituto i+12. Representative of postdoctoral researchers, R2.

Ms. Marta García López.

Member of the Translational Research Group with PI Cells of the Instituto i+12. Predoctoral researcher representatives, R1.

Secretary

Ms. María López Berlanga.

Quality Coordinator of the Instituto i+12.

TEACHING COMMITTEE

The Teaching Committee of the Instituto i+12 has been created with the main objective of advising and supporting the Training Coordinator of the Instituto i+12 in everything related to the planning, programming, organization, coordination, supervision and evaluation of all activities and tasks related to the training and teaching of the Instituto i+12.

The Teaching Committee will be made up of the Training Coordinator, representatives of the Research Commission of the Instituto i+12, research staff from the state training and incorporation subprograms (Sara Borrell, Río Hortega, Juan Rodés and Miguel Servet) and the Head of Residents.

The role of President will fall to the Director of the Instituto i+12 and that of Secretary to a member of the Quality and Strategic Planning Unit of the i+12.

Currently, the Teaching Committee is made up of a total of 13 members, including the President and the Secretary.

Chair

Dr. Joaquín Arenas Barbero.



Committee members

Dr. José M.^a Aguado García.

Training Coordinator of the Instituto +12.

Dr. Gema Ruiz Hurtado.

Researcher Miguel Servet II.

Dr. Esther Gallardo Pérez.

Researcher Miguel Servet II.

Dr. Carmen Fiuza Luces.

Researcher Miguel Servet.

Dr. Fernando Bartolomé Robledo.

Researcher Miguel Servet.

Dr. Carolina Alquezar Burillo.

Researcher Miguel Servet.

Dr. Jon Zugazagoitia Fraile.

Researcher Juan Rodés.

Dr. Mario Fernández Ruiz.

Researcher Miguel Servet.

Dr. Álvaro Utero Herrería.

Postdoctoral researcher. Associate professor - UCM. Head of Residents.

Secretary

Member of the Quality and Strategic Planning Unit of i+12.

ETHICAL COMMITTEES

The Instituto i+12 also has two other advisory bodies whose purpose is to assess bioethical approaches both in clinical trials on humans (Ethics Committee for Research with Medical Products, CEIm) and in research on animals (Ethical Committee for Animal Welfare, CEBA).

ETHICS COMMITTEE FOR RESEARCH WITH MEDICAL PRODUCTS (CEIm)

The Royal Decree on Clinical Trials, RD 1090/2015, of December 4, defines the Ethics Committee for Research with Medicines (CEIm) as that Research Ethics Committee (REC) that is accredited to issue an opinion on a clinical study with medicines and on clinical research with medical devices.

In order to assess the bioethical approaches relating to clinical trials carried out with medicines for human use by the Institute's researchers, the Hospital Universitario 12 de Octubre makes the CEIm available to the Instituto i+12.

Currently, the CEIm of the Instituto i+12 is composed of the following members:

Chair

Dr. M.^a del Puy Goyache Goñi.

Assistant Pharmacist in Hospital Pharmacy.

ViceChair

Dr. Sarahí Elizabeth Valdez Acosta.

Clinical Pharmacologist.

Members

Dr. Jorge Adeva Alfonso.

Physician in Oncology.

Ms. M.^a Luisa Albelda de la Haza.

Law graduate.

Ms. Sagrario Alegre Alonso.

AECC Coordinator.

Dr. Gonzalo Carreño Gómez-Tarrago.

Doctor in Haematology.

Dr. Gema Rúa Hurtado.

Commission of Inquiry.

Dr. Mercedes Catalán González.

Intensive Care Physician.

Ms. M.ª Pilar Hernández Suárez.
University Diploma in Nursing.
Dr. Ana Isabel Jiménez Ubieto.
Doctor in Haematology.
Ms. Cristina Martín-Arriscado Arroba.
Graduate in Statistics.
Mr. Francisco Javier Mazuecos Gómez.
Social Worker for the Ayuntamiento de Madrid.
Ms. M.ª Montserrat Pílas Pérez.
University Diploma in Nursing.
Dr. Yolanda Rodríguez Gil.
Medical Doctor in Anatomical Pathology.
Dr. Roberto Rodríguez Jiménez.
Specialist in Psychiatry.
Dr. David Sánchez Guzmán.
Family Doctor (Primary Care).
Dr. Rafael San Juan Garrido.
Medical Microbiology.
Dr. Raquel Siguín Gómez.
Primary Care Pharmacist.
Dr. Elena Puerto García Martín.
Médica especialista en Cardiología.
Dr. Raquel Sopeña Sutil.
Urology Physician.
Dr. Laura Lema Roso.
Physician in Oncology.
Dr. Tycho Baumann.
Haematology Physician.
Dr. Luis Manuel Manso Sánchez.
Medical Oncology.
Ms. Candelas López López.
University Diploma in Nursing.
Dr. Elena Gutierrez Solís.
Doctor in Nephrology.
Dr. Madalena Abad Gran.
Specialist in Gynaecology and Obstetrics.
Dr. Luis Ignacio González Granada.
Specialist in Pediatrics.

Secretary

Dr. María Ugalde Díez.
PhD in Biological Sciences.

ETHICS COMMITTEE FOR ANIMAL WELFARE (CEBA)

The Ethics Committee for Animal Welfare (CEBA) of the Hospital Universitario 12 de Octubre is the body in charge of evaluating research projects that use experimental animals in accordance with RD 53/2013, of February 1.

In December 2021, the Instituto i+12 signed up to the Transparency Agreement on Animal Experimentation promoted by the Confederation of Scientific Societies of Spain (COSCE) in collaboration with the European Animal Research Association (EARA) and the Spanish Society for Laboratory Animal Science (SECAL).

Some of the functions of the Committee are:

- Report on the suitability of each procedure in relation to the objectives of the study, on the possibility of reaching valid conclusions with the fewest possible number of animals, on the possibility of considering alternative methods to the use of animals, and on the suitability of the selected species.
- To report that each procedure is carried out in accordance with the notified or approved descriptive report.
- To ensure that the personnel participating in the procedures are accredited to carry out the tasks entrusted to them. To collaborate in the processing of the accreditations of those researchers who need it (art. 25.6 of RD 53/2013)

- Report on the procedures carried out, paying special attention to the following:
 - That the necessary means are put in place so that the animals do not suffer unnecessarily and so that they are provided, when necessary, with analgesics, anesthetics or other methods aimed at eliminating pain, suffering or distress as much as possible.
 - That euthanasia methods appropriate to the animal species in question and to the procedure being performed are used.
- Furthermore, the Committee has the power to request from researchers all the information it deems necessary for the fulfillment of its functions.

The Committee is made up of 3 members, proposed and elected by the Research Commission of the Instituto i+12, and a fourth member who is a specialist in animal welfare. The members of the CEBA are as follows:

Chair

Mr. José Luis Pablos Álvarez.
Representative of the Research Commission of the Instituto i+12.

Members

Mr. Juan Luis Antón-Pacheco Sánchez.
Ms. Inés García-Consuegra Galiana.

Secretary

Ms. Montserrat Grau Sanz.
Animal facility manager, designated veterinarian and animal health and welfare specialist.

MANAGEMENT AND ADMINISTRATION

FINANCIAL-ADMINISTRATIVE MANAGEMENT AREA

The Economic-Administrative Management Department of the Instituto i+12 corresponds to the Fundación para la Investigación Biomédica del Hospital 12 de Octubre (FIBH12O). This department is organized into five main units:

Responsible

Ms. M.ª del Mar López Martín.
Director of FIBH12O.

- Accounting Unit
Ms. Eva Montero Sánchez.
- Project Monitoring Unit
Ms. Elvira Romero Molina, Ms. Carmen Racionero Tirados.
- Billing and Clinical Trials Unit
Ms. Lupe Torrejón Navarro.
- Human Resources Management Unit
Ms. Sara Palacios Bermejo.
- Procurement and Contracting Unit.
Ms. María Piedelobo Cabrera.

SCIENTIFIC MANAGEMENT AREA

After the constitution and start-up of the Instituto i+12, the management structure was reinforced year after year with the incorporation of different units that allowed the Institute to expand its portfolio of services in the field of management, which in turn allowed it to diversify its activities.

These units have been organized into the Scientific Management Area, with the aim of structuring in an integral way the management carried out by the professionals of the Instituto i+12.

Currently, the Scientific Management Area is made up of the following units:

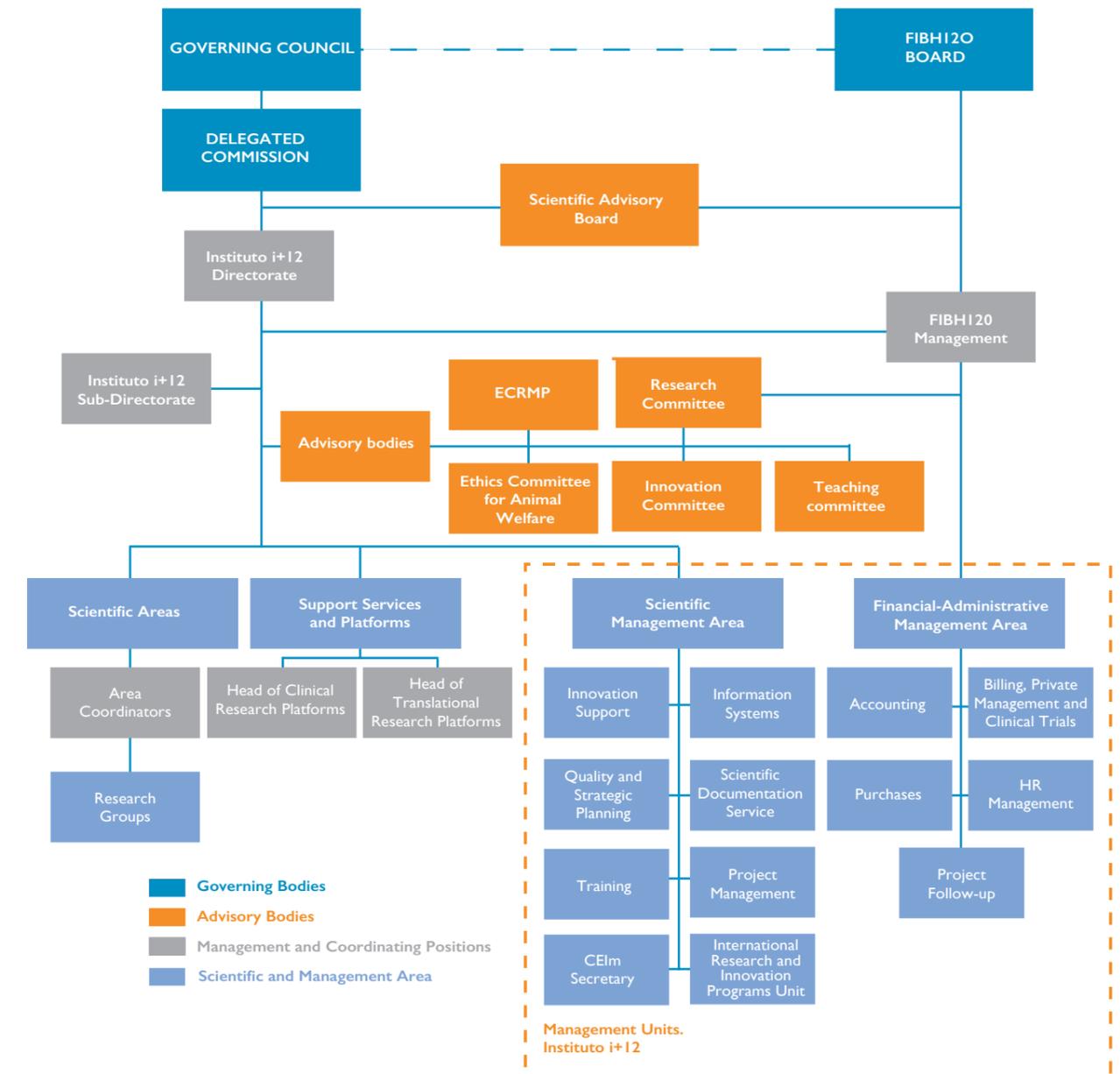
Responsible

Dr. Joaquín Arenas Barbero.
Scientific Director of the Instituto de investigación Hospital 12 de Octubre (Instituto i+12).

- Quality Unit and Strategic Planning
Ms. María López Berlanga, Ms. M.ª Isabel de Mier Barragán and Ms. Rosa Rodríguez Herranz.

- Innovation Support Unit
Ms. María López Berlanga.
- Training Unit
Mr. José M.º Aguado García.
- Project Management Unit
Ms. María Ugalde Díez and Mr. Fernando Valero Bonilla.
- International Research and Innovation Programmes Unit
Mr. Javier de la Cruz Bertolo.
- Information Systems Unitn.
Mr. Gustavo Roig Domínguez and Ms. Victoria Pilar García Vaquero.
- CEIm Technical Secretariat
Ms. María Ugalde Díez, Ms. Sarahí Valdez Acosta and Ms. Sara Pérez de Lara.
- Scientific Documentation Service (library)
Mr. José Manuel Estrada Lorenzo.

GENERAL ORGANIZATIONAL STRUCTURE OF INSTITUTO i+12



04

HUMAN AND
TECHNOLOGICAL
RESOURCES



HUMAN RESOURCES

Below is a list of contracts for researchers and technicians funded by different organizations and programs at the Instituto i+12 active in 2023:

Management of accredited Health Research Institutes	Accredited Health Research Institute Managers	1	1
Researchers	Miguel Servet Researcher and Technician NHS Contracts	10	43
	Miguel Servet-ISCIII Contracts	9	
	Juan Rodés Contracts	5	
	Ramón y Cajal Contracts - MICNN	1	
	Contracts Talent Attraction - CAM	1	
	Researchers attached to Platforms -ISCIII	9	
	Researchers attached to Public Research Networks -ISCIII	8	
Specialized health post-training researchers	Río Hortega-ISCIII Contracts	9	9
Postdoctoral researchers	Sara Borrell-ISCIII Contracts	3	3
Pre-doctoral researchers	Pre-doctoral Research Training Contracts: (PFIS, i-PFIS - ISCIII)	6	12
	FPU University Teaching Staff Training Contract	5	
	Training Contract for Research Staff FPI	1	
Researchers attached to research projects	Researchers attached to specific public and private projects	187	334
	Researchers attached to transversal projects	147	
Other	Contracts for specific CAM training programs	11	12
	Contract Chief Resident	1	

TOTAL 414

The contracts financed by different public and private organizations awarded in 2023 are shown below:

Predoctoral contracts for training in health research (PFIS)-ISCI

- Tamara Ruiz Merlo.
- Cecilia González Cuadrado.
- Sara Hiller Vallina.

Doctorate Contracts IIS-Company in Health Sciences and Technologies (IPFIS)-ISCI

- Paula Díaz Candeleda.

Contracts Sara Borrell-ISCI

- Juan García-Bernalt Diego.
- Manuel Navarro Oviedo.

Contracts Río Hortega-ISCI

- Irene Martín de Miguel.
- Alejandro Segura Tudela.
- Pilar Hernández Jiménez.
- Gonzalo Rivas Hernández.
- Laura Bermejo Guerrero.

Contracts Juan Rodés-ISCI

- Jorge Barriuso Feijoo.
- Alejandro Cruz Utrilla.
- M.ª Ángeles Meléndez Carmona.

Mobility of research staff hired under the AES (M-AES)

- Alberto Lens Pardo.

Mobility of healthcare professionals and SNS researchers (M-BAE)

- M.ª Concepción Garrido Ruiz.

Grants for university teacher training (FPU) - Ministerio de Universidades

- Jorge Navarro Nadal.

Supplementary grants for beneficiaries of University Teacher Training grants - Ministerio de Universidades

- Roberto García Vicente.

Grants for researchers in modality 1 of the Program for Attracting Research Talent of the Comunidad de Madrid, for the contracting and undertaking of R&D activities for an additional period of one year

- Beatriz Cabanillas Martín.

Grants for the hiring of research assistants and laboratory technicians for the year 2023 (resolution 2023)- Vicepresidencia, Consejería de Educación y Universidades (CM)

3 laboratory technician contracts, whose tutors are:

- Ana Isabel Flores de Cal.
- Jaime Lora-Tamayo Morillo-Velarde.
- Ángel Pérez Núñez.

Six research assistant contracts, whose tutors are:

- M.ª Carmen Fiuza Luces.
- M.ª Esther Gallardo Pérez.
- Carolina Alquezar Burillo.
- Joaquín Martínez López.
- David Lora Pablos.
- Estela Paz Artal.

Grants for the recruitment of pre-doctoral research staff in training - Vicepresidencia, Consejería de Educación y Universidades (CM)

- Melina Peressini Álvarez.
- Cecilia González Cuadrado.
- Mario Díaz García.
- Eva García Veros.

Grants for industrial doctorates at the Comunidad de Madrid

- Luis Rivas Gómez.

Funding to help finance the incorporation of a Chief Resident / Researcher in the Instituto de Investigación Hospital 12 de Octubre - i+12

- David Seoane Fernández.

Predoctoral research training grants - i+12

- Raquel González Jabardo.
- Miguel Ángel Marugal López.
- Daniel González Moreno.
- Paula San Román Ruiz.
- Gemma Valera Arévalo.
- Eva Garrido Rodríguez.
- Ana Jambrina Prieto.
- M.ª Carmen Martín Higuera.
- Paula Díaz Candeleda.
- Joan Salvador Russo Cabrera.
- Irene Íñiguez de Heredia Pérez.

TRANSFORMA12" grants 2023. Phase II: Incorporation of specialist doctors with research experience for the development of specific healthcare innovation programs

- Sonia Mayo de Andrés.
- Sara Llamas Velasco.
- Salvador Piris Borregas.
- Cinta Moraleta Redecilla.
- Isabel Rodríguez Goncer.
- M.ª Soledad Pizarro Sánchez.

CARE STAFF BENEFITING FROM GRANTS FOR THE INTENSIFICATION OF RESEARCH ACTIVITY

Contracts for the intensification of research activity in the NHS-ISCI

- Daniel Blázquez Gamero.
- Cristina Domínguez González.

Intensification contracts for specialist physicians providing healthcare services in the Medical Oncology Department - i+12

- Helena Bote de Cabo.
- M.ª Cristina Grávalos Castro.

Contracts for the intensification of research activity for specialist doctors belonging to research groups - i+12

- Jorge Adeva Alfonso.
- Luis M. Allende Martínez.
- Rafael Alberto Alonso Fernández.
- Tycho Baumann.
- Sylvia María Belda Hofheinz.
- Marcello Bellusci.
- Julián Benito León.
- Luis Borrego Bernabé.
- María Calbacho Robles.
- Patricia Calleja Castaño.
- Patricia E. Carreira Delgado.
- Daniel Castellano Gauna.
- Nerea Castro Quismondo.
- María Teresa Cedena Romero.
- Eva Ciruelos Gil.
- Esther Conde Gallego.
- Francisco Javier de la Serna Torroba.
- Guillermo Antonio de Velasco Oria de Rueda.
- Carmen Díaz Pedroche.
- María del Carmen Díaz Pedroche.
- Felipe Díez del Hoyo.
- María del Pilar Escribano Subías.
- María del Mar Espino Hernández.
- Daniel Falkenhain López.
- María Dolores Folgueira López.
- Alfredo Javier García González.
- Ismael García Moguel.
- María Dolores García-Cosío Carmena.
- Iván Tomás Gómez Blázquez.
- Carlos Gómez Martín.
- Sandra Gómez Rojas.
- Enrique González Billalabeitia.
- María Cristina Grávalos Castro.
- Elena Gutiérrez Solís.
- Ana Rosario Hernández Voth.

- Alejandro Octavio Herrero San Martín.
- Lara Carmen Iglesias Docampo.
- María Jesús Jiménez Cerezo.
- María del Carmen Jiménez López-Guarch.
- Ana Jiménez Ubieto.
- Beatriz Esther Joven Ibáñez.
- Laura Lema Roso.
- Manuel Lizasoain Hernández.
- Paula López Roa.
- Jaime Lora-Tamayo Morillo-Velarde.
- Esther Mancebo Sierra.
- Luis Manuel Manso Sánchez.
- Álvaro Marco del Castillo.
- Roberto Martín Asenjo.
- Elena Martín Hernández.
- María Pilar Martínez Montiel.
- María Pilar Martínez Sánchez.
- Sheila Melchor Díaz.
- Evangelina Mérida Herrero.
- Fátima Miras Calvo.
- Laura Montejano Ortega.
- María Teresa Moral Pumarega.
- Enrique Morales Ruiz.
- Laura Lucía Morán Fernández.
- Noemí Núñez Enamorado.
- Raquel Núñez Ramos.
- Juan Antonio Núñez Sobrino.
- María de los Reyes Oliver Pérez.
- Carmen Rosa Pallas Alonso.
- David Andrés Pérez Martínez.
- Alfredo Pérez Rivilla.
- Gloria María Pérez Segura.
- Luis Prieto Tato.
- Federico Pulido Ortega.
- María del Pilar Quijada Fraile.
- David Rial Crestelo.
- María Carmen Riesco Martínez.
- Raquel Rivera Díaz.
- Luis Robles Díaz.
- Antonia Rodríguez Izquierdo.
- Daniel Antonio Rodríguez Muñoz.
- Rosa Ana Saiz Díaz.
- Rafael Salguero Bodes.
- José María Sánchez Pina.
- Fernando Sarnago Cebada.

- Rafael Sarnago Cebada.
- Juan Sepúlveda Sánchez.
- Jose Tiago Sequeira Lopez da Silva.
- Pablo Tolosa Ortega.
- Alberto Villarejo Galende.
- Denis Zafra Torres.
- Irene Zamanillo Herreros.
- Berta Zamora Crespo.
- Jon Zugazagoitia Fraile.

Contracts for the intensification of research activity for two researchers providing healthcare services belonging to the Nephrology Department - i+12

- Elena Gutiérrez Solís.
- Evangelina Mérida Herrero.

TECHNOLOGICAL RESOURCES

RESEARCH SUPPORT SERVICES

The Research Support Services collaborate in the activities of the groups of the Instituto i+12. Each of the services maintains state-of-the-art technologies and infrastructures within its area. In addition, these are designed to assimilate new technologies as they emerge and develop.

The services are available to all users and are highly competitive. The same units carry out research projects, together with their own and external research groups, which enable them to improve the technologies and methodologies used.

The Research Support Services that the Instituto i+12 makes available to its researchers are as follows:

PLATFORMS TO SUPPORT TRANSLATIONAL RESEARCH

GENOMICS UNIT

The Genomics Unit of the Instituto de Investigación Hospital 12 de Octubre (i+12) has two laboratories, located respectively in the Research Center of the Hospital Universitario 12 de Octubre and in the Centro de Actividades Ambulatorias (sixth floor).

The main objective of the Unit is to provide research support and scientific advice to the different research groups at the Instituto i+12. It is equipped with advanced technology aimed at developing and fine-tuning new methodologies of interest to research staff. The services offered are available to researchers from the Instituto i+12 and from other public or private institutions.

Portfolio of services

Sanger sequencing

- De novo sequencing and resequencing.
- Analysis of fluorescently labeled DNA fragments.
- Microsatellite analysis (STRs, VNTRs).
- Single nucleotide polymorphism (SNP) analysis.

Massive sequencing

- Sequencing of small genomes.
- Sequencing of regions of interest and gene panels.
- Exome and transcriptome sequencing.
- Pathogen detection.
- miRNA sequencing.

Real-time PCR

- Development and analysis of real-time quantitative PCR data.
- Absolute or relative quantification studies of transcriptional profiles.
- Allele discrimination studies (SNPs) (detection of polymorphisms at the nucleotide level).
- Plus/minus type assays (detection) using positive internal control and generation of dissociation curves.
- Advice on experimental design, optimal primers and probes for quantitative PCR assays using Primer software Express and LightCycler Probe Design.

Other

- Quality control (integrity) of DNA, RNA and protein samples.
- High-precision spectrophotometric quantification in different starting samples: nucleic acids, microarrays, proteins, cell cultures, etc.

Installation and infrastructure

The Genomics Unit has the following instrumentation:

- AB 7500 Fast real-time quantitative PCR from Life Technologies (2).
- Roche LightCycler 480 real-time PCR.
- Roche LightCycler 96 real-time PCR.
- Applied Biosystems QuantStudio 5 real-time PCR.
- Applied Biosystems ABI 3130XL automatic sequencer.
- Applied Biosystems SeqStudio automatic sequencer.

- Applied Biosystems 3500 Dx automatic sequencer.
- Bio Rad Chemidoc XRS gel documentation and image analysis system.
- Bio Rad GELDOC GO imaging system.
- NanoDrop ONE spectrophotometer.
- Eppendorf Concentrator Plus.
- Agilent 2100 bioanalyzer.
- Life Technologies Ion PGM sequencer.
- Ion S5 XL sequencer from Life Technologies.
- 2 NextSeq 500 sequencers from Illumina.
- NextSeq 550 sequencer from Illumina.
- MiSeq sequencer from Illumina.
- NextSeq 2000 sequencer from Illumina.
- ePCR One Touch 2 from Life Technologies.
- Ion Chef robot from Life Technologies.
- Thermocyclers: GeneAmp PCR System 9800 de Applied Biosystems, PCR system 2400 de Perkin Elmer y Verity de Life Technologies (3).

Activity

The Genomics Unit is structured into different areas according to the technological equipment. The results of activity for the year 2023 in these areas are as follows:

NGS platforms

EQUIPMENT	SAMPLES
S5	2,333
PGM	154
NextSeq 500	2,001
NextSeq 550	1,808
Nexseq 500 (NIPT)	2,184
MiSeq	420
NextSeq 2000	1,782

Capillary sequencing platform (Sanger)

EQUIPMENT	SAMPLES
Capillary sequencers*	17,832

PCR and real-time PCR

EQUIPMENT	CARRERAS
Real Time Fast 7500 CAA Applied	375
Real Time LC 480 II Roche	134
Real Time Fast 7500 CI Applied	180
Thermocyclers**	1,074

**2720 Thermal Cycler X2, 2400 Thermal Cycler, 9800 Thermal Cycler, Verity Thermal Cycler x4.

The Genomics Unit shares information and procedures with the Bioinformatics Unit for the management of genomic data.

Personal

Coordinator: Dr. Francisco Javier Fernández Martínez.

Technical Manager: Dr. Juan Carlos Rubio Muñoz.

Laboratory technician: Ms. M.ª Consolación Pascual Pérez.

PROTEOMICS UNIT

The Instituto i+12 has been supported by the Proteomics Unit since 2007. Its main objectives are to provide support to researchers, promote scientific research and raise awareness of the latest techniques developed, all focused on the area of proteomics.

The Proteomics Unit has a set of tools that enable the study of the molecular pathogenesis of disease, identifying specific biomarkers that enable the diagnosis, classification, prognosis and prediction of disease. They also enable the definition of new therapeutic targets or the prediction of behavior in response to different drugs.

Portfolio of services

The Proteomics Unit offers researchers a range of proteomics services, as well as seminars and training courses.

The proteomics laboratory offers a diverse range of protein analysis services. Some of these require the contracting of external services, for which we have an advisory service, as these services require close technical-scientific interaction to determine the best analytical strategy to use.

In all cases, priority for analysis will be given to samples sent by the Institute's research groups and other academic entities affiliated with it. Analyses requested by external users (other research institutions and private companies) will be subject to evaluation by the head of the Unit.

The Proteomics Unit offers the following services:

1. Separation of proteins and differential expression analysis:
 - 2D electrophoresis for conventional analysis of protein mixtures in gel.
 - 2D electrophoresis for quantitative differential analysis DIGE technology.
 - Isobaric multiple labeling.
2. Identification of proteins both in gel and in solution.
3. Separation and analysis of protein complexes in native conditions: BLUE NATIVE. This analysis is carried out in both 1D and 2D and involves the transfer of the complexes to a membrane or the staining and cutting of the gel bands for the subsequent identification of proteins.
4. Theoretical and practical assistance in the particular design of each type of immunoblotting.
5. One-dimensional differential expression analysis or staining and cutting of gel bands for subsequent protein identification.
6. Multiplex analysis of proteomic biomarkers.

Installation and infrastructure

In order to develop these techniques and methodologies, the Proteomics Unit currently has the following high-tech equipment:

Luminex MAGPIX® System

- The MAGPIX system is a versatile multiplex platform capable of performing qualitative and quantitative analyses of proteins and nucleic acids in a wide variety of samples. It requires considerably less sample than many other technologies and can perform up to 50 tests in a single reaction well. This greatly reduces the volume of samples, reagents and labor, while improving productivity.

Ettan™ two-dimensional electrophoresis system, 2D-PAGE

- This system is made up of the IPGphor™ III unit, which integrates the isoelectrofocusing system to carry out the first dimension. It allows the application of immobilized pH strips using the IPGphor™ Manifold support, which in turn allows up to 12 strips to run simultaneously. The IPGphor™ III unit includes control software that generates graphs that monitor the changes in voltage, current and volt-hours that occur throughout the isoelectric focusing program.
- The DALTsix electrophoresis unit, where the second dimension will be performed, consists of an electrophoresis tray that allows up to six gels to be run at a time, thus reducing experimental variability in each of these gels. In addition, it provides a gel mounting stand that is also designed to polymerize up to six gels at a time.
- Both units are stabilized using the MultiTemp™ III system (GE Healthcare), which provides reliable and reproducible temperature control by distributing liquids at a constant temperature to external electrophoresis units. The generous cooling capacity of 200 W allows up to two vertical electrophoresis units to be connected at a time, for greater test reproducibility.

Liquid isoelectric focusing fractionator, 3100 OFFGEL (Agilent)

- Preparative liquid phase isoelectric focusing: the Agilent 3100 Offgel Fractionator resolves complex mixtures of proteins or peptides according to their isoelectric point (pI), achieving high-resolution fractionations. The resulting fractions remain in solution, making them much easier to recover for LC/MS or conventional gel analysis. The results are highly reproducible.

2100 Bioanalyzer (Agilent Technologies)

- A system based on microfluidic capillary electrophoresis, in such a way that it can determine, quantify and show the quality of total protein extracts.

ImageQuant LAS 4000 gel analysis and documentation equipment (Cytiva).

- Automated image analysis system that combines optimal image capture and analysis with ImageQuantTL software. It uses a 3.2 megapixel CCD camera that allows digital images of chemiluminescent, stained or fluorescent gels and membranes to be captured with an effective resolution of 6.3 megapixels.

ImageQuant 800 gel analysis and documentation equipment (Cytiva)

- Amersham's image analysis system, with Fujifilm optics, and SNOW imaging mode, allows you to expand the dynamic range and easily obtain images of low and high abundance proteins.
- Automatically produces clear images with the best signal-to-noise ratio.
- One system for various applications: chemiluminescence and fluorescence.
- Functional and flexible design.
- Ideal for multi-user laboratories.

ChemiDoc MP Imaging System (Bio Rad) gel documentation and analysis equipment

- Photodocumenter designed to cover multiplex fluorescence, chemiluminescence and other general gel documentation applications using a CCD camera.

Gel DocTM EZ (Bio Rad) gel documentation and analysis equipment

- Compact, automated image analysis system that combines optimal image capture and analysis with Image Lab software. It can be used to document mini gels stained with fluorescent or visible dyes, photographic plates and stain-free gels (Bio-Rad Stain Free).

ImageScanner III (GE Healthcare)

- High-resolution scanner for digitizing and densitometry of gels with visible stains.

Activity

The activity carried out in the Proteomics Unit in the year 2023 has been as follows:

Gel Doc TM EZ (Bio Rad)

RESEARCH GROUP	NO. OF ANALYSIS
Rare, Mitochondrial and Neuromuscular Diseases	309
Translational Hematology	86
Tissue Engineering	2
Immuno-oncology and Immunotherapy	26
Infectious Diseases	18
Translational Research with iPS Cells	9
Students	14
Immunodeficiencies and Transplant Immunology	17
Energy-Translational Metabolism	20

EnSpire (Perkin Elmer)

RESEARCH GROUP	NO. OF ANALYSIS
Asthma and Immunoallergic Diseases	146
Porphyrias-Hemochromatosis-Anemias	4
Neurodegenerative Diseases	75
Digestive Cancer: Hereditary	1
Students	14
Translational Research in Hypertension and Cardiorenal Disease	139
Regenerative Medicine	1
Skin Oncology	62
Thoracic and Translational Clinical Oncology	34
Proteomics Technician	21

ImageQuant Las4000 (Cytiva)

RESEARCH GROUP	NO. OF ANALYSIS
Asthma and Immunoallergic Diseases	235
Inflammatory and Autoimmune Diseases	1
Neurodegenerative Diseases	210
Translational Research in Hypertension and Cardiorenal Disease	251
Students	113
Skin Oncology	46
Proteomics Technician	67
Regenerative Medicine	5

ImageQuant 800 (Cytiva)

RESEARCH GROUP	NO. OF ANALYSIS
Digestive Cancer: Hereditary	40
Proteomics Technician	8
Thoracic and Translational Clinical Oncology	28

ImageScanner III (GE)

RESEARCH GROUP	NO. OF ANALYSIS
Rare, Mitochondrial and Neuromuscular Diseases	45
Proteomics Technician	28

Magpix (Luminex)

RESEARCH GROUP	NO. OF ANALYSIS
Translational Research in Hypertension and Cardiorenal Disease	2
Regenerative Medicine	4
Oncology	6
Psychiatry	3
Infectious Diseases	2
Oncology	5

Proteomic techniques: Western Blot, staining, Spot excision.

RESEARCH GROUP	NO. OF ANALYSIS	NO. HOURS
Inflammatory and Autoimmune Diseases	26	87
Psychiatry	45	360
Neurodegenerative Diseases	2	16
Translational Research with iPS Cells	32	256
Genitourinary Cancer	8	36
Digestive Cancer	1	8

Responsible

Dr. Inés García-Consuegra Galiana (line manager).

CYTOMETRY UNIT

The Instituto i+12 has the support of the Flow Cytometry Unit, located in the Centro de Investigación del Hospital Universitario 12 de Octubre.

The activity of the person in charge of managing the Unit's equipment is specified in the following points:

- Definition of the general rules of use of the different high-tech equipment.
- Advising the different research groups on the development, fine-tuning and analysis of new protocols for the different equipment.

Activity

According to the usage records for the year 2023, the FACSCalibur cytometer has been used by 14 users belonging to 8 research groups and 5 areas of the Institute (Cancer; Cardiovascular; Inflammatory Diseases and Immune Disorders; Neurosciences and Mental Health; and Transversal Area).

The Aurora spectral cytometer has been used by 13 users from 5 research groups belonging to 3 research areas of the i+12 (Inflammatory Diseases and Immune Disorders; Infectious Diseases and AIDS; and Transversal Area).

The use of the equipment by personnel from outside the Institute has not been recorded.

Responsible

Dr. Gabriel Criado Carrasco (scientific manager).

MICROSCOPY UNIT

The Instituto i+12 has a Microscopy Unit. It is located in the Centro de Investigación del Hospital Universitario 12 de Octubre.

The activity of the people in charge of this Unit is specified in the following points:

- Definition of the general rules for the use of the confocal microscope, which means a considerable improvement in its performance and better use of it.
- Control of the annual external maintenance of the equipment necessary for its correct functioning, as well as contact with the technical services when necessary.
- Advice to the different research groups in the development and fine-tuning of experiments and protocols with the equipment.
- Specific training (initial training) for new users.

Portfolio of services

- Analysis of images on glass and plastic supports (ibidi plates, multiwell plates, etc.).
- Immunofluorescence and probe detection (apoptosis and cell proliferation, cellular and subcellular localization, diffusion studies, etc.).
- Subcellular localization using fluorescent proteins.
- Three-dimensional multi-position studies (Z-Stack, time-lapse, mosaic, etc.).
- Counterstaining: labelling of the Golgi complex (HPA lectin, Grasp68 prot.), the endoplasmic reticulum (rianodine, calnexin), mitochondria (Mitotracker Red/Green), actin microfilaments (phallotoxin) and nuclear labelling (IP, Hoechst, DAPI, etc.).
- In vivo physiological studies:

- Quantification of intracellular calcium (Fura2-AM, Fluo3-AM, Fluo4-AM, MagFluo4, etc.).
- Determination of plasma membrane potential (di4ANEPS) and mitochondrial potential (TMRM, TMRE).
- Determination of oxidative stress (DHE, GSH, MitoSox, lipid peroxidation, etc.).
- NADH/Redox, FAD/Redox.
- Colocalization and interaction of proteins (FRET).
- Fluorescence detection up to 8 channels (LED8).
- Organoid imaging.
- Deconvolution of fluorescence images.

Installation and infrastructure

To carry out these techniques and methodologies, the Microscopy Unit of the Instituto i+12 has the following high-tech equipment:

- LSM510 META ConfoCor 3 spectral confocal microscope (ZEISS).
- THUNDER Imager 3D Cell Culture microscope (Leica).

Activity

In the year 2023, the following use of the Microscopy Unit has been recorded:

Proteomic techniques: Western Blot, staining, Spot excision.

RESEARCH GROUP	TOTAL TIME OF USE	TOTAL TIME OF USE (HOURS)
Translational Research in Hypertension and Cardiorenal Disease	12 days, 5 hours	293
Research in ALS	5 days, 14 hours and 30 minutes	134.5
Neurodegenerative Diseases	5 days, 14 hours and 30 minutes	134.5
Translational Research with iPS Cells	4 days, 17 hours	113
Rare, Mitochondrial and Neuromuscular Diseases	14 hours	14

TOTAL USE: 28 days, 17 hours (689 hours)

Responsibles

Dr. Gema Ruiz Hurtado.
Dr. Fernando Bartolomé Robledo.

Widefield microscope (Thunder DMi8-Leica)

RESEARCH GROUP	TOTAL TIME OF USE	TOTAL TIME OF USE (HOURS)
Neurodegenerative Diseases	16 days, 8 hours	392
NeuroOncology Traslacional	14 days, 12 hours	348
Research in ALS	4 days, 5 hours and 30 minutes	101.5
Translational Research in Hypertension and Cardiorenal Disease	3 days, 6 hours	78
Translational Research with iPS Cells	2 days, 23 hours	71
Immunodeficiencies and Transplant Immunology	1 día, 18 hours	42
Pathological Anatomy	1 día, 8 hours	32
Asthma and Immunoallergic Diseases	1 día, 3 hours and 30 minutes	27.5
Inflammatory and Autoimmune Diseases	20 hours, 30 minutes	20.5
Intercellular Communication in Aging and Cancer	7 hours, 30 minutes	7.5

TOTAL USE: 46 days, 16 hours (1,120 h).

Responsibles

Dr. Carolina Alquézar Burillo.
Dr. Alicia Usategui Corral.

BIOINFORMATICS UNIT

The Bioinformatics Unit was created to respond to the growing demand for the manipulation and analysis of data mainly from the new mass sequencing platforms (Next-Generation Sequencing, NGS).

Its main functions are:

- To provide the necessary support for the analysis of NGS results.
- To supervise the servers of the sequencers, the computing cluster and the data storage system.
- Train users and collaborate with them in the use and development of bioinformatics tools that are useful for different scenarios.

Portfolio of services

The main services offered by the Bioinformatics Unit of the Instituto i+12 are:

- Maintenance of the bioinformatics infrastructure of i+12:
 - Supervision and administration of the computer equipment involved in the massive sequencing processes: sequencer servers, computing cluster and storage systems.
 - Maintenance and improvement (expansion) of the current computer equipment.
 - Installation, maintenance and optimization of the data analysis software as required at any given time.
- Support and advice on processes for the analysis of massive sequencing results to the different professionals of the Instituto i+12, and secure storage of NGS results.
- Generation and standardization of protocols: development of analysis pipelines that take advantage of the existing infrastructure.
- Genomic data analysis service for professionals of the Instituto i+12.
- Provide basic bioinformatics training to people involved in the analysis of NGS results.

Installation and infrastructure

- NGS sequencing servers. i+12-Genómica:
 - Dell Precision T7500: 2x Intel Xeon X5650 (6 cores), 48GB RAM, 11TB.
 - Dell PowerEdge T630: 2x Intel Xeon E5-2680v3 (12 cores), 128GB RAM, 28TB.
 - HP Z400: Intel Xeon W3550 (4 cores), 12GB RAM, 620GB.
- “Quimera” i+12-CPD H120 cluster:
 - 2 R423-E3 management nodes: 4x Intel Xeon E5-2650v2 (8 cores), 128GB RAM.
 - 4 R421-E3 computer servers: 8x Intel Xeon E5-2650v2 (10 cores), 320GB RAM, 2x K20m GPU (5GB).
 - Storage cabinet: E2700 (130TB).
- Dell T7610 workstation (2x Intel Xeon E5-2630v2 (6 cores), 64GB RAM, 2.3TB). Rare, Mitochondrial and Neuromuscular Diseases Group.
- Dell T7610 workstation (2x Intel Xeon E5-2630v2 (6 cores), 64GB RAM, 2.3TB). Genetics and Inheritance Group.
- Dell T7600 workstation (2x Intel Xeon E5-2630 (6 cores), 64GB RAM, 2.4TB). Translational Hematology Group.
- Synology NAS: RS18017XS+ (100TB), DS1813+ (38TB), DS415Play (6TB).

Activity

In 2023, three service requests were received from research groups at the Instituto i+12. The platform's activity has been limited by the availability of resources.

Incidents relating to the platform have been dealt with in joint meetings with the Services/Groups and have been adequately resolved, covering requests for increased genomic data storage.

Personal

Coordinator: Dr. Francisco Javier Fernández Martínez.

Technical Manager: Dr. Aitor Delmiro Magdalena.

ANIMAL FACILITY AND EXPERIMENTAL OPERATING ROOMS

The Animal Facility and Experimental Operating Rooms Unit is a research and teaching support service that aims to ensure that all studies on animal models are carried out to the highest quality and guaranteeing the welfare of the animals. It is aimed at all researchers from the Instituto i+12 and other centres.

The mission of the Animal Facility and Experimental Operating Rooms Unit is to support research and teaching activities related to the use of experimental animals, justifying the purpose they pursue, assessing their opportunity in terms of their potential benefits.

All animals housed in the animal facility are kept in accordance with Spanish legislation on the protection of animals used for experimentation and other scientific purposes (Royal Decree 53/2013 and Law 32/2007). The housing and care conditions reflect the recommendations of the Council of Europe Commission of June 18, 2007. Since 2007, the Animal Welfare Committee has been registered under number ES280790001164.

The functions carried out are as follows:

- To provide accommodation for the maintenance and care of animals, guaranteeing the welfare of the experimental animals.
- To carry out periodic health checks to keep the animals in good condition and thus obtain reliable and reproducible results.
- Satisfy the needs of users by providing them with the advice and equipment required to carry out their research with experimental animals
- Guarantee compliance with all legal and ethical standards relating to the use of animals for experimentation and other scientific purposes, including teaching.

Portfolio of services

Services to i+12 groups

- Assistance in the drafting of experimental procedures.
- Evaluation of procedures by the CEBA.
- Drafting of reports.
- Processing of communications to the competent authority.e.

General services

- Veterinary advice on animal welfare and on the choice of the most appropriate model, maintenance conditions, feeding and reproduction.
- Anaesthesia, monitoring and post-operative care of the animals.
- Sterilization of surgical material.
- Training of personnel involved in animal experimentation.
- Stabling and control of the animals.
- Specific support tasks, assistance in procedures and surgical models: administration of products, obtaining samples, cell inoculation, extraction of blood or fluids, anesthesia, analgesia, euthanasia, necropsy, taking samples and postoperative care.

Installation and infrastructure

The Animal Facility and Experimental Operating Theatres Unit is located in the Research Center of the Hospital Universitario 12 de Octubre Hospital, on the ground floor of the Teaching Building.

Currently there is an area with positive pressure for housing rodents: *Mus musculus* mice and *Rattus norvegicus* rats; and another for housing *Oryctolagus cuniculus* rabbits. In addition, there are ventilated racks for the maintenance of immunosuppressed mice, and finally, an area for pigs (*Sus scrofa*).

The number of rooms available allows for the different species that are commonly used to be housed separately, with one room being used for quarantine of newly-received animals and another for handling or special observations.

The surgical area complies with current regulations. It is separate from the animal house, has changing rooms with double access, a common anteroom, an Operating Room for large animals and a microsurgery room.

Activity

The following activities were carried out in the Animal Facility and Experimental Operating Rooms in 2023:

Table 1. Operating Room 1: Large animals

RESEARCH GROUP	NUMBER OF USES	NO. HOURS
Courses	9	159.75
Thoracic and Translational Clinical Oncology	1	1.25
Translational Research in Hypertension and Cardiorenal Disease	1	2
Inflammatory and Autoimmune Diseases	10	11.75
Researchers. Clinical associate.	9	36
Comprehensive Animal Management Course. Clinical associate.	1	10
TBS supervised work experience	72	288

Table 2. Operating Room 1: Large animals

RESEARCH GROUP	NUMBER OF USES	NO. HOURS
Translational Research in Hypertension and Cardiorenal Disease	1	2
Courses	9	159.75
Researchers. Clinical associate.	7	19
TBS supervised work experience	72	288

Table 3. Operating Room 1: Large animals

RESEARCH GROUP	NUMBER OF USES	NO. HOURS
Researchers. Clinical associate.	2	6.25
Courses	9	159.75
Neurodegenerative Diseases	1	2
Regenerative Medicine	7	18
TBS supervised work experience	72	288

Table 4. Operating Room 1: Large Animals

RESEARCH GROUP	NUMBER OF USES	NO. HOURS
Courses	9	159,75

Table 1. Operating Room 2: Microsurgery

RESEARCH GROUP	NUMBER OF USES	NO. HOURS
Digestive Cancer: Hereditary	35	64.50
Thoracic and Translational Clinical Oncology	15	29.25
Skin Oncology	5	6.25
Regenerative Medicine	6	15
Porphyrias	1	1.75
Rare, Mitochondrial and Neuromuscular Diseases	27	68
Translational Research in Hypertension and Cardiorenal Disease	141	251.25
Inflammatory and Autoimmune Diseases	23	32.75
Associate clinician	10	34.25
Immuno-oncology and Immunotherapy	2	20
Translational Hematology	11	4
Courses	13	94
Biomarkers in Genitourinary Tumors	1	2

Table 2. Operating Room 2: Microsurgery

RESEARCH GROUP	NUMBER OF USES	NO. HOURS
Digestive Cancer	16	42.25
Thoracic and Translational Clinical Oncology	8	23
Translational Hematology	8	17.5
Skin Oncology	34	54
Biomarkers in Genitourinary Tumors	3	3.25
Immuno-oncology and Immunotherapy	13	20.75
Rare, Mitochondrial and Neuromuscular Diseases	7	13
Translational Research in Hypertension and Cardiorenal Disease	6	11.5
Inflammatory and Autoimmune Diseases	43	64
Neurodegenerative Diseases	1	1.5
Regenerative Medicine	25	118
Courses	13	99
Neurotraumatology and Subarachnoid Hemorrhage	2	3.25
Porphyrias	1	1.5

Vivo Xtreme - Bruker

RESEARCH GROUP	NUMBER OF USES	NO. HOURS
Proteomics	6	22
Inflammatory and Autoimmune Diseases	16	29
Translational Hematology	36	92
Immuno-oncology and Immunotherapy	47	106.5
Digital Health	2	111
Translational Research in Hypertension and Cardiorenal Disease	8	24.5
Thoracic and Translational Clinical Oncology	1	1
Skin Oncology	1	3

Behavior Room

RESEARCH GROUP	NUMBER OF USES	NO. HOURS
Rare, Mitochondrial and Neuromuscular Diseases	73	48
Proteomics	1	1
Inflammatory and Autoimmune Diseases	31	25
Digestive Cancer	3	4.25
Regenerative Medicine	12	17.5
Thoracic and Translational Clinical Oncology	3	4.5
Translational Hematology	1	1

Animal Experiments Room

RESEARCH GROUP	NUMBER OF USES	NO. HOURS
Translational Research in Hypertension and Cardiorenal Disease	1	0.75
Proteomics	3	9.25

Animal Facility

- No. of animals handled = 2,030.
- No. of animals used in procedures = 1,039.

Responsible

Dr. Montserrat Grau Sanz (technical manager).
Dr. Inés García Consuegra.

CLINICAL RESEARCH SUPPORT PLATFORMS

SCIENTIFIC SUPPORT UNIT

The Research and Scientific Support Unit provides consultations, advice and scientific collaborations of a methodological, epidemiological, statistical, computer and teaching nature to the researchers of the Instituto i+12.

Its main functions are as follows:

- To provide scientific support and methodological, epidemiological, biostatistical and computer support for research, scientific production and clinical practice activities. (B.O.E. 18/05/91).
- To carry out the tasks of coordination, support and scientific advice for the management, adaptation and improvement of research projects in official national and international public calls.
- To develop own research work in Health Sciences. Development of procedures and methods that deepen and open up possibilities for research support and backing. Development and deepening in specific subject areas. To this end, it coordinates with other national and international centers, units and diverse cooperative research structures, RETICs, CIBERs, the Spanish Platform of Clinical Research Units and Clinical Trials SCReN (Spanish Clinical Research Network), agencies and other international entities.
- To carry out internal or external collaboration, teaching and consultancy with the Instituto de Salud Carlos III, the Directorate General for Research, Training and Health Infrastructures of the Consejería de Sanidad de la Comunidad de Madrid, el Ministerio de Sanidad, Servicios Sociales e Igualdad (Advisory Council of the Ministry) and various universities, especially the Universidad Complutense de Madrid.

Portfolio of services

Consultations

Requesting information, advice or technical or scientific opinion. This refers to all consultations that do not require the use of computer, statistical or telematic applications. They are one-off and are resolved through appointments that have no continuity. Before making the consultation, the researcher must have personally reviewed the topic or situation to be addressed with basic documentation, whether scientific, legislative or technical.

Consultancy

Request the solution of problems or processes in the scientific field that require qualified dedication, human resources, materials and time. A work calendar is opened with planned consecutive appointments linked by objectives, tasks and results, with a start and end date. All consultancies have an economic cost.

In this case, the Research and Scientific Support Unit will carry out the study of the problem using whatever means it considers necessary according to the objectives, hypotheses or processes proposed by the researcher. Once the work is finished, the researcher will be given a document with the results and all the working files used in the analysis.

The time taken to deliver the results will depend on the complexity of the study, the availability of the Unit's personnel and the workload involved in the consultancy. It is advisable to request the consultancy sufficiently in advance of the use or completion of its objectives.

In those specific cases in which the nature of the work requires it, an overall budget for the project will be drawn up, without charging by the hour. This project depends on the delivery deadline, the materials required, the level of involvement of the Research and Scientific Support Unit and the origin of the applicant. The preparation of the quote will not entail any cost to the user, except in the case of large-scale projects for which the preparation of the quote requires prior analysis.

Activity

- Number of consultancies provided in 2023:

Methodological and statistical support. Support has been given to 205 consultancies related to the elaboration of the study design, establishment of conceptual and operational hypotheses, objectives of the study, type and selection of the sample, methods of random assignment, sample size, elaboration of intermediate analyses, establishment of the population to be studied and variables according to objectives, statistical analysis plan, filtering, visualization, exploitation and presentation of data in research projects, clinical trials, scientific publications, degree final projects and doctoral theses.

Support for data management, data protection and REDCap computing. 78 new projects have been generated in REDCap: creation of data collection notebooks, structured import of collected data from Excel to REDCap, programming of alerts or notifications within the REDCap project, creation of quality rules to review data pragmatically, and training in the basic use of the tool. Maintenance has been offered to 425 active projects on an ongoing basis: creating users, resetting passwords and including users in projects, checking the presence/absence of personal data in research projects hosted on the server. In the tasks of updating REDCap projects, 556 users were registered in REDCap. At the same time, 1,464 users who had been inactive for more than a year had their activity suspended.

Support for the management and monitoring of research projects. 45 consultancies related to the registration of studies and clinical trials on Clinicaltrials.gov and CTIS (total = 29), and with the management of clinical research (total = 16).

- **Platform for Clinical Research Units and Clinical Trials (SCReN).** Clinical trials supervised by the Research and Scientific Support Unit in 2023:

Support and collaboration in 24 clinical trials: 3 clinical trials in clinical trial management activities; 9 in monitoring activities; 4 in data management activities; 24 in statistical activities; maintenance of 50 active projects hosted on the server with control of 1,100 users.

Members of the SCReN citizen dissemination and participation group.

All the studies in which it has collaborated have been commissioned by independent clinical research sponsors.

- **Training placements.** Internship agreement between the Universidad Complutense de Madrid and the Hospital Universitario 12 de Octubre. Two 3-month placements for the completion of the Master's Degree Final Project in Biostatistics at the Universidad Complutense de Madrid.

i+12 BIOBANK

The i+12 Biobank is the unit that regulates the management of samples and data generated from the healthcare activity of the Hospital Universitario 12 de Octubre for use in biomedical research. The Biobank guarantees the quality, security and traceability of the stored data and samples, and the procedures associated with the operation of the Biobank of the requested biological material. One of the main objectives of the Biobank is to ensure the competitiveness and excellence of national and international biomedical research, as well as to ensure compliance with current legislation and to protect the rights of donors.

The i+12 Biobank was authorized by the Regional Ministry of Health of the Comunidad de Madrid in 2013, and was registered in the National Registry of Biobanks, under the Instituto de Salud Carlos III (ISCIII), with the number B. 0000657, as required by RD 1716/2011 on the basic requirements for the authorization and operation of biobanks for biomedical research purposes and the processing of biological samples of human origin. In addition, the Biobank has been part of the National Biobank Network Platform at the request of the ISCIII (PT17/0015/001). It is currently a member of the ISCIII Biobank and Biomodel Platform (PT20/00121), and has also recently been admitted as a member of the ISCIII Biomodel and Biobank Platform (PT23/00080).

Portfolio of services

Services offered

- Hosting and custody of human samples.
- Transfer of human samples for biomedical research and provision of clinical data in compliance with current legislation.
- Frozen and paraffin histological sections.
- Immunohistochemical sections.
- Extraction of nucleic acids.
- Mutation studies.
- Design and fine-tuning of procedures and techniques for the collection, processing and conservation of human biological samples.
- Ethical and legal advice on the conservation and possible uses of human biological samples in research projects.

Collections

- Urology Collection.
- Hematology Collection.
- Immunology Collection.
- Genetics Collection.
- Tumor Bank Collection.
- Cardiology Collection.
- Psychiatry Collection.
- Dermatology Collection.
- Allergy Collection.
- DRECE Collection.
- NEDICES collection.
- Healthy Donor Blood collection.

Installation and infrastructure

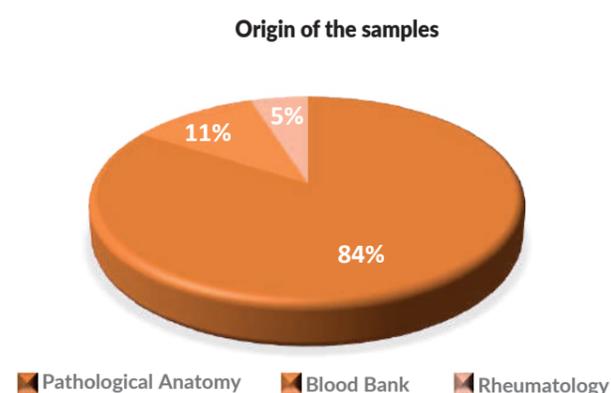
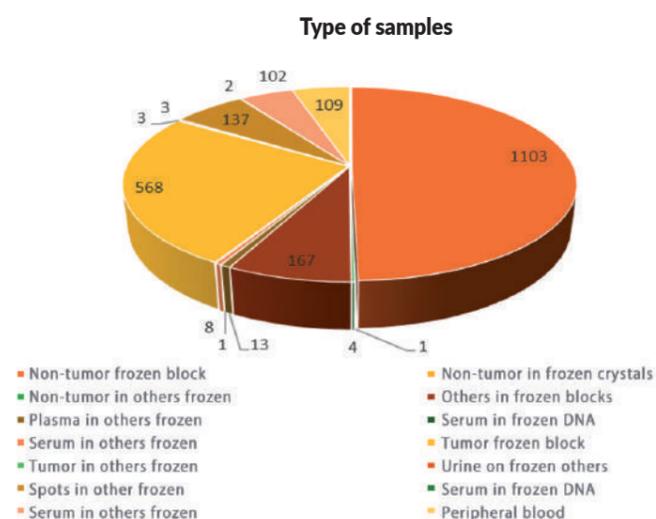
The i+12 Biobank is located in the Pathological Anatomy Department and covers 96 m² divided into two areas: the reception and laboratory area and the cryopreservation area.

The flow of samples and associated data in and out of the laboratory and reception area is managed by two workstations assigned to Biobank technicians. The workstations are equipped with two computers, two printers, a label reader and the sample and data management application to ensure traceability. This area houses the office of the technical coordinator and the sample processing and aliquoting laboratory, where, in addition to sample processing, nucleic acid extraction and quality control checks are carried out. The processing laboratory is equipped with a -20°C refrigerator, a laminar flow hood, two centrifuges, a thermoblock, a nucleic acid extraction robot, a nanodrop, a bioanalyzer, a cryotome, a thermocycler and a microscope.

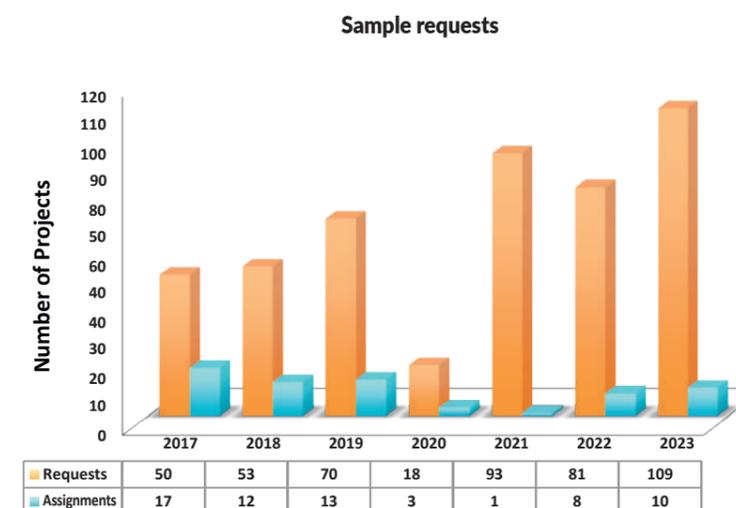
In the cryopreservation area there is the equipment for preserving samples in freezing conditions. In total there are 12 - 80 °C ultra-low temperature freezers equipped with CO2 tanks, a nitrogen container, an alarm center and equipment temperature monitoring and control.

Activity

In the year 2023, the i+12 Biobank has recorded the following activity:



Comparison 2017-2023 of sample requests for research projects



Personal

Scientific Direction: Dr. José Luis Rodríguez Peralto.

Technical Coordinator Dr. Alicia Maroto Pérez.

OTHER INSTITUTO i+12 SUPPORT SERVICES

SCIENTIFIC DOCUMENTATION SERVICE

The researchers at the Instituto i+12 have the support of the Library of the Hospital Universitario 12 de Octubre as a scientific documentation service. The Library offers access to information resources (full texts of scientific journals and e-books, databases, scientific production) and library services (loans, consultations, bibliographic searches), as well as a place to work and study in its different consultation and reading rooms

The Library has an Internet platform, called the Virtual Library of the Hospital Universitario 12 de Octubre, through which it makes available to all users the services and collections available to facilitate their healthcare, teaching and research work. A personal username and password are required to access the Virtual Library.

The main services offered by the Library are requesting articles (requesting articles from other libraries in the health system that are not available in the Library's collection), requesting bibliographic searches, training users in bibliographic searches and accessing information resources, in coordination with Continuing Education and the Teaching Commission, consulting impact factors and quartiles of scientific publications, borrowing books, consulting in the reading room and accessing the Internet through the computer room.

A more detailed description of the Scientific Documentation Service can be found on the website of the Library of the Hospital Universitario 12 de Octubre, at the following address: <http://cendoc.h12o.es/blog/>.

Personal

Responsible: Dr. José Manuel Estrada Lorenzo.

Interlibrary loan management: Ms. Gema Serrano (library assistant).

Collection-repository management: Ms. M.^a José Muñoz (library clerk).

Book collection management: D. Francisco Javier Villanueva Leiguarda (library assistant).

I+12 INNOVATION SUPPORT UNIT

The Innovation Support Unit of the Instituto i+12 (UAI i+12) aims to develop innovation activities with excellence and quality, promoting collaboration and cooperation with other research centres and groups of the Instituto i+12

The i+12 UAI aims to channel innovative ideas through the different phases of the innovation funnel: from the moment the idea emerges until it reaches the market.

The philosophy of the i+12 UAI is to work in an environment of open innovation, in which patients, suppliers and industry can participate in the innovation process together with the staff of the Instituto i+12.

The UAI i+12 is made up of a multidisciplinary team of professionals who provide the necessary advice so that ideas can give rise to products or services that provide new solutions.

The UAI i+12 is a member of the Platform for Innovation in Medical and Health Technologies (ITEMAS), promoted by the Carlos III Health Institute as a component of the integrative vision of innovation in its environment.

The functions carried out by the UAI i+12 are organized into three main areas of activity:

Legal protection of innovation:

- Promotion of an innovative culture in the i+12 environment.
- Preparation of reports on the state of the art in relation to the identified innovative idea.
- Application, file tracking, registration and maintenance of inventions (patents, utility models).
- Application, tracking and registration of trademarks.
- Technology watch of the i+12 environment.
- Definition of and advice on IP protection strategies.

Transfer and commercialization:

- Search for and identification of licensees for the portfolio of inventions in the i+12 environment.
- Attendance at BROKERAGE events.
- Publication of technology offer sheets for the inventions of i+12, and their presentation on the European platform TECHNOLOGY TRANSFER EEN and on the ITEMAS platform.
- Drafting of license agreements, co-ownership of IP, technology transfer, confidentiality and R&D&I agreements with companies.
- Dissemination of UAI i+12 activities at national and international events.
- Search for synergies with other networks and alliances for innovation.

Training and search for funding:

- Organization of training activities in the field of innovation (courses, seminars and innovation pills).
- Organization of institutional innovation conferences.
- Support in the presentation of proposals to calls for health innovation.
- Search for potential partners to participate in collaborative projects within the framework of the H2020 program.
- Identification and search for public/private funding applied to the environment.
- Search for innovative public procurement opportunities.

Personal

Ms. María López Berlanga (unit manager).

05

RESEARCH
ACTIVITY

RESEARCH PROJECTS

In 2023, the Instituto i+12 has nine prioritized research areas. At the head of each of these areas is an area coordinator, who is responsible for coordinating the work of that area. In turn, each area is made up of different research groups, and each group is led by a principal investigator. In 2023, the Instituto i+12 is made up of 68 research groups.

In addition, the Instituto i+12 has associate clinical researchers, professionals from the healthcare field of the Instituto i+12 who carry out scientific activities without meeting the minimum criteria to be considered a research group.

The following table shows the relationship between the number of active research projects in 2023 managed by the Fundación para la Investigación Biomédica del Hospital 12 de Octubre (FIBH12O).

RESEARCH AREAS OF THE INSTITUTO I+12	ACTIVE PROJECTS
Cancer	156
Chronic Diseases and Transplantation	21
Rare and Genetic Diseases	19
Research into Health Outcomes and Digital Transformation	16
Cardiovascular	20
Inflammatory Diseases and Immune Disorders	28
Infectious Diseases and AIDS	36
Neuroscience and Mental Health	32
Transversal	20
Researchers / Associate Clinicians	24
TOTAL	372

The distribution of active projects by funding organization is shown below.

FINANCER	ACTIVE PROJECTS
INSTITUTO DE SALUD CARLOS III	135
MINISTERIO DE ECONOMÍA Y COMPETITIVIDAD	18
COMMISSION OF THE EUROPEAN COMMUNITIES	13
COMUNIDAD DE MADRID	10
FUNDACIÓN DE INVESTIGACIÓN MÉDICA MUTUA MADRILEÑA	9
FUNDACIÓN CIENTÍFICA DE LA ASOCIACIÓN ESPAÑOLA CONTRA EL Cancer	8
EIT HEALTH	4
FUNDACIÓN ESPAÑOLA DE ONCOLOGÍA MÉDICA	4
FUNDACIÓN CASA DEL CORAZÓN	3
FUNDACIÓN CRIS DE INVESTIGACIÓN PARA VENCER EL Cancer	3
FUNDACIÓN MENUDOS CORAZONES	3
FUNDACIÓN SENEFRÓ	3
ORGANIZACIÓN NACIONAL DE CIEGOS ESPAÑOLES	3
SOCIEDAD MADRILEÑA DE TRASPLANTES	3
FUNDACIÓN CLINIC PER A LA RECERCA BIOMÉDICA	2
FUNDACIÓN EUGENIO RODRÍGUEZ PASCUAL	2
GILEAD SCIENCES, S.L.U.	2
BARCELONA SUPERCOMPUTING CENTER-CENTRO NACIONAL	1
CENTRO DE INVESTIGACIÓN COOPERATIVA EN BIOCENCIAS	1
CONSEJO SUPERIOR DE INVESTIGACIONES CIENTÍFICAS	1

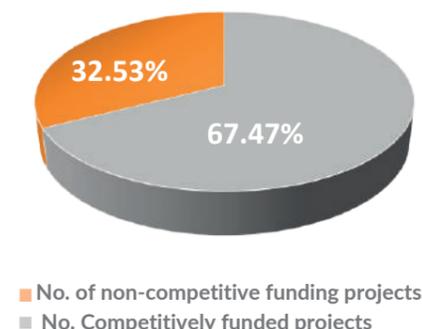
FINANCER	ACTIVE PROJECTS
FUNDACIÓ LA MARATÓ DE TV3	1
FUNDACIÓN BBVA	1
FUNDACIÓN DE INVESTIGACIÓN ONCOLÓGICA	1
FUNDACIÓN DEL SECTOR PÚBLICO ESTATAL CENTRO NACIONAL DE INVESTIGACIONES ONCOLÓGICAS CARLOS III	1
FUNDACIÓN ESPAÑOLA DE INVESTIGACIÓN ÓSEA Y DEL METABOLISMO MINERAL	1
FUNDACIÓN LA CAIXA	1
FUNDACIÓN LUZÓN	1
FUNDACIÓN MADRILEÑA DE NEFROLOGÍA	1
FUNDACIÓN PARA LA INVESTIGACIÓN MÉDICA APLICADA	1
FUNDACIÓN PARA LA INNOVACIÓN Y LA PROSPECTIVA EN SALUD EN ESPAÑA (FIPSE)	1
FUNDACIÓN PFIZER	1
FUNDACIÓN SEDIM	1
FUND. INVEST. BIOM. HOSPITAL CLÍNICO SAN CARLOS	1
GRUPO ESPAÑOL DE TUMORES NEUROENDOCRINOS Y ENDOCRINOS (GETNE)	1
INSTITUTO DE MEDICINA MOLECULAR JOÃO LOBO ANTUNES	1
LEDUCQ FOUNDATION FOR CARDIOVASCULAR RESEARCH	1
LUNG CANCER RESEARCH FOUNDATION	1
MINISTERIO DE SANIDAD, SERVICIOS SOCIALES E IGUALDAD	1
SOCIEDAD ESPAÑOLA DE ENFERMEDADES INFECCIOSAS Y MICROBIOLOGÍA CLÍNICA	1
SOCIEDAD ESPAÑOLA DE INFECTOLOGÍA PEDIÁTRICA	1
UNIVERSITY OF MIAMI	1
EUROPEAN SOCIETY FOR PAEDIATRIC INFECTIOUS DISEASES	1
OTHER (NOT COMPETITIVE)	121
TOTAL	372

The following is a list, for the 9 research areas and associated clinical groups/researchers, of the number of active research projects in 2023 by funding source:

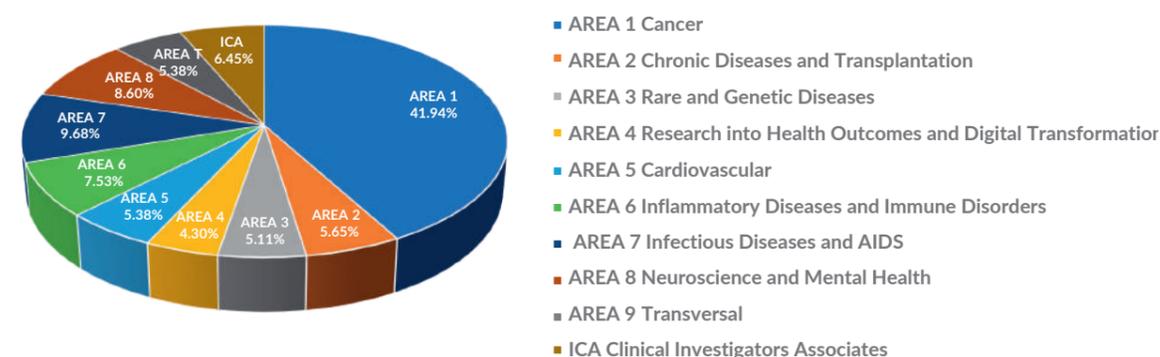
Research area i+12	No. of projects competitive funding	No. of projects non-competitive funding	Total projects
Cancer	99	57	153
Chronic Diseases and Transplantation	12	9	21
Rare and Genetic Diseases	12	7	16
Research into Health Outcomes and Digital Transformation	11	5	16
Cardiovascular	14	6	21
Inflammatory Diseases and Immune Disorders	17	11	28
Infectious Diseases and AIDS	32	4	37
Neuroscience and Mental Health	28	4	31
Transversal	17	3	21
Researchers / Associate Clinicians	9	15	34
Total	251	121	372

The following figure graphically represents the distribution of active projects in 2023 by type of funding:

Active Projects 2023 managed by the FIBH120



Below is a graphic representation of the distribution of active projects managed by the FIBH120 in 2023 by research area:



As the graph shows, in the distribution by area, the research area with the highest number of active projects in 2023 is the Cancer Area, followed by the Infectious Diseases and AIDS Area, the Neuroscience and Mental Health Area and the Inflammatory Diseases and Immune Disorders Area.

Below are the public and private competitive research projects funded by different organizations, awarded in the 2023 annuity.

Commission of the European Communities

- EIT Health 2023 - PDnetGo - Innovation Devices. PI: Álvaro Sánchez Ferro. Research Group: A8 - Neurodegenerative Diseases.
- EIT Health 2023- App-Nea - Innovation Devices. PI: M.ª Trinidad Díaz Cambriles. Research Group: A2 - Respiratory Diseases.
- JACARDI - Joint Action on cardiovascular diseases (CVDs) and diabetes. PI: Héctor Bueno. Research Group: A5 - Multidisciplinary Translational Cardiovascular Research.EU4HEALTH.
- TEAM-COACH - Project Grant: Coordinator. Implementation of best practices in community-based services for the human immunodeficiency virus (HIV) infection and acquired immunodeficiency syndrome (AIDS). PI: Pablo Rojo Conejo. Research Group: A7 - Translational Research in Pediatric Infectious Diseases. EU4HEALTH.
- CARE-1 - Mission on Cancer - First line randomized study platform to optimize treatment in patients with metastatic renal cell carcinoma. PI: Guillermo de Velasco Oria de Rueda. Research Group: A1 - Biomarkers in Genitourinary Tumors. Horizon Europe.
- e-FabRIC - Enhanced Manufacturing of Broadly Potent Equine Polyclonal Fab With a Rationale Immunization Strategy Against Coronaviruses. PI: Rafael Delgado Vázquez. Research Group: A7 - Virology: HIV/AIDS. Horizon-Health.

- COMFORT - COMputational Models FOR patient stratification in urologic cancers – Creating robust and trustworthy multimodal AI for health care. PI: Guillermo de Velasco Oria de Rueda. Research Group: A1 - Biomarkers in Genitourinary Tumors. Horizon Europe.
- Effectiveness and Cost-effectiveness of the STRATUM Tool to assist surgery in Patients Affected by Brain Tumours: A Quasi-experimental study. PI: Alfonso Lagares Gómez- Abascal. Research Group: A8 - Neurotraumatology and Subarachnoid Hemorrhage.

Health Research Projects - ISCIII.

- PI23/00765 - EL SISTEMA ENDOCANNABINOIDE EN EL MICROAMBIENTE TUMORAL: PAPEL EN LA PROGRESIÓN Y RESPUESTA A INMUNOTERAPIA EN CÁNCER DE MAMA. PI: Cristina Sánchez García. A1 - Breast and Gynecological Cancer.
- PI23/00916 - BIOFÍSICA Y BIOMEDICINA DE PRECISIÓN PARA LAS NECESIDADES ACTUALES EN CÁNCER DE MAMA AVANZADO: PROGRAMA DE BIOMARCADORES DE TRATAMIENTO CON TRASTUZUMAB DERUXTECAN (GO BREAST - COHORT C). PI: Eva María Ciruelos Gil. A1 - Breast and Gynecological Cancer.
- PI23/01256 - NUEVAS ESTRATEGIAS DE INMUNOTERAPIA PARA EL TRATAMIENTO DE NEOPLASIAS DE CÉLULAS B. PI: Belén Blanco Durango. A1 - Immuno-oncology and Immunotherapy.
- PI23/01849CD44 - TUMORAL Y SENSIBILIDAD AL BLOQUEO PD-1: VALIDACIÓN FUNCIONAL Y DESARROLLO DE TERAPIAS SINÉRGICAS CENTRADAS EN CD44 PARA MEJORAR LA EFICACIA DEL BLOQUEO DE PUNTOS DE CONTROL INMUNE EN CÁNCER DE PULMÓN PI: Jon Zugazagoitia Fraile. A1 - Tumor Microenvironment and Immunotherapy.
- PI23/00392 - GENERACIÓN Y CARACTERIZACIÓN DE FRAGMENTOS DE ANTICUERPOS TIPO SCFV TUMOR-ESPECÍFICOS COMO NUEVAS ESTRATEGIAS DE INMUNOTERAPIA MOLECULAR Y CELULAR Y DE BIOPSIA LÍQUIDA PARA PACIENTES DE CÁNCER. PI: Marta Dueñas Porto. A1 - Genitourinary Oncology and Cellular and Molecular Oncology.
- PI23/00554 - EXPRESIÓN ALTERADA DE IKKα COMO NEXO ENTRE EL DESARROLLO DE ENFERMEDADES CUTÁNEAS AMPOLLOSAS INFLAMATORIAS Y TRASTORNOS HEMATOLÓGICOS: IMPLICACIONES TERAPÉUTICAS. PI: María de los Llanos Casanova Hernández. A1 - Genitourinary Oncology and Cellular and Molecular Oncology.
- PI23/00198 - OPTIMIZACIÓN DE LA TERAPIA CON INHIBIDORES DE KRAS PARA MEJORAR LA ONCOLOGÍA DE PRECISIÓN EN EL CÁNCER IMPULSADO POR KRAS. PI: Irene Ferrer Sánchez. A1 - Targeted Therapies for Precision Oncology.
- PI23/01577 - NUEVAS TERAPIAS Y ENFOQUES PERSONALIZADOS EN EL CÁNCER MICROCÍTICO DE PULMÓN PI: Luis Paz-Ares Rodríguez. A1 - Thoracic and Clinical-Translational Oncology.
- PI23/01109 - SENESCENCIA CELULAR ACELERADA EN LA ENFERMEDAD RENAL CRÓNICA: NUEVOS BIOMARCADORES DE RIESGO PARA LA ENFERMEDAD CARDIOVASCULAR. PI: Enrique Morales Ruiz. A2 - Clinical Nephrology.
- PI23/00169 - ENCEFALOMIOPATÍA MITOCONDRIAL PEDIÁTRICA: APROXIMACIONES DIAGNÓSTICO-TERAPÉUTICAS. PI: Cristina Ugalde Bilbao. A3 - Rare, Mitochondrial and Neuromuscular Diseases.
- PI23/00354 - UTILIDAD TERAPÉUTICA DE SUPLEMENTOS NUTRICIONALES CON FUNCIÓN ANAPLERÓTICA EN ENFERMEDADES MITOCONDRIALES PI: María Jesús Morán Bermejo. A3 - Rare, Mitochondrial and Neuromuscular Diseases.
- PI23/00665 - IMPACTO DE LA TELEMONITORIZACIÓN NO INVASIVA SOBRE EVENTOS CLÍNICOS, COSTES SANITARIOS Y NO SANITARIOS EN LA INSUFICIENCIA CARDIACA (IMPACT-IC). PI: Juan Francisco Delgado Jiménez. A5 - Research into Heart Failure - Pulmonary Hypertension.
- PI23/00182 - PROYECTO INFLAKICARDIOSOMA: ESTUDIO DEL INFLAMASOMA NLRP3 EN EL SÍNDROME CARDIORRENAL TRAS UN FRACASO RENAL AGUDO. PI: Gema Ruiz Hurtado. A5 - Translational Research in Hypertension and Cardiorenal Disease.
- PI23/00776 - DESARROLLO DE UN MODELO PRONÓSTICO DE CIRCULACIÓN POSNATAL EN FETOS CON DIAGNÓSTICO DE ATRESIA PULMONAR - ESTENOSIS PULMONAR CRÍTICA CON SEPTO VENTRICULAR ÍNTEGRO: ESTUDIO PROSPECTIVO OBSERVACIONAL DE COHORTES. PI: Cecilia Villalaín González. A5 - Perinatal Medicine.
- PI23/01910 - VALIDACIÓN DE MODELOS BASADOS EN EL APRENDIZAJE AUTOMÁTICO PARA LA PREDICCIÓN DE COMPLICACIONES MATERNAS EN LA PREECLAMPSIA PRECOZ. PI: Ignacio Herráiz García. A5 - Perinatal Medicine.
- PI23/00771 - PREDICCIÓN DE ENFERMEDAD CARDIOVASCULAR EN LUPUS ERITEMATOSO SISTÉMICO BASADO EN PARÁMETROS DE INFLAMACIÓN-ENVEJECIMIENTO Y DAÑO ENDOTELIAL. PI: María Galindo Izquierdo. A6 - Inflammatory and autoimmune diseases.
- PI23/00218 - EVALUACIÓN A LARGO PLAZO DE PACIENTES CON ENFERMEDAD DE KAWASAKI Y MIS-C. ESTUDIO PILOTO SOBRE LA ACTIVACIÓN DEL SISTEMA INMUNE, BIOMARCADORES CARDÍACOS, EVALUACIÓN CARDIOPULMONAR Y CALIDAD DE VIDA. PI: Elisa Fernández Cooke. A7 - Translational Research in Pediatric Infectious Diseases.
- PI23/00635 - EFECTO DE LOS RITMOS CIRCADIANOS EN EL PRONÓSTICO, RECANALIZACIÓN Y LAS INFECCIONES TRAS UN ICTUS. PI: Ignacio Lizasoain Hernández. A8 - Neurovascular disease.
- PI23/00396 - EJERCICIO FÍSICO Y ASESORAMIENTO EN SALUD EN PACIENTES PEDIÁTRICOS CON CÁNCER SOMETIDOS A TRASPLANTE DE PRECURSORES HEMATOPOYÉTICOS: UNIÓN ENTRE INVESTIGACIÓN Y REALIDAD CLÍNICA. PI: María del Carmen Fiuza Lucas. AT- Research in Physical Activity and Health.
- PI23/01864 - COMBINACIÓN DE TÉCNICAS PERSONALIZADAS DE CtdNA Y PET/TC PARA PREVENIR EL FRACASO DEL TRATAMIENTO CON CÉLULAS CAR-T EN PACIENTES CON LINFOMA B DIFUSO DE CÉLULAS GRANDES REFRACTARIO O EN

RECAÍDA. PI: Ana Isabel Jiménez Ubieto - Associate Clinical Researcher.

Independent clinical research projects - ISCIII.

- ICI23/00041 - ADMINISTRACIÓN INTRATUMORAL DE CÉLULAS T MODIFICADAS CON EL RECEPTOR QUIMÉRICO (CAR) FRENTE AL ANTÍGENO P32 EN GLIOMAS DE ALTO GRADO DE PROGRESIÓN. ENSAYO CLÍNICO PHASE 1 CON ESCALADA DE DOSIS. PI: Juan Manuel Sepúlveda Sánchez. Research Group A1 - Neuro-oncology.

Independent clinical research projects - ISCIII.

- AC23_2/00046 - ATAXIA CONGÉNITA NO PROGRESIVA - MEJORAR EL DIAGNÓSTICO PARA INCREMENTAR LAS OPCIONES DE TRATAMIENTOS DIRIGIDOS. PI: Javier de la Cruz Bertolo. Research Group A4 - Maternal and Child Health.

Platforms to support R+D+I in Biomedicine - ISCIII.

- PT23/00104 - INNO+12 - CONSOLIDACIÓN DE LA UNIDAD DE INNOVACIÓN DEL INSTITUTO i+12 EN LA PLATAFORMA ITEMAS. PI: Joaquín Arenas Barbero.
- PT23/00080 - PLATAFORMA ISCIII DE APOYO A LA I+D+i EN BIOMEDICINA Y CIENCIAS DE LA SALUD (BIOMODELOS Y BIOBANCOS) EN EL i+12. PI: José Luis Rodríguez Peralto.
- PT23/00178 - SOPORTE E INNOVACIÓN PARA LA INVESTIGACIÓN CLÍNICA. PI: Pablo Rojo Conejo.

Incorporation of new groups into the CIBER Consortium - ISCII.

- CB23/09/00062. PI: Roberto Rodríguez Jiménez. Cognition and Psychosis. Joined CIBERSAM.

FORTALECE Program - ISCIII.

- FORT23/00023. PI: Joaquín Arenas Barbero. Cognition and Psychosis. Joined CIBERSAM.

Grants for the selection and financing of the members of the State Network Consortium for the Development of Advanced Therapy Medicinal Products (CERTERA) - ISCII

- CERT22/00014. PI: Joaquín Martínez López; CoPI: María Liz Paciello Coronel.

Grants to encourage research consolidation - State Research Agency. Ministry of Economy and Competitiveness.

- CNS2023-145149 - CARACTERIZACIÓN MOLECULAR DEL CÁNCER DE PRÓSTATA HEREDITARIO. PI: Elena Castro Marcos. A1 - Translational Research in Hereditary Cancer.
- CNS2023-144144 - PAPEL DEL EJERCICIO FÍSICO EN PACIENTES PEDIÁTRICOS CON CÁNCER RECEPTORES DE UN TRASPLANTE DE PRECURSORES HEMATOPOYÉTICOS Y EN SU REALIDAD CLÍNICA: HENKO. PI: M.ª Carmen Fiuza Lucas. AT - Research in Physical Activity and Health.
- CNS2023-143688 - EN BUSCA DE UNA TERAPIA ANTIOXIDANTE PARA DOA 'PLUS' BASADA EN TECNOLOGÍA DE iPSCs Y POLIFENOLES NATURALES. PI: M.ª Esther Gallardo Pérez. AT - Translational Research with iPSCs.
- CNS2023-144891 - INFLAMASOMA CARDIACO COMO MECANISMO DIANA EN EL SÍNDROME CARDIORRENAL TRAS EL FRACASO RENAL AGUDO ASOCIADO A DIFERENTES ETIOLOGÍAS. PI: Gema Ruiz Hurtado. A5 - Translational Research in Hypertension and Cardiorenal Disease.

Grants for public-private partnership projects - State Research Agency. Ministry of Economy and Competitiveness.

- CPP2022-009838 - TOWARD A COMPLETE SIMULATION ENVIRONMENT FOR COMPLEMENT-ASSOCIATED PATHOLOGIES: PHYSIOLOGY-INSPIRED HARMACOKINETICS/PHARMACODYNAMICS, DIGITAL TWINS, AND ARTIFICIAL INTELLIGENCE-ASSISTED DIGITAL PATHOLOGY (TwinKidz). PI: Marina Alonso Riaño - Associate Clinical Researcher.
- CPP2022-009937 - DEVELOPMENT AND EVALUATION OF THE PREDICTIVE VALUE OF AN ULTRA-SENSITIVE NGS TEST FOR THE DETECTION OF MINIMAL RESIDUAL DISEASE AFTER EFFICIENT TREATMENTS IN DIFFERENT LIQUID BIOPSIES, INCLUDING BLOOD, URINE, AND SALIVA. PI: Santiago Barrio García. A1 - Translational Hematology.
- CPP2022-009765 - IMMUNE CHECK POINT-CONDITIONAL 4-1BB CO-STIMULATION FOR EFFECTIVE AND SAFE CANCER IMMUNOTHERAPY EFFESO. PI: Luis Paz-Ares Rodríguez. A1 - Thoracic and Clinical-Translational Oncology.
- CPP2022-009592 - NEW TOOL BASED ON ARTIFICIAL INTELLIGENCE AND BIOMARKERS FOR EARLY NON-INVASIVE DIAGNOSIS OF PANCREATIC CANCER: AI-Early PanC. PI: Mercedes Pérez Carreras. Associate Clinical Researcher.

Grants for "Knowledge Generation Projects" and for training activities for pre-doctoral research staff associated with these projects - State Research Agency. Ministry of Economy and Competitiveness.

- PID2022-138585OB-C33 - EVALUACIÓN DE UN NUEVO MARCO MULTIMODAL PARA APOYAR EL DIAGNÓSTICO Y MANEJO DEL TEMBLOR. PI: Julián Benito León. A8 - Neurodegenerative diseases.
- PID2022-140785OB-I00 - ESTRATEGIA DE TERAPIA AVANZADA CON CÉLULAS MADRE DE PLACENTA Y SECRETOMA EN ENFERMEDADES DE MAYOR PREVALENCIA FEMENINA. MODELOS DE INCONTINENCIA URINARIA Y ESCLEROSIS MÚLTIPLE. PI: Ana Isabel Flores de la Cal. A5 - Regenerative Medicine.

Grants from the Comunidad de Madrid

- IND2023/BMD-28821 - GENERACIÓN DE CÉLULAS STAbT DIRIGIDAS SIMULTÁNEAMENTE FRENTE ANTÍGENOS TUMORALES INTRACELULARES Y DE SUPERFICIE PARA SUPERAR LA HETEROGENEIDAD CLONAL DE LOS TUMORES SÓLIDOS. PI: Luis Álvarez Vallina. A1 - Immuno-oncology and Immunotherapy.
- 2023-5A/BIO-28929 - ANALYSIS OF MOLECULAR MECHANISMS TRIGGERING FOOD ALLERGY VERSUS TOLERANCE AND CHARACTERIZATION OF NOVE ALLERGENS IN FOOD. PI: Beatriz Cabanillas Martín. A6 - Asthma and Immunoallergic Diseases.

Fundación Científica de la Asociación Española Contra el Cáncer

- **AEC Innova 2023** - INNOV235311SUAR - BLADIMIR Y BLADIMIRPLUS. VALIDACIÓN MULTICÉNTRICA DE UN NOVEDOSO Y EFICIENTE SISTEMA PARA EL DIAGNÓSTICO Y PREDICCIÓN DE RESPUESTA A BCG EN PACIENTES CON CÁNCER DE VEJIGA. PI: Cristian Suárez Cabrera. A1 - Genitourinary Oncology and Cellular and Molecular Oncology.
- **RETO AEC 70% SUPERVIVENCIA** - CÁNCER DE PULMÓN DE CÉLULA PEQUEÑA: REDES BIOLÓGICAS Y MEDICINA PERSONALIZADA. PI: Luis Paz-Ares Rodríguez. A1 - Thoracic and Clinical-Translational Oncology.

Fundación de Investigación Médica Mutua Madrileña

- TRAUMATISMO CRANEAL Y FRACTURA DE CADERA: APROVECHAR LOS DATOS DE LA VIDA REAL PARA MEJORAR EL PROCESO ASISTENCIAL Y LOS RESULTADOS EN SALUD. PI: Alfonso Lagares Gómez-Abascal. A8 - Neurotraumatology and Subarachnoid Hemorrhage.

Fundación CRIS Research to Fight Cancer

- LANDSCAPE MAPPING OF EPITOPES AND T CELL RECEPTORS FOR MALIGNANT PLEURAL MESOTHELIOMA. PI: M.ª Mercedes Herrera Juárez. Associate Clinical Researcher.
- ReBePCa: ADRESSING THE BIOLOGICAL AND CLINICAL ROLE OF RB1 LOSS AND DNA REPAIR DEFECTS IN LETHAL PROSTATE CANCER. PI: David Olmos Hidalgo. A1 - Genomics and Prostate Cancer Therapy.

Fundación Casa del Corazón

- ESTUDIO DEL PAPEL DEL SOPORTE CIRCULATORIO MECÁNICO EN LA EVOLUCIÓN DE LA INFLAMACIÓN MEDIADA POR NEUTRÓFILOS EN LA FISIOPATOLOGÍA DEL SHOCK CARDIOGÉNICO. PI: Víctor Manuel Juárez Olmos. Associate Clinical Researcher.

Fundación LA CAIXA

- BLADIMIR, NON-INVASIVE URINE-BASED DIAGNOSTIC AND THERAPY RESPONSE PREDICTOR FOR BLADDER CANCER. (BLADIMIR). PI: Marta Dueñas Porto. A1 - Genitourinary Oncology and Cellular and Molecular Oncology.

Fundación de Investigación Oncológica FERRO

- LOCAL UPREGULATION OF TUMOR CELL OX40L USING INTRATUMORAL DELIVERY OF EXOGENOUS OX40L MRNA AS A CANDIDATE THERAPEUTIC INTERVENTION TO INCREASE THE EFFICACY OF PD-1 AXIS BLOCKADE IN NSCLC. PI: Jon Zugazagoitia Fraile. A1 - Tumor Microenvironment and Immunotherapy.

Asociación Española de Cáncer de Mama Metastásico (AECMM)

- ANÁLISIS DE EXPRESIÓN DE MICRORNAs Y PERFILES DE CITOQUINAS EN SANGRE Y SALIVA EN PACIENTES QUE DESARROLLAN NEUMONITIS POR TRASTUZUMAB-DERUXTECAN. PI: Eva M.ª Ciruelos Gil. A1 - Breast and Gynecological Cancer.

Fundación Española de Pediatría

- COHORTE NACIONAL DE MUJERES EMBARAZADAS CON INFECCIÓN POR VIH Y SUS HIJOS EXPUESTOS EN ESPAÑA. PI: Luis Manuel Prieto Tato. A7 - Translational Research in Pediatric Infectious Diseases.

Grupo Español de Tumores Neuroendocrinos y Endocrinos (GETNE)

- CARACTERIZACIÓN DEL PERFIL MOLECULAR EN BIOPSIA LÍQUIDA DE LAS NEOPLASIAS NEUROENDOCRINAS (NNES) G3 DE ORIGEN GASTROENTEROPANCREÁTICO (GEP) O DESCONOCIDO. UTILIDAD DIAGNÓSTICA Y DE SEGUIMIENTO DE LA ENFERMEDAD. PI: Arantza Lamas Paz. A1 - Gastrointestinal and Neuroendocrine Tumors.

Becas ViiV Modelo óptimo de atención al paciente con infección por VIH

- AVANZANDO HACIA EL MODELO ÓPTIMO: IMPLEMENTACIÓN DE NUEVAS HERRAMIENTAS Y REDES DE TRABAJO COLABORATIVO PARA OFRECER PLANES DIRIGIDOS EN LOS CUIDADOS A PVV Y USUARIOS DE PREP EN UN EQUIPO MULTIDISCIPLINAR E INTERSECTORIAL. María de Lagarde Sebastián. Associate Clinical Researcher.

Fundación SENEPRO

- ESTUDIO PUMA. ESTUDIO PILOTO DE USO DE MEDIACIÓN APP. PI: Claudia Yuste Lozano. A2 - Clinical Nephrology.

Fundación Madrileña de Nefrología

- ESTUDIO PUMA. ESTUDIO PILOTO DE USO DE MEDIACIÓN APP. PI: Claudia Yuste Lozano. A2 - Clinical Nephrology.

Fundación Española de Hematología y Hemoterapia

- MEDICINA DE PRECISIÓN APLICADA A LOS PACIENTES CON LEUCEMIA MIELOIDE AGUDA: IMPLEMENTACIÓN DE BIOMARCADORES DE RESPUESTA FARMACOLÓGICA. PI: Noemí Álvarez Sánchez-Redondo. A1 - Translational Hematology.

Fundación LUZÓN

- MEDICINA PERSONALIZADA PARA LA ELA MEDIANTE EL USO DE NOVEDOSOS SISTEMAS SINTÉTICOS EDICIÓN - SYNCAS. PI: Albero García Redondo. A3 - Research into Amyotrophic Lateral Sclerosis (ALS).

Fundación PFIZER

- BLADIMIR, NUEVO SISTEMA DIAGNÓSTICO PARA LA DETECCIÓN TEMPRANA DEL CÁNCER DE VEJIGA. PI: Marta Dueñas Porto. A1 - Genitourinary Oncology and Cellular and Molecular Oncology.

Fundación Casa del Corazón

- ESTUDIO DEL INFLAMASOMA NLRP3 EN EL SÍNDROME CARDIORRENAL TRAS UN FRACASO RENAL AGUDO INDUCIDO POR CONTRASTE EN EL INTERVENCIÓNISMO CARDIOLÓGICO. PI: Gema Ruiz Hurtado. A5 - Investigación Traslacional en Hipertensión y Cardiorenal disease.

Fundación SEDIM

- APLICACIÓN DE LA RADIÓMICA PARA LA CARACTERIZACIÓN AUTOMÁTICA DE LOS REALCES NO MASA EN RESONANCIA MAGNÉTICA DE MAMA. PI: Manuel Delgado Márquez. Associate Clinical Researcher.

Fundación Española de Oncología Médica

- VALIDACIÓN DE LA HETEROGENEIDAD INTRATUMORAL Y SU IMPACTO CLÍNICO EN EL TRATAMIENTO INICIAL DEL CÁNCER DE OVARIO AVANZADO. PI: Luis Manuel Manso Sánchez. A1 - Breast and Gynecological Cancer.

Organización Nacional de Ciegos Españoles

- TerDOA BiomIPS: NUEVAS APROXIMACIONES TERAPÉUTICAS PARA DOA BASADAS EN TECNOLOGÍA DE IPSCS Y BIOMATERIALES TEXTURIZADOS. PI: M.ª Esther Gallardo Pérez. AT - Translational Research with iPSCs.

Fundación Menudos Corazones

- EMPODERAMIENTO Y EVALUACIÓN DE EXPERIENCIAS Y RESULTADOS EN PACIENTES CON CARDIOPATÍAS CONGÉNITAS MEDIANTE UNA APLICACIÓN MÓVIL PI: Raquel Luna López. A5 - Multidisciplinary Translational Cardiovascular Research.

Gilead grants for biomedical research

- DEEP LEARNING AND MORPHOLOGICAL PATTERNS OF HOMOLOGOUS RECOMBINATION DEFICIENCY IN OVARIAN CANCERS FROM WHOLE SLIDE IMAGES. PI: Luis Manuel Manso Sánchez. A1 - Breast and Gynecological Cancer.

International research and innovation programs funded or active in 2023

In the year 2023, at least one group from each i+12 research area participated in one of the 23 funded or active European projects

Acronym	Group i+12	Call	Beginning	Duration (months)
DIAMONDS	A7 - Translational Research in Pediatric Infectious Diseases	H2020-SC1-2019-RTD	January 2020	66
EPIC-CROWN-2	A7 - Virology- HIV/AIDS	HORIZON-HLTH-2021-CORONA	June 2021	30
VERDI	A7 - Translational Research in Pediatric Infectious Diseases	HORIZON-HLTH-2021-CORONA	November 2021	48
RELECOV	A7 - Virology- HIV/AIDS	EU4HEALTH-ECDC-2021-SARSCoV2	December 2021	18
BRAINI2	A8 - Neurotraumatology and Subarachnoid Hemorrhage	EIT HEALTH BP2022 Innovation	January 2022	36
HEMOPLUG	A2 - Clinical Nephrology	EIT HEALTH BP2022 Innovation	January 2022	36
HcTA	Clinical Research Coordinator / PT Innovation	EIT HEALTH BP2022 Campus	November 2022	26
bioMAT4EYE	AT - Translational Research with iPSCs	HORIZON-ERANet3-2022-Biomaterials	January 2023	36
TeAM-Coach	A7 - Translational Research in Pediatric Infectious Diseases	EU4HEALTH-PG-2022-BestPract	January 2023	36
COMFORT	A1 - Genitourinary Oncology and Cellular and Molecular Oncology	HORIZON-HLTH-2022-TOOL	April 2023	48
CARE1	A1 - Genitourinary Oncology and Cellular and Molecular Oncology	HORIZON-MISS-2022-CANCER	May 2023	60
RELECOV2	A7 - Virology- HIV/AIDS	EU4HEALTH-OG-2023	October 2023	18
STRATUM	A8 - Neurotraumatology and Subarachnoid Hemorrhage	HORIZON-HLTH-2023-TOOL	December 2023	60
e-FabRIC	A7 - Virology- HIV/AIDS	HORIZON-HLTH-2023-DISEASE	December 2023	48
PDNet GO	A8 - Neurodegenerative diseases.	EIT HEALTH BP2023 Innov Devices	August 2023	24
APP-NEA	A2 - Respiratory Diseases	EIT HEALTH BP2023 Innov Devices	August 2023	24
JA-CARDI	A5 - Multidisciplinary Translational Cardiovascular Research	EU4HEALTH-JOINTACTION-2022	November 2023	48
FAITHFUL	A5 - Cardiovascular	EIT HEALTH BP2023 Innov High Value	December 2023	24
ARTEMIS	A4 - Maternal and Child Health	HORIZON-EJP-RD-2023	January 2024	36
GENOMIT	A3 - Mitochondrial and Neuromuscular Rare Diseases	HORIZON-EJP-RD-2023	January 2024	36
SUPPORT	A7 - Translational Research in Pediatric Infectious Diseases	HORIZON-JU-GlobalH-EDCTP3-2023	May 2024	54
Ebola PREP-TBOX	A7 - Virology- HIV/AIDS	HORIZON-JU-GlobalH-EDCTP3-2023	May 2024	36
JA-RESP	A6- Asthma and Immunoallergic Diseases	EU4HEALTH-JOINTACTION-2023	October 2024	36

CLINICAL TRIALS

During 2023, 319 clinical studies (clinical trials and observational studies) have been contracted at our institution. Of these, 253 correspond to research groups from the Instituto i+12 (Consolidated Stable, Consolidated, Emerging), while the remaining 66 correspond to associated clinical groups/researchers.

The following table details the number of clinical trials and investigations by area and research group:

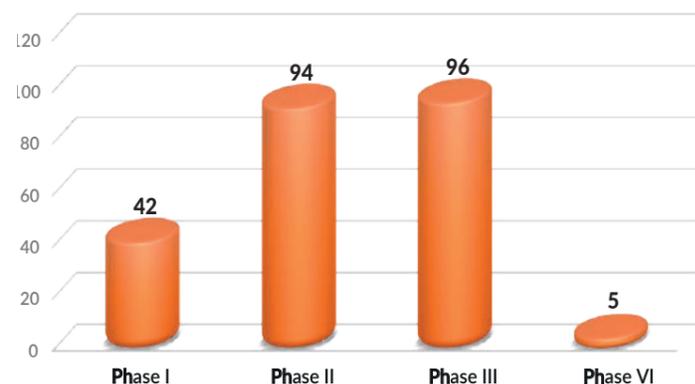
Areas of research	Number
Area 1. Cancer	176
Biomarkers in Genitourinary Tumors	28
Breast and Gynecological Cancer	32
Genomics and Prostate Cancer Therapy	3
Translational Hematology	38
Translational Research in Hereditary Cancer	1
Neuro-oncology	4
Skin Oncology	4
Genitourinary Oncology and Cellular and Molecular Oncology	3
Thoracic and Translational Clinical Oncology	44
Gastrointestinal and Neuroendocrine Tumors	19
Area 2. Chronic Diseases and Transplantation	17
Respiratory Diseases	1
Bone Metabolism, Diabetes and Nutrition	1
Clinical Nephrology	12
Critically ill patient	2
Abdominal Organ Transplant	1
Area 3. Rare and Genetic Diseases	6
Rare, Mitochondrial and Neuromuscular Diseases	6
Area 5. Cardiovascular	20
Cardiovascular, Multidisciplinary, Translational Research	14
Research into Heart Failure - Pulmonary Hypertension	5
Perinatal Medicine	1
Area 6. Inflammatory Diseases and Immune Disorders	14
Asthma and Immunoallergic Diseases	3
Inflammatory and autoimmune diseases	9
Immunodeficiencies and Transplant Immunology	2
Area 7. Infectious Diseases and AIDS	13
Molecular Epidemiology of Hospital-Acquired and Emerging Infections	1
Translational Research in Pediatric Infectious Diseases	12
Area 8. Neuroscience and Mental Health	6
Addictions and Comorbidity	1
Cognition and Psychosis	2
Neurodegenerative Diseases	3
Area 9. Transversal	1
Research in Care - InveCuid	1
Total	253
Other researchers	66
Total	319

The distribution of clinical trials and studies according to the type of research contracted in 2023 by the research groups of the Instituto i+12 was as follows:

TRIALS/STUDIES		NUMBER
C.T. with medicines	Extension	1
	PHASE I	42
	PHASE II	94
	PHASE III	96
	PHASE IV	5
C.T. with medical devices 2		
Total C.T.		240
Non-commercial NCEs (independent clinical research)		21
Commercial (pharmaceutical industry)		219
Observational studies		79
Total		319

The following graph shows the distribution of clinical trials with contracted drugs throughout 2023:

Social Security with contracted medication in 2023



The number of clinical studies (clinical trials and observational studies) active at the Instituto i+12 in 2023 is indicated

TRIALS/STUDIES		NUMBER
C.T. with medicines	PHASE I	137
	PHASE II	336
	PHASE III	436
	PHASE IV	23
C.T. with medical devices 14		
Total C.T.		953
Non-commercial NCEs (independent clinical research)		80
Commercial (pharmaceutical industry)		873
Observational studies		226
Total		1,179

The following table details the number of clinical trials and investigations active in 2023 by research area:

Areas of research	Number
Area 1. Cancer	699
Area 2. Chronic Diseases and Transplantation	66
Area 3. Rare and Genetic Diseases	15
Area 4. Research into Health Outcomes and Digital Transformation	5
Area 5. Cardiovascular	77
Area 6. Inflammatory Diseases and Immune Disorders	78
Area 7. Infectious Diseases and AIDS	41
Area 8. Neuroscience and Mental Health	17
Area 9. Transversal	3
Associate Clinical Researcher	178
Total	1,179

PARTICIPATION IN COLLABORATIVE RESEARCH NETWORKS

HEALTH OUTCOMES-ORIENTED COOPERATIVE RESEARCH NETWORKS (RICORS)

The Health Outcome-oriented Cooperative Research Networks (RICORS) are structures made up of a group of research groups that have a common, concrete and achievable research objective.

Currently, there are 7 Health Outcome-oriented Cooperative Research Networks. Researchers from different research groups at i+12 participated in 2023 in 6 of them.

	Name of the RICORS	Participating groups
RICORS TERAV	Advanced Therapies	<ul style="list-style-type: none"> Lymphoid Differentiation - Dr. David Alfaro Sánchez. Member of the team. RD21/0017/0010. Translational Hematology - Dr. Joaquín Martínez López. Principal Investigator RD21/0017/0030. Thoracic and Clinical-Translational Oncology - Dr. Luis Paz-Ares Rodríguez. Member of the team. RD21/0017/0030. Immuno-oncology and Immunotherapy - Dr. Luis Álvarez Vallina, Dr. Belén Blanco Durango. Member of the team. RD21/0017/0030.
RIAPAD	Network for Research in Primary Care in Addictions	<ul style="list-style-type: none"> Addictions and Comorbidity - Dr. Isabel Colado Megía. Principal Investigator . RD21/0009/0027. Applied Behavioral Neuropharmacology - Dr. Laura Orio Ortiz. Member of the team. RD21/0009/0027. Addictions and Comorbidity - Dr. Gabriel Rubio Valladolid. Principal Investigator RD21/0009/0007.
RICAPPS	Research Network in Chronicity, Primary Care and Health Promotion	<ul style="list-style-type: none"> Research into Cardiovascular Risk - Dr. Cesar Minué Lorenzo. Principal Investigator RD21/0016/0026.
REI	Inflammatory Diseases Network. Inflammation and immunopathology of organs and systems	<ul style="list-style-type: none"> Inflammatory and autoimmune diseases - Dr. José Luis Pablos Álvarez. Principal Investigator RD21/0002/0007. Associate Clinical Researcher - Dr. Esther Rodríguez Almaraz. Member of the team. RD21/0002/0007.
RICORS-ICTUS	Cerebral Vascular Diseases Network	<ul style="list-style-type: none"> Enfermedad Neurovascular - Dr. Ignacio Lizasoain Hernández. Principal Investigator RD21/0006/0001. Associate Clinical Researcher - Dr. Paloma Martín Jiménez; Lucas Roca Rodríguez. Team members. RD21/0006/0001. Perinatal Medicine - Dr. Ignacio Herraiz García. Principal Investigator RD21/0012/0024. Cardiovascular image - Dr. Jorge Solís Martín. Member of the team. RD21/0012/0024. Associate Clinical Researcher - Dr. Patricia Barbero Casado. Member of the team. RD21/0012/0024.
RICORS-SAMID	Primary care interventions to prevent maternal and child chronic diseases of perinatal and developmental origin	<ul style="list-style-type: none"> Maternal and Child Health - Dr. Carmen Rosa Pallás Alonso. Principal Investigator . RD21/0012/0009. Associate Clinical Researcher - Dr. Beatriz Flores Antón. Member of the team. RD21/0012/0009.

SUPPORT PLATFORMS FOR HEALTH SCIENCES AND TECHNOLOGIES RESEARCH

Twelve research groups from the Instituto i+12 have participated in Plataformas de Apoyo a la Investigación en Ciencias y Tecnologías de la Salud del ISCIII in 2023.

	Name of the platform	Participating groups
BIOBANKS AND BIOMODELS	Support Platform for R&D&I in Biomedicine and Health Sciences	<ul style="list-style-type: none"> Skin Oncology - Dr. José Luis Rodríguez Peralto. Principal Investigator PT20/00121.
ITEMAS	Platform for the Revitalization and Innovation of the Industrial Capacities of the NHS and their Effective Transfer to the Productive Sector	<ul style="list-style-type: none"> Rare, Mitochondrial and Neuromuscular Diseases - Dr. Joaquín Arenas Barbero. Principal Investigator PT20/00025. Thoracic and Clinical-Translational Oncology - Dr. Luis Paz-Ares Rodríguez; Dr. Irene Ferrer Sánchez. Members of the project's research team PT20/00025. Genitourinary Oncology and Cellular and Molecular Oncology - Dr. Marta Gloria Dueñas Porto. Member of the project research team PT20/00025. Skin Oncology - Dr. Pablo Luis Ortiz Romero. Member of the project research team PT20/00025. Translational Hematology - Dr. Joaquín Martínez López. Member of the project research team. PT20/00025. Immuno-oncology and Immunotherapy - Dr. Luis Álvarez Vallina. Member of the project's research team PT20/00025. Maternal and Child Health - Dr. Carmen Rosa Pallás Alonso, Dr. Javier de la Cruz Bertolo, Dr. Diana Escuder Vieco. Members of the project's research team PT20/00025. Infectious Diseases - Dr. Francisco López Medrano. Member of the project research team PT20/00025. Regenerative Medicine - Dr. Ana Isabel Flores de la Cal. Member of the project research team PT20/00025. Research in Care - Dr. Santiago Pérez García, Dr. M.ª Elena García Manzanares. Members of the project's research team PT20/00025. Clinical research associates - D. Imanol Tajuelo Llopis, Dr. Alejandro Ferrando Sánchez. Members of the project's research team PT20/00025.
C.T.	Clinical Research Support Platform	<ul style="list-style-type: none"> Digital Health - Dr. David Lora Pablos. Principal Investigator PT20/00193.

IMPACT: INFRASTRUCTURE FOR PRECISION MEDICINE ASSOCIATED WITH SCIENCE AND TECHNOLOGY

IMPACT is the Precision Medicine Infrastructure associated with Science and Technology, made up of three programs: IMPACT - Genomics, IMPACT - Data, IMPACT - Cohort. These programs are designed to provide a service to the R+D+i system with a focus on precision medicine. As shown below, different research groups from the Instituto i+12 participate in this precision medicine infrastructure.

	Name of the platform	Participating groups
IMPACT - GENOMICS	Genomic Medicine Program	<ul style="list-style-type: none"> Rare, Mitochondrial and Neuromuscular Diseases - Dr. Miguel Ángel Martín Casanueva. Principal Investigator Thoracic and Clinical-Translational Oncology - Dr. Luis Paz-Ares Rodríguez. Principal Investigator
IMPACT - DATA	Data Science Program	<ul style="list-style-type: none"> Digital Health - Dr. Miguel Pedrera Jiménez. Principal Investigator
IMPACT - COHORTE	Predictive Medicine Program	<ul style="list-style-type: none"> Research in Health Services and Outcomes - Dr. Tomás Gómez Gascón. Principal Investigator

NETWORKED BIOMEDICAL RESEARCH GROUPS (CIBER)

25 research groups from the Hospital 12 de Octubre Research Institute will participate in CIBER in 2023.

	Name of the CIBER	Participating groups
CIBERNED	CIBER of Neurodegenerative Diseases	<ul style="list-style-type: none"> Neurodegenerative Diseases - Dr. Fernando Bartolomé Robledo; Dr. Marta González Sanchez; Dr. Julián Benito León. Members of the project's research team CB06/05/0022.
CIBERER	CIBER on Rare Diseases	<ul style="list-style-type: none"> Rare, Mitochondrial and Neuromuscular Diseases - Dr. Miguel Ángel Martín Casanueva. Researcher in charge of the project CB06/07/0016 and coordinator of the Mitochondrial Pathology Area. Metabolismo Energético Traslacional - Dr. José Manuel Cuezva Marcos. Researcher in charge of the project CB06/07/0017.
CIBERSAM	Mental Health CIBER	<ul style="list-style-type: none"> Translational Psychiatry <ul style="list-style-type: none"> Dr. Juan Carlos Leza Cerro. Researcher in charge of the project CB07/09/0026 Dr. Luis Agüera Ortiz. Member of the project research team CB07/09/0026 Cognition and Psychosis - Dr. Roberto Rodríguez Jiménez. Researcher in charge of the project GCV17/SAM/2 (grupo clínico vinculado).
CIBER-BBN	CIBER of Bioengineering, Biomaterials and Nanomedicine	<ul style="list-style-type: none"> Research into Intelligent Biomaterials - Dr. Antonio Jesús Salinas Sánchez. Member of the project research team CB06/01/1037.

	Name of the CIBER	Participating groups
CIBERCV	CIBER on Cardiovascular Diseases	<ul style="list-style-type: none"> Heart Failure and Pulmonary Hypertension - Dr. Juan Francisco Delgado Jiménez. Researcher in charge of the project CB16/11/00502. Multidisciplinary Translational Cardiovascular Research - Dr. Héctor José Bueno Zamora; Dr. Fernando Arribas Ynsaurriaga; Dr. Rafael Salguero Bodes; Dr. Julian Palomino Doza; Dr. Fernando Sarnago Cebada. Members of the project's research team CB16/11/00502. Research into Cardiovascular Imaging - Dr. Jorge Solís Martín, Dr. Carmen Jiménez López Guarch. Members of the project's research team CB16/11/00502. Translational Research in Hypertension and Cardiorenal Disease - Dr. Gema Ruiz Hurtado. Member of the project research team CB16/11/00502. Inflammatory and autoimmune diseases - Dr. José M.ª González Granado. Member of the project research team CB16/11/00405
CIBERONC	CIBER on Cancer	<ul style="list-style-type: none"> Thoracic and Clinical-Translational Oncology - Dr. Luis Gonzaga Paz-Ares Rodríguez: Researcher in charge of the project CB16/12/00442. Intercellular Communication in Aging and Cancer - Dr. Álvaro Ucero Herrería. Member of the project research team CB16/12/00442. Breast and Gynecological Cancer - Dr. Eva M.ª Ciruelos Gil. Member of the project research team CB16/12/00442. Breast and Gynecological Cancer - Dr. Manuel Navarro Espinel; Dr. M.ª Angustias Page Peñuelas. Members of the project's research team CB16/12/00228. Translational Hematology - Dr. Joaquín Martínez López; Rosa M.ª Ayala Díaz, Dr. Inmaculada Rapado Martínez. Members of the project's research team CB16/12/00369. Tumor immunomodulation - Dr. Itziar Otano Andrés. Member of the project research team CB16/12/00442. Tumor Microenvironment and Immunotherapy - Dr. Jon Zugazagoitia Fraile. Member of the project research team CB16/12/00442. Skin Oncology - Dr. José Luis Rodríguez Peralto. Member of the project research team CB16/12/00228. Genitourinary Oncology and Cellular and Molecular Oncology - Dr. Jesús M.ª Paramio González. Researcher in charge of the project CB16/12/00228. Targeted Therapies for Precision Oncology - Dr. Irene Ferrer Sánchez. Member of the project research team CB16/12/00442. Gastrointestinal and Neuroendocrine Tumors - Dr. Rocío García Carbonero. Member of the project research team CB16/12/00442.
CIBERFES	CIBER on Frailty and Healthy Ageing	<ul style="list-style-type: none"> Research in Physical Activity and Health - Dr. Alejandro Lucía Mulas. Member of the project research team CB16/10/00314.
CIBERINFEC	CIBER for Infectious Diseases	<ul style="list-style-type: none"> Infectious Diseases - Dr. José M.ª Aguado García. Researcher in charge of the project CB21/13/00079. Immunodeficiencies and Transplant Immunology - Dr. Estela Paz Artal. Member of the project research team CB21/13/00079. Molecular Epidemiology of Hospital-Acquired and Emerging Infections - Dr. Jaime Lora-Tamayo Morillo-Velarde. Member of the project research team CB21/13/00043.

OTHER NETWORKS AND COLLECTIVES

SCReN (Spanish Clinical Research Network) - The members of the Research and Scientific Support Unit of the Instituto i+12 participate in this platform by coordinating its Data Management and Biostatistics Program.

ELIXIR - Distributed European bioinformatics infrastructure for the life sciences. 22 countries and more than 200 research institutes are participating in the initiative, jointly developing fundamental services that allow the research community to access, integrate and analyze data. The Genomics and Bioinformatics Unit of the Instituto i+12 participates in the ELIXIR initiative through the TransBioNet (Translational Bioinformatics Network), of which it is a member node. (<https://inb-elixir.es/transbionet>).

EATRIS (European Infrastructure for Translational Medicine) - European Research Infrastructure Network in Translational Medicine. i+12 researchers participate in the Biomarker Working Platform. The objective is to participate in the short term in another of the 5 working platforms: the Advanced Therapies Platform.

EJPRD - European Joint Programme on Rare Diseases.

EUROPEAN INSTITUTE OF INNOVATION AND TECHNOLOGY (EIT) HEALTH - EIT Health, consortium promoted by the European Institute of Innovation and Technology (EIT) and financed by the European Commission.

Red eUROGEN - European Reference Network for Rare Urogenital Diseases. Dr. José Medina Polo. A2 - Comprehensive Men's Health.

COVID Human Genetic Effort - International consortium. Dr. Luis Allende Martínez. A7 - Immunodeficiencies and Transplant Immunology.

Leducq Trans-Atlantic Network of Excellence On Circadian Effects in Stroke - (21CVD04) - Dr. Ignacio Lizasoain Hernández. A8 - Neurovascular disease.

ERK Net - The European Rare Kidney Diseases Reference Network. Dr. Enrique Morales Ruiz. A2 - Clinical Nephrology.

EAHP - European Association of Hospital Pharmacists - Special Interest Group for the investigation of medication errors in intensive care units. Dr. M.ª Cruz Martín Delgado. A2 - Critical Patient.

ERC Synergy Grants - LiguOrg - Do liquid crystal-like phases of proteins organize membrane compartments? Dr. Iván López Montero. A3 - Mitochondrial Membrane Laboratory.

JOINT INTERNATIONAL PROGRAMMING

ERA PerMed - ERA-Net Cofund in Personalised Medicine. PMT- LC: Personalized multimodal therapies for the treatment of lung cancer. (ERA PerMed PMT-LC. AC20/00070). 2020-2023.

- Dr. Luis Paz-Ares Rodríguez - Thoracic and Clinical-Translational Oncology Group.

ERA - NET: TRANSCAN 2 - A Translational Platform for de-orphaning malignant pleural MESOthelioma (TRNSC18004PAZ).

- Dr. Luis Paz-Ares Rodríguez - Thoracic and Clinical-Translational Oncology Group.

M-ERA.NET 3 - bioMAT4EYE - Neoteric biomaterials from hiPSCs monitored differentiation to RGCs: creation, microfabrication & microfluidics.

- Dr. Esther Gallardo Pérez - Translational Research Group with iPS Cells.

ERA - NET: TRANSCAN 3 - Transcan-3 JCT-21. UCIPREDICT - Circulating tumour microenvironment components as Urothelial Cancer Immunotherapy Response Predictors

- Dr. Marta Dueñas Porto - Genitourinary and Cellular and Molecular Research Group.

COST (EUROPEAN COOPERATION IN SCIENCE AND TECHNOLOGY)

COST Action CA17116 - SPRINT - International Network for Translating Research on Perinatal Derivatives into Therapeutic Approaches (SPRINT).

- Dr. Ana Isabel Flores de la Cal - Regenerative Medicine Group.

COST Action Nano2Clinic - CA17140 - Cancer nanomedicine - from the bench to the bedside (NANO2CLINIC).

- Dr. Corina Lorz - Genitourinary Oncology and Cellular and Molecular Oncology Group.

COST Action - CA21111 - One Health drugs against parasitic vector borne diseases in Europe and beyond.

- Dr. José M.ª Alunda Rodríguez - Translational Research Group on Leishmaniasis.

COMUNIDAD DE MADRID

Grants for the realization of R&D activity programs between research groups of the Comunidad de Madrid in Biomedicine 2023:

SINOXPPOS-CM - P2018/BAA-4403 - Interdisciplinary solutions with gene editing control of the OXPHOS bioenergetic deficit.

- Dr. Iván López Montero - Mitochondrial Membrane Laboratory Group.
- Dr. Cristina Ugalde Bilbao - Rare, Mitochondrial and Neuromuscular Diseases Group.

AGES-CM 3-CM - P2022/BMD-7216 - Environment and Genes in Schizophrenia.

- Dr. Roberto Rodríguez Jiménez - Cognition and Psychosis Group.
- Dr. Juan Carlos Leza Cerro - Translational Psychiatry Group.

CIFRA_COR-CM - P2022/BMD-7223 - Consortium for the study of renal failure and its impact on cardiovascular disease.

- Dr. José Julián Segura de la Morena - Translational Research Group in Hypertension and Cardiorenal Disease.

RETAR-A-COVID-CM - P2022/BMD-7274 - Macrophage reprogramming as a therapeutic strategy against severe COVID-19.

- Dr. Rafael Delgado Vázquez - Virology-HIV/AIDS Group.

ILUNG 2.0- CM - P2022/BMD-7437

- Dr. Fernando López-Ríos Moreno - Thoracic Oncology and Translational Clinical Group.

NEXT_GEN_CART_MAD-CM - P2022/BMD-7225- New generation of multi-day STAB and CAR-T immunotherapies.

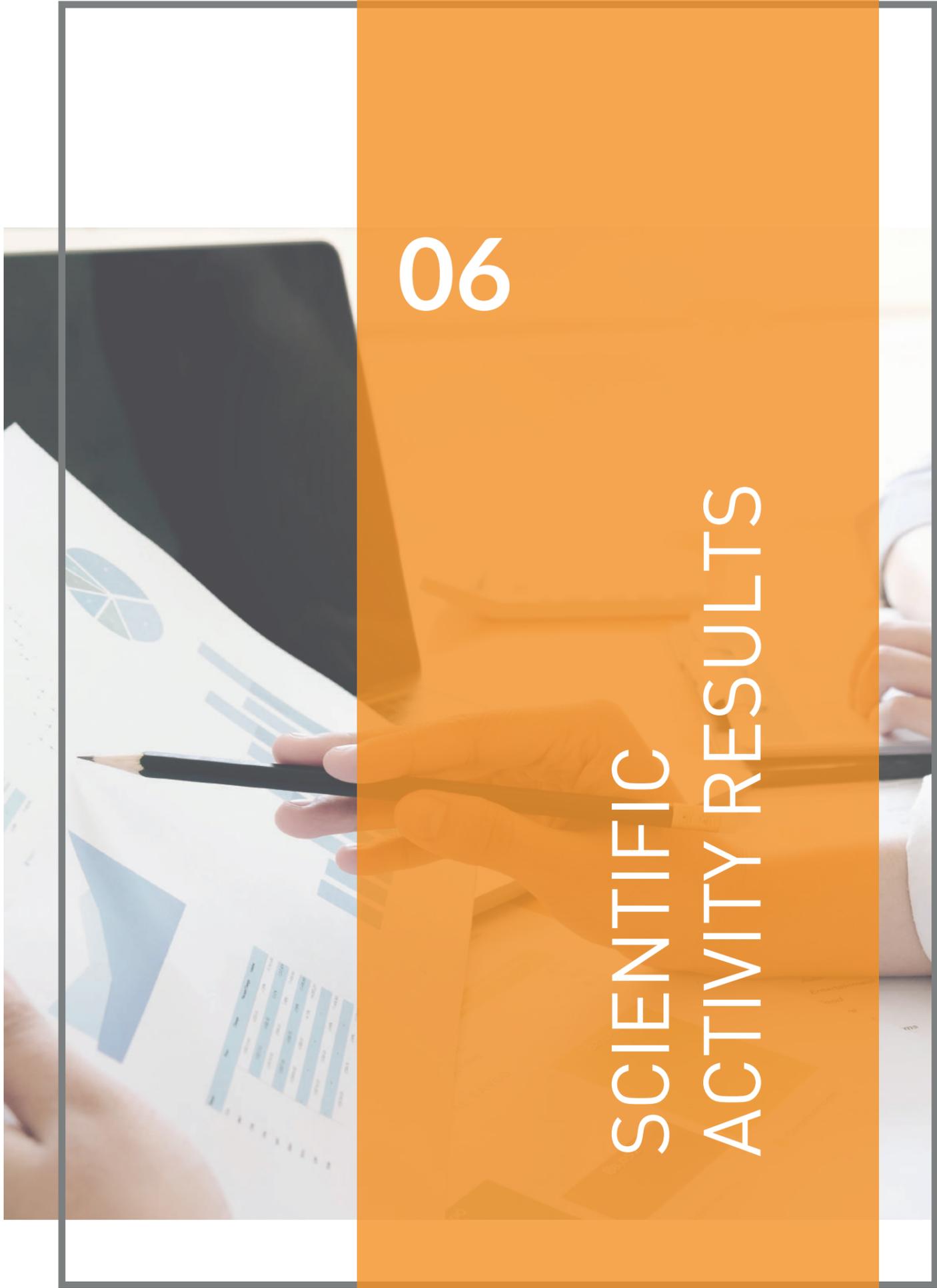
- Dr. Lus Álvarez Vallina - Immuno-oncology and Immunotherapy Group.

CELLULAR AND SYSTEMIC INTERACTIONS BETWEEN CANCER AND METABOLIC SIGNALLING - RED2022-134397-T Themes -BME- FOS.

- Dr. Laura Formentini - Translational Energy Metabolism Group.

AGES-CM3 - ENVIRONMENT AND GENES IN SCHIZOPHRENIA- S2022/BMD-7216.

- Dr. Juan Carlos Leza Cerro - Translational Psychiatry Group.



06

SCIENTIFIC
ACTIVITY RESULTS

PUBLICATIONS LISTED IN THE JOURNAL CITATION REPORTS (JCR 2022)

To prepare the 2023 Scientific Report, the journals indexed in the ISI Web of Knowledge have been analyzed, both in the Science and Social Science versions, applying the JCR impact factor of 2022.

As on previous occasions, only original articles, reviews and editorials have been taken into account for the total sum of the impact factor, thus excluding other types of publications (conference papers, case reports, etc.) included in the report, but which do not contribute an impact factor to the total scientific production. Likewise, the total number of publications and the associated global impact factor have also been calculated taking into account the number of letters published.

ANALYSIS

Analyzing the Institute's scientific output is a very important factor when evaluating its scientific activity, as it allows us to understand the evolution and quality of the research activity of the members of the Instituto i+12 over the years and thus measure the progress of the institution.

Once again, in order to better understand the results of our researchers' work, we present a summary of the publications produced throughout 2023 and their impact.

The number of indexed publications produced by the consolidated and emerging research groups and by the clinical researchers associated with the Instituto i+12 during 2023 continues to be excellent. In total, 1,174 indexed publications (original articles, reviews and editorials) have been achieved, representing an overall impact factor of 12,063.20 points and an average impact factor of 10.275. The data shows the high productivity of our researchers, which is evidence of the magnificent quality of their work.

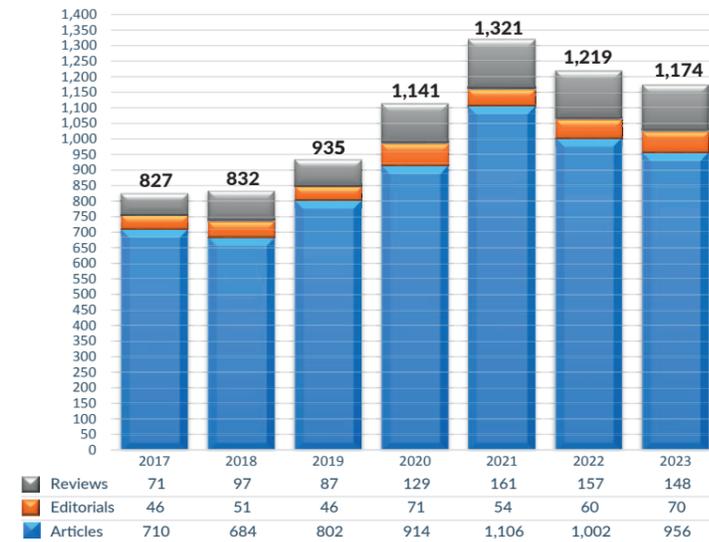
The following table shows the total scientific output generated in 2023 by the professionals that make up the Instituto i+12, distributed by decile (D) and quartiles (Q), and indicating the cumulative impact factor (Σ IF) of the same:

2023	Total publications	Publications in indexed journals (JCR 2022)	Σ IF (JCR 2022)	D1	Σ IF D1 (JCR 2022)	Q1	Σ IF Q1 (JCR 2022)
Articles	1,075	956	10,417.00	250	7,198.80	573	9,157.80
Reviews	159	148	1,168.90	37	668.70	87	963.90
Editorials	79	70	477.30	18	245.60	46	412.50
Total	1,313	1,174	12,063.20	305	8,113.10	706	10,534.20
Letters	100	90	877.90	28	625.60	56	782.60
Total	1,413	1,264	12,941.10	333	8,738.70	762	11,316.80

2023	Q2	Σ IF Q2 (JCR 2022)	Q3	Σ IF Q3 (JCR 2022)	Q4	Σ IF Q4 (JCR 2022)
Articles	219	860.30	119	329.50	45	69.40
Reviews	37	151.40	11	30.30	13	23.30
Editorials	8	30.70	12	29.20	4	4.90
Total	264	1,042.40	142	389	62	97.60
Letters	10	39.80	10	28.10	14	27.40
Total	274	1,082.20	152	417.10	76	125

The evolution of the global scientific production of the Instituto i+12 in the period 2017-2023:

Annual evolution of the number of publications (2017-2023)



Annual evolution of the FIA and FIM (2017-2023)



Similarly, the scientific output of the consolidated and emerging groups of the Instituto i+12 has also reached magnificent levels. In total, 1,010 indexed publications were generated in 2023, with a cumulative impact factor of 10,743.70 points and an average impact factor of 10.637.

To calculate the impact factor, the Journal Citation Reports (JCR) for the year 2022 has been used and, as indicated above, only original articles, reviews and editorials have been considered.

Of the total publications generated by researchers from consolidated and emerging groups at the Instituto i+12, 62.28% have been published in first quartile (Q1) journals. Of these, 43.40% are first decile (D1) journals (27.03% of the total).

2023	Total publications	Publications in indexed journals (JCR 2022)	Σ IF (JCR 2022)	D1	Σ IF D1 (JCR 2022)	Q1	Σ IF Q1 (JCR 2022)
Articles	919	826	9,293.03	226	7,420.80	512	8,148.80
Reviews	135	128	1,059.40	34	609.70	79	874
Editorials	61	56	391	13	191.20	38	336.70
Total	1,115	1,010	10,743.70	273	7,221.70	629	9,359.50
Letters	68	63	674.10	20	471.60	40	595.80
Total	1,183	1,073	11,417.80	293	7,693.30	669	9,955.30

2023	Q2	Σ IF Q2 (JCR 2022)	Q3	Σ IF Q3 (JCR 2022)	Q4	Σ IF Q4 (JCR 2022)
Articles	186	773.60	94	291.00	34	79.90
Reviews	29	126.00	9	28.80	11	30.60
Editorials	7	26.80	9	25.50	2	2.00
Total	222	926.40	112	345.30	47	112.50
Letters	8	34	6	19.60	9	24.70
Total	230	960.40	118	364.90	56	137.20

The evolution of the scientific production generated by the consolidated and emerging groups of the i+12 over the last seven years is shown below:

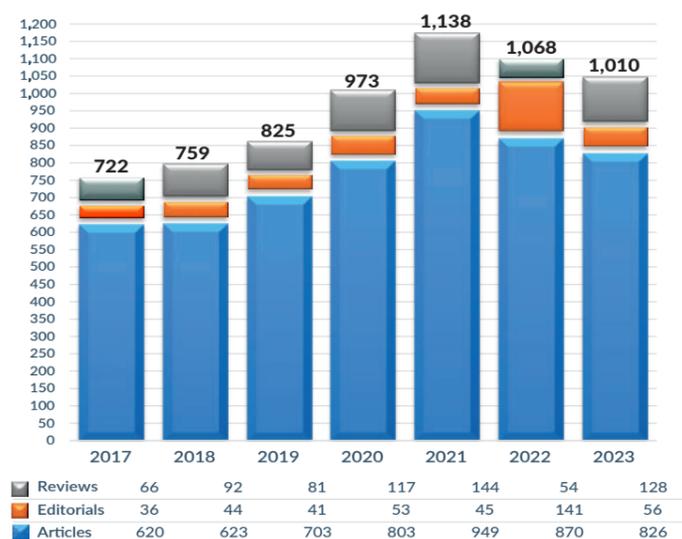
Publications	N° 2017	ΣFI (JCR 2016)	N° 2018	ΣFI (JCR 2017)	N° 2019	ΣFI (JCR 2018)
Articles	620	3,690.800	623	3,958.996	703	4,397.989
Reviews	66	339.410	92	446.848	81	349.849
Editorials	36	236.764	44	278.781	41	245.877
Total	722	4,266.974	759	4,684.625	825	4,993.715
Mean IF	2017		2018		2019	
	5.73		6.17		6.05	

Publications	Total 2020	ΣFI (JCR 2019)	Total 2021	ΣFI (JCR 2020)
Articles	803	4,861.052	949	7,672.482
Reviews	117	625.970	144	926.243
Editorials	53	317.304	45	371.144
Total	973	5,804.326	1,138	8,969.869
Mean IF	2020		2021	
	5.965		7.882	

Publications	Total 2022	ΣFI (JCR 2021)	Total 2023	ΣFI (JCR 2022)
Articles	870	8,731.46	826	9,293.03
Reviews	141	1,296.486	128	1,059.40
Editorials	54	468.21	56	391
Total	1,065	10,496.156	1,010	10,743.70
Mean IF	2022		2023	
	9.865		10.637	

The following graphs show the evolution over the last 7 years (2017-2023) of the number of publications generated by researchers in the consolidated and emerging groups of i+12 and the evolution of their average impact factor and cumulative impact factor:

Annual evolution of the number of publications (2017-2023)



Annual evolution of the FIA and FIM (2017-2023)



The evolution of the total number of indexed publications¹ (Articles, Reviews and Editorials) and the impact factor for the 9 research areas of the Instituto i+12 is summarized in the following table

Research areas	No. of publications 2023	Σ FI (JCR 2022)	Mean IF (JCR 2022)
Area 1. Cancer	328	5,724	17.413
Area 2. Chronic Diseases and Transplantation	144	1,112.2	7.724
Area 3. Rare and Genetically Based Diseases	48	408.7	8.515
Area 4. Epidemiology and Evaluation of Technologies, Health Services and Information Systems	72	564.1	7.835
Area 5. Cardiovascular	133	1,413.2	10.626
Area 6. Inflammatory Diseases and Immune Disorders	83	533.1	6.423
Area 7. Infectious Diseases and AIDS Area	126	1,003.7	7.966
Area 8. Neurosciences and Mental Health Area	113	622.1	5.505
Area 9. Transversal	81	662.6	8.18

Graphic representation of the accumulated FI and the average FI for the 9 research areas of the Instituto i+12:



¹ Publications involving several areas of research have been considered in each of them.

Graphic representation of the total number of publications and the average IF for the 9 research areas of the Instituto i+12:



The total number of publications and cumulative impact factor (CIF) per research² group during 2023 has been as follows (Articles, Reviews and Editorials):

Research Group	Publications	Cumulative IF
Thoracic and Clinical-Translational Oncology	52	1,668.315
Translational Hematology	76	874.4
Biomarkers in Genitourinary Tumors	41	797.3
Breast and Gynecological Cancer	47	748.308
Research into Heart Failure - Pulmonary Hypertension	47	528.362
Cardiovascular, Multidisciplinary, Translational Research	53	457.1
Gastrointestinal and Neuroendocrine Tumors	34	428.108
Research in Physical Activity and Health	36	406.21
Translational Research in Hypertension and Cardiorenal Disease	24	401.308
Neuro-oncology	27	371.508
Maternal and Child Health	28	329.5
Virology: HIV/AIDS	38	324.3
Translational Research in Pediatric Infectious Diseases	31	296.2
Critical Patient	28	286.962
Infectious Diseases	38	272.3
Skin Oncology	25	228.5
Digital Health	37	203.2
Inflammatory and Autoimmune Diseases	33	202.816
Molecular Epidemiology of Hospital-Acquired and Emerging Infections	24	199.8
Rare, Mitochondrial and Neuromuscular Diseases	30	170.216
Neurodegenerative Diseases	31	167.4

² Publications involving several research groups have been considered in each of them.

Research Group	Publications	Cumulative IF
Physical Exercise and Pediatric Cancer	7	158.7
Immunodeficiencies and Transplant Immunology	24	157.708
Genomics and Prostate Cancer Therapy	8	143.9
Research into Intelligent Biomaterials	20	139.632
Respiratory Diseases	16	139.108
Cognition and Psychosis	26	132
Perinatal Medicine	21	125.5
Lymphocyte Immunobiology	17	124.166
Clinical Nephrology	24	120.108
Neurovascular	13	112.008
Translational Psychiatry	21	112
Genitourinary and Cellular and Molecular Oncology	18	101.5
Pulmonary Surfactant and Respiratory Diseases	6	100.9
Tumor immunomodulation	2	82.6
Translational Research in Hereditary Cancer	4	79.2
Intercellular Communication in Aging and Cancer	1	78.8
Kidney Transplant	14	78.108
Immuno-oncology and Immunotherapy	6	77.6
Bone Metabolism, Diabetes and Nutrition	15	76.7
Addictions and Comorbidity	14	67.3
Mitochondrial Membrane Laboratory	8	65.2
Toxicology and Safety of Chemical and Biological Agents	7	56.19
Aging, Neuroimmunology and Nutrition	12	60.824
Asthma and Immunoallergic Diseases	8	59.162
Tissue Engineering	6	45.808
Tumor Microenvironment and Immunotherapy	6	38.6
Cardiovascular Imaging Research	6	34.4
Abdominal Organ Transplantation	11	34.2
Neurotraumatology and Subarachnoid Hemorrhage	13	34.2
Applied Behavioral Neuropharmacology	7	34.108
Translational Research in Leishmaniasis	8	32.1
Comprehensive Men's Health	11	32
Translational Energy Metabolism	4	31.5
Research in Care	10	28.5
Adaptation of Clinical Practice and Patient Safety	6	28.3

Research Group	Publications	Cumulative IF
Research in Health Services and Outcomes	5	24.5
Research in ALS	4	22.408
Translational Biophysics	4	22.4
Targeted Therapies for Precision Oncology	2	22.2
Translational Research in Malaria	3	15.508
Regenerative Medicine	3	14.8
Genetics and Inheritance	4	13.5
Porphyrias, Hemochromatosis and Anemia	1	6.208
Research into Complex Patients and the Health System	1	5.2
Research into Cardiovascular Risk	2	5
Translational Research with iPS Cells	1	4.7
Lymphoid Differentiation	0	0

The following table lists the magazines and the total number of publications generated (articles, reviews and editorials) by all the professionals at Instituto i+12 during the year 2023:

Magazine	IF (JCR 2022)	No. of publications	Cumulative IF	Decile (D)	Quartile (Q)
ACTA BIOMATER	9.7	3	29.1	D1	Q1
ACTA NEUROPATHOL	12.7	1	12.7	D1	Q1
ACTA NEUROPATHOL COM	7.1	2	14.2		Q1
ACTA PAEDIATR	3.8	2	7.6		Q1
ACTA PHARM SIN B	14.5	1	14.5	D1	Q1
ACTA PSYCHIAT SCAND	6.7	1	6.7		Q1
ACTAS ESP PSIQUIATRI	1.5	3	4.5		Q4
ACTAS UROL ESP	1.1	2	2.2		Q3
ADICCIONES	3	4	12		Q3
ADV SCI	15.1	2	30.2	D1	Q1
ADV THER	3.8	1	3.8		Q2
AESTHET PLAST SURG	2.4	1	2.4		Q2
AGEING RES REV	13.1	2	26.2	D1	Q1
AGING CELL	7.8	2	15.6	D1	Q1
AGING-US	5.2	1	5.2		Q2
AIDS	3.8	2	7.6		Q2
ALCOHOL ALCOHOLISM	2.8	1	2.8		Q3
ALLERGOL INT	6.8	1	6.8		Q1

Magazine	IF (JCR 2022)	No. of publications	Cumulative IF	Decile (D)	Quartile (Q)
ALLERGY	12.4	4	49.6	D1	Q1
AM HEART J	4.8	1	4.8		Q1
AM J CANCER RES	5.3	1	5.3		Q2
AM J CARDIOL	2.8	2	5.6		Q2
AM J CLIN DERMATOL	7.3	1	7.3	D1	Q1
AM J GASTROENTEROL	9.8	1	9.8	D1	Q1
AM J HEMATOL	12.8	1	12.8	D1	Q1
AM J NEPHROL	4.2	1	4.2		Q1
AM J PHYSIOL-CELL PH	5.5	1	5.5	D1	Q1
AM J PHYSIOL-LUNG C	4.9	1	4.9		Q1
AM J RESP CELL MOL	6.4	1	6.4		Q1
AM J RESP CRIT CARE	24.7	1	24.7	D1	Q1
AM J TRANSPLANT	8.8	6	52.8	D1	Q1
AN PEDIATR	2.1	14	29.4		Q2
AN SIST SANIT NAVAR	1	1	1		Q4
ANDROLOGY-US	4.5	1	4.5		Q1
ANIMALS-BASEL	3	1	3	D1	Q1
ANN DIAGN PATHOL	2	1	2		Q3
ANN HEMATOL	3.5	3	10.5		Q2
ANN INTENSIVE CARE	8.1	1	8.1		Q1
ANN INTERN MED	39.2	1	39.2	D1	Q1
ANN ONCOL	50.5	7	353.5	D1	Q1
ANN RHEUM DIS	27.4	1	27.4	D1	Q1
ANN SURG ONCOL	3.7	2	7.4		Q1
ANTIBIOTICS-BASEL	4.8	10	48		Q1
ANTIMICROB AGENTS CH	4.9	1	4.9		Q1
ANTIOXIDANTS-BASEL	7	4	28		Q1
ARCH BRONCONEUMOL	8	9	72	D1	Q1
ARCH DIS CHILD-FETAL	4.4	1	4.4	D1	Q1
ARCH ESP UROL	0.5	1	0.5		Q4
ARCH PATHOL LAB MED	4.6	1	4.6		Q1
ARQ BRAS OFTALMOL	1	1	1		Q3
ARTHRIT CARE RES	4.7	1	4.7		Q1
ARTHRITIS RES THER	4.9	1	4.9		Q1
ARTHRITIS RHEUMATOL	13.3	1	13.3	D1	Q1

Magazine	IF (JCR 2022)	No. of publications	Cumulative IF	Decile (D)	Quartile (Q)
ARTIF INTELL MED	7.5	1	7.5	D1	Q1
ATEN PRIM	2.5	3	7.5		Q2
AUST NZ J OBSTET GYN	1.7	1	1.7		Q3
AUSTRALAS J DERMATOL	2	2	4		Q2
AUTOIMMUN REV	13.6	2	27.2	D1	Q1
AUTOPHAGY	13.3	1	13.3	D1	Q1
BBA-MOL BASIS DIS	6.2	1	6.2		Q1
BEHAV BRAIN RES	2.7	1	2.7		Q2
BEST PRACT RES CL EN	7.4	1	7.4		Q1
BIOELECTROCHEMISTRY	5	1	5		Q1
BIOL SPORT	5.6	1	5.6	D1	Q1
BIOMED PHARMACOTHER	7.5	5	37.5	D1	Q1
BIOMEDICINES	4.7	2	9.4		Q1
BIOMOLECULES	5.5	2	11		Q1
BIOORG CHEM	5.1	1	5.1		Q1
BJPSYCH OPEN	5.4	1	5.4		Q1
BJU INT	4.5	1	4.5		Q1
BLOOD	20.3	2	40.6	D1	Q1
BLOOD ADV	7.5	4	30		Q1
BLOOD CANCER J	12.8	1	12.8	D1	Q1
BMC CANCER	3.8	2	7.6		Q2
BMC GERIATR	4.1	1	4.1		Q2
BMC HEALTH SERV RES	2.8	1	2.8		Q2
BMC NURS	3.2	2	6.4	D1	Q1
BMC PALLIAT CARE	3.1	1	3.1		Q2
BMC PSYCHOL	3.6	1	3.6		Q1
BMC PULM MED	3.1	1	3.1		Q2
BMJ OPEN	2.9	7	20.3		Q1
BONE MARROW TRANSPL	4.8	2	9.6		Q1
BRAIN	14.5	2	29	D1	Q1
BREAST	3.9	1	3.9	D1	Q1
BREAST CANCER RES	7.4	1	7.4		Q1
BRIT J CANCER	8.8	2	17.6		Q1
BRIT J DERMATOL	10.3	2	20.6	D1	Q1
BRIT J HAEMATOL	6.5	3	19.5		Q1

Magazine	IF (JCR 2022)	No. of publications	Cumulative IF	Decile (D)	Quartile (Q)
BRIT J PHARMACOL	7.3	4	29.2	D1	Q1
CANCER CELL	50.3	1	50.3	D1	Q1
CANCER IMMUNOL IMMUN	5.8	1	5.8		Q1
CANCER MED-US	4	2	8		Q2
CANCER NANOTECHNOL	5.7	1	5.7		Q1
CANCER RES	11.2	1	11.2	D1	Q1
CANCER SCI	5.7	1	5.7		Q1
CANCER-AM CANCER SOC	6.2	1	6.2		Q1
CANCERS	5.2	27	140.4		Q1
CARDIOL J	2.9	2	5.8		Q2
CATAL TODAY	5.3	1	5.3		Q1
CELL	64.5	1	64.5	D1	Q1
CELL BIOL TOXICOL	6.1	2	12.2		Q1
CELL DEATH DIS	9	3	27		Q1
CELL MOL LIFE SCI	8	1	8		Q1
CELL REP	8.8	1	8.8		Q1
CELL REP MED	14.3	2	28.6	D1	Q1
CELLS-BASEL	6	1	6		Q2
CEREBELLUM	3.5	1	3.5		Q3
CHEM MATER	8.6	1	8.6		Q1
CHEST	9.6	1	9.6	D1	Q1
CHILDREN-BASEL	2.4	4	9.6		Q2
CIR ESPAN	1.9	7	13.3		Q3
CLIN CANCER RES	11.5	7	80.5	D1	Q1
CLIN CARDIOL	2.7	1	2.7		Q2
CLIN COLORECTAL CANC	3.4	1	3.4		Q2
CLIN EXP DERMATOL	4.1	1	4.1		Q1
CLIN EXP RHEUMATOL	3.7	3	11.1		Q2
CLIN GENET	3.5	1	3.5		Q2
CLIN GENITOURIN CANC	3.2	3	9.6		Q2
CLIN INFECT DIS	11.8	1	11.8	D1	Q1
CLIN INTERV AGING	3.6	1	3.6		Q2
CLIN J AM SOC NEPHRO	9.8	2	19.6	D1	Q1
CLIN J PAIN	2.9	1	2.9		Q2
CLIN KIDNEY J	4.6	11	50.6		Q1

Magazine	IF (JCR 2022)	No. of publications	Cumulative IF	Decile (D)	Quartile (Q)
CLIN LUNG CANCER	3.6	1	3.6		Q2
CLIN MICROBIOL INFEC	14.2	5	71	D1	Q1
CLIN NUCL MED	10.6	1	10.6	D1	Q1
CLIN NUTR	6.3	2	12.6	D1	Q1
CLIN ONCOL-UK	3.4	1	3.4		Q2
CLIN RES CARDIOL	5	3	15		Q1
CLIN RHEUMATOL	3.4	1	3.4		Q2
CLIN TRANSL MED	10.6	1	10.6	D1	Q1
CLIN TRANSL ONCOL	3.4	11	37.4		Q2
CLIN TRANSPLANT	2.1	1	2.1		Q2
COLORECTAL DIS	3.4	1	3.4		Q1
COMMUN BIOL	5.9	2	11.8		Q1
COMPUT METH PROG BIO	6.1	3	18.3		Q1
CONTACT DERMATITIS	5.5	1	5.5		Q1
CRIT CARE	15.1	1	15.1	D1	Q1
CRIT CARE MED	8.8	1	8.8		Q1
CRIT REV TOXICOL	5.9	1	5.9		Q1
CTS-CLIN TRANSL SCI	3.9	1	3.9		Q2
CURR OPIN COLLOID IN	8.9	1	8.9		Q1
CURR OPIN NEPHROL HY	3.2	1	3.2		Q2
CURR PSYCHOL	2.8	1	2.8		Q2
CURR UROL REP	2.6	1	2.6		Q2
CYTOJOURNAL	1.9	1	1.9		Q2
CYTOPATHOLOGY	1.3	1	1.3		Q3
DERMATITIS	5.2	2	10.4		Q1
DERMATOLOGY THER	3.4	1	3.4		Q1
DIABETES CARE	16.2	1	16.2	D1	Q1
DIABETES OBES METAB	5.8	4	23.2		Q1
DIAGNOSTICS	3.6	1	3.6		Q1
DIGEST DIS SCI	3.1	1	3.1		Q2
DIS COLON RECTUM	3.9	1	3.9		Q1
DRUG ALCOHOL DEPEN	4.2	1	4.2		Q1
DRUG SAFETY	4.2	1	4.2		Q1
EARLY INTERV PSYCHIA	2	1	2		Q3
ECLINICALMEDICINE	15.1	6	90.6	D1	Q1

Magazine	IF (JCR 2022)	No. of publications	Cumulative IF	Decile (D)	Quartile (Q)
EFORT OPEN REV	3.4	1	3.4	D1	Q1
ELECTROMAGN BIOL MED	1.7	1	1.7		Q3
ELIFE	7.7	1	7.7	D1	Q1
EMBO J	11.4	1	11.4	D1	Q1
EMBO REP	7.7	1	7.7		Q1
EMERGENCIAS	5.5	6	33	D1	Q1
ENDOCR CONNECT	2.9	1	2.9		Q3
ENDOCR REV	20.3	1	20.3	D1	Q1
ENDOCRINE	3.7	2	7.4		Q2
ENDOCRINOL DIAB NUTR	1.9	1	1.9		Q3
ENDOCR-RELAT CANCER	3.9	1	3.9		Q2
ENFERM INFEC MICR CL	2.5	3	7.5		Q3
ENVIRON POLLUT	8.9	1	8.9		Q1
EPIDEMIOLOG PSYCH SCI	8.1	1	8.1	D1	Q1
ESC HEART FAIL	3.8	4	15.2		Q2
ESMO OPEN	7.3	7	51.1		Q1
EUR ARCH OTO-RHINO-L	2.6	2	5.2		Q2
EUR CHILD ADOLES PSY	6.4	4	25.6	D1	Q1
EUR HEART J	39.3	6	235.8	D1	Q1
EUR HEART J-ACUTE CA	4.1	3	12.3		Q1
EUR HEART J-CARD IMG	6.2	3	18.6	D1	Q1
EUR HEART J-CARD PHA	7.1	1	7.1	D1	Q1
EUR HEART J-QUAL CAR	5.2	2	10.4		Q1
EUR J CANCER	8.4	7	58.8		Q1
EUR J CLIN INVEST	5.5	1	5.5		Q1
EUR J CLIN MICROBIOL	4.5	1	4.5		Q2
EUR J HEART FAIL	18.2	3	54.6	D1	Q1
EUR J MED CHEM	6.7	1	6.7		Q1
EUR J MED RES	4.2	1	4.2		Q2
EUR J NEUROL	5.1	2	10.2		Q1
EUR J NUCL MED MOL I	9.1	1	9.1	D1	Q1
EUR J OBSTET GYN R B	2.6	1	2.6		Q2
EUR J PEDIATR	3.6	8	28.8		Q1
EUR J PREV CARDIOL	8.3	3	24.9	D1	Q1
EUR J PSYCHOTRAUMATO	5	1	5		Q1

Magazine	IF (JCR 2022)	No. of publications	Cumulative IF	Decile (D)	Quartile (Q)
EUR J SPORT SCI	3.2	2	6.4		Q2
EUR NEUROPSYCHOPHARM	5.6	3	16.8	D1	Q1
EUR RADIOL	5.9	1	5.9		Q1
EUR RESPIR J	24.3	5	121.5	D1	Q1
EUR UROL	23.4	4	93.6	D1	Q1
EUROINTERVENTION	6.2	1	6.2	D1	Q1
EUROPACE	6.1	2	12.2	D1	Q1
EXERC IMMUNOL REV	7.3	1	7.3		Q1
EXPERT OPIN BIOL TH	4.6	1	4.6		Q2
FACIAL PLAST SURG AE	2	1	2		Q2
FETAL DIAGN THER	2.2	1	2.2		Q3
FOOD CHEM	8.8	1	8.8	D1	Q1
FOOD RES INT	8.1	1	8.1	D1	Q1
FOOT ANKLE INT	2.7	1	2.7		Q2
FRONT CARDIOVASC MED	3.6	2	7.2		Q2
FRONT CELL DEV BIOL	5.5	1	5.5		Q1
FRONT CELL INFECT MI	5.7	2	11.4		Q1
FRONT CELL NEUROSCI	5.3	1	5.3		Q2
FRONT ENDOCRINOL	5.2	5	26		Q2
FRONT HUM NEUROSCI	2.9	1	2.9		Q2
FRONT IMMUNOL	7.3	20	146		Q1
FRONT MED-LAUSANNE	3.9	4	15.6		Q1
FRONT NEUROENDOCRIN	7.4	1	7.4	D1	Q1
FRONT NEUROSCI-SWITZ	4.3	1	4.3		Q2
FRONT NUTR	5	2	10		Q2
FRONT ONCOL	4.7	4	18.8		Q2
FRONT PEDIATR	2.6	3	7.8		Q2
FRONT PHARMACOL	5.6	3	16.8		Q1
FRONT PHYSIOL	4	1	4		Q2
FRONT PSYCHIATRY	4.7	2	9.4		Q2
FRONT PUBLIC HEALTH	5.2	2	10.4		Q2
FRONT SURG	1.8	1	1.8		Q2
FUTURE ONCOL	3.3	4	13.2		Q2
GASTROENT HEPAT-BARC	1.9	3	5.7		Q3
GASTROINTEST ENDOSC	7.7	1	7.7		Q1

Magazine	IF (JCR 2022)	No. of publications	Cumulative IF	Decile (D)	Quartile (Q)
GELS-BASEL	4.6	1	4.6		Q1
GENES-BASEL	3.5	3	10.5		Q2
GENET MED	8.8	1	8.8	D1	Q1
GENOME MED	12.3	2	24.6	D1	Q1
GERONTOLOGY	3.5	1	3.5		Q3
GUT MICROBES	12.2	1	12.2	D1	Q1
HAEMATOLOGICA	10.1	5	50.5		Q1
HEALTHCARE-BASEL	2.8	3	8.4		Q2
HEART	5.7	2	11.4		Q1
HEART RHYTHM	5.5	1	5.5		Q1
HELIYON	4	1	4		Q1
HELL J CARDIOL	4.1	1	4.1		Q2
HEMASPHERE	6.6	5	33		Q1
HEPATOLOGY	13.5	1	13.5	D1	Q1
HERNIA	2.3	1	2.3		Q1
HISTOL HISTOPATHOL	2	1	2		Q2
HISTOPATHOLOGY	6.4	1	6.4		Q1
HIV MED	3	3	9		Q2
HUM GENOMICS	4.5	1	4.5		Q2
HUM IMMUNOL	2.7	1	2.7		Q3
HYPERTENSION	8.3	1	8.3	D1	Q1
IMMUNOL REV	8.7	1	8.7		Q1
INFECT DIS NOW	3.5	1	3.5		Q2
INFECT DIS THER	5.4	1	5.4		Q1
INFLUENZA OTHER RESP	4.4	1	4.4		Q1
INNOV FOOD SCI EMERG	6.6	1	6.6	D1	Q1
INT BREASTFEED J	3.5	1	3.5		Q1
INT J ANTIMICROB AG	10.8	1	10.8		Q1
INT J BIOPRINTING	8.4	1	8.4		Q1
INT J CANCER	6.4	2	12.8		Q1
INT J CARDIOL	3.5	3	10.5		Q2
INT J CHRONIC OBSTR	2.8	1	2.8		Q2
INT J COMPUT ASS RAD	3	1	3		Q2
INT J EPIDEMIOLOG	7.7	1	7.7	D1	Q1
INT J GYNECOL CANCER	4.8	11	52.8	D1	Q1

Magazine	IF (JCR 2022)	No. of publications	Cumulative IF	Decile (D)	Quartile (Q)
INT J GYNECOL PATHOL	2.4	1	2.4		Q3
INT J INFECT DIS	8.4	3	25.2		Q1
INT J MENT HEALTH AD	8	2	16		Q1
INT J MOL SCI	5.6	41	229.6		Q1
INT J NEUROPSYCHOPH	4.8	2	9.6		Q1
INT J SOC PSYCHIATR	7.5	1	7.5		Q2
INT J SPORT PHYSIOL	3.3	4	13.2		Q1
INT OPHTHALMOL	1.6	1	1.6		Q3
INT ORTHOP	2.7	1	2.7		Q2
INT REV IMMUNOL	5	1	5		Q2
INTENS CARE MED	38.9	1	38.9	D1	Q1
INVEST NEW DRUG	3.4	1	3.4		Q2
ISCIENCE	5.8	4	23.2		Q1
J ADOLESCENCE	3.8	1	3.8		Q2
J ADV NURS	3.8	1	3.8	D1	Q1
J AFFECT DISORDERS	6.6	1	6.6		Q1
J ALLERGY CLIN IMMUN	14.2	4	56.8	D1	Q1
J AM ACAD DERMATOL	13.8	3	41.4	D1	Q1
J AM COLL CARDIOL	24	1	24	D1	Q1
J AM HEART ASSOC	5.4	2	10.8		Q1
J AM SOC NEPHROL	13.6	1	13.6	D1	Q1
J ANTIMICROB CHEMOTH	5.2	2	10.4		Q1
J ASTHMA	1.9	1	1.9		Q3
J BIOETHIC INQ	2.4	1	2.4		Q2
J CACHEXIA SARCOPENI	8.9	1	8.9	D1	Q1
J CELL MOL MED	5.3	1	5.3		Q2
J CHEM PHYS	4.4	1	4.4		Q1
J CLEAN PROD	11.1	1	11.1	D1	Q1
J CLIN IMMUNOL	9.1	2	18.2		Q1
J CLIN INVEST	15.9	1	15.9	D1	Q1
J CLIN MED	3.9	24	93.6		Q1
J CLIN ONCOL	45.3	12	543.6	D1	Q1
J CLIN PERIODONTOL	6.7	1	6.7	D1	Q1
J CLIN PSYCHIAT	5.3	1	5.3	D1	Q1
J CLIN VIROL	8.8	1	8.8		Q2

Magazine	IF (JCR 2022)	No. of publications	Cumulative IF	Decile (D)	Quartile (Q)
J COLLOID INTERF SCI	9.9	2	19.8		Q1
J COMP EFFECT RES	2.1	1	2.1		Q3
J COSMET DERMATOL-US	2.3	1	2.3		Q2
J CROHNS COLITIS	8	1	8	D1	Q1
J CUTAN PATHOL	1.7	1	1.7		Q3
J DTSCH DERMATOL GES	3.6	1	3.6	D1	Q1
J ENDOCRINOL INVEST	5.4	2	10.8		Q2
J EUR ACAD DERMATOL	9.2	8	73.6	D1	Q1
J FOOT ANKLE SURG	1.3	1	1.3		Q3
J GERIATR CARDIOL	2.5	1	2.5		Q3
J GERIATR ONCOL	3	1	3		Q2
J HEART LUNG TRANSPL	8.9	2	17.8	D1	Q1
J HEMATOL ONCOL	28.5	2	57	D1	Q1
J HOSP INFECT	6.9	2	13.8		Q1
J HUM GENET	3.5	1	3.5		Q2
J HYPERTENS	4.9	1	4.9		Q1
J IMMUNOTHER	3.9	1	3.9		Q2
J IMMUNOTHER CANCER	10.9	3	32.7	D1	Q1
J INFECT DIS	6.4	1	6.4		Q1
J INFECTION	28.2	1	28.2	D1	Q1
J INHERIT METAB DIS	4.2	1	4.2		Q1
J INNATE IMMUN	5.3	1	5.3		Q2
J INT ADV OTOL	1	1	1		Q3
J INT AIDS SOC	6	1	6		Q1
J INT SOC SPORT NUTR	5.1	1	5.1	D1	Q1
J INVEST ALLERG CLIN	7.2	1	7.2		Q1
J MANAG CARE SPEC PH	2.1	1	2.1		Q2
J MATER CHEM B	7	1	7		Q1
J MATERN-FETAL NEO M	1.8	2	3.6		Q3
J MED CHEM	7.3	1	7.3	D1	Q1
J MED GENET	4	1	4		Q2
J MED INTERNET RES	7.4	1	7.4	D1	Q1
J MED VIROL	12.7	8	101.6	D1	Q1
J MINIM INVAS GYN	4.1	1	4.1		Q1
J MOL MED	4.7	1	4.7		Q1

Magazine	IF (JCR 2022)	No. of publications	Cumulative IF	Decile (D)	Quartile (Q)
J NEPHROL	3.4	1	3.4		Q2
J NEUROENDOCRINOL	3.2	2	6.4		Q2
J NEUROIMAGING	2.4	1	2.4		Q2
J NEUROIMMUNOL	3.3	1	3.3		Q2
J NEUROINTERV SURG	4.8	1	4.8	D1	Q1
J NEUROL	6	2	12		Q1
J NEURO-ONCOL	3.9	1	3.9		Q2
J NEURORADIOLOGY	3.5	1	3.5		Q2
J NEUROSURG	4.1	1	4.1		Q1
J NEUROSURG SCI	1.9	2	3.8		Q3
J NEUROVIROL	3.2	1	3.2		Q3
J NURS CARE QUAL	1.2	1	1.2		Q3
J PATHOL	7.3	2	14.6	D1	Q1
J PATHOL CLIN RES	4.1	1	4.1		Q1
J PEDIAT INF DIS SOC	3.2	1	3.2		Q1
J PEDIATR ENDOCR MET	1.4	1	1.4		Q3
J PEDIATR GASTR NUTR	2.9	1	2.9		Q1
J PERINAT MED	2.4	1	2.4		Q2
J PERINATOL	2.9	2	5.8		Q1
J PERS MED	3.4	5	17		Q1
J PHYSIOL BIOCHEM	3.4	1	3.4		Q1
J PHYSIOL-LONDON	5.5	2	11		Q1
J PSYCHIATR RES	4.8	2	9.6		Q1
J RELIG HEALTH	2.8	1	2.8		Q2
J ROBOT SURG	2.3	1	2.3		Q2
J SPORT HEALTH SCI	11.7	1	11.7	D1	Q1
J STRENGTH COND RES	3.2	1	3.2		Q2
J SYST ARCHITECT	4.5	1	4.5		Q1
J THORAC ONCOL	20.4	5	102	D1	Q1
J THROMB THROMBOLYS	4	1	4		Q2
J UROLOGY	6.6	4	26.4	D1	Q1
J WOUND OSTOMY CONT	2.6	1	2.6		Q2
JACC-CARDIOVASC INTE	11.3	3	33.9	D1	Q1
JAIDS-J ACQ IMM DEF	3.6	1	3.6		Q2
JAMA CARDIOL	24	1	24	D1	Q1

Magazine	IF (JCR 2022)	No. of publications	Cumulative IF	Decile (D)	Quartile (Q)
JAMA INTERN MED	39	1	39	D1	Q1
JAMA NEUROL	29	1	29	D1	Q1
JBIC EVID IMPLEMENT	2.3	1	2.3		Q1
JCI INSIGHT	8	2	16		Q1
JCO PRECIS ONCOL	4.6	1	4.6		Q1
JHEP REP	8.3	1	8.3	D1	Q1
JMIR MED INF	3.2	1	3.2		Q2
JNCI-J NATL CANCER I	10.3	2	20.6	D1	Q1
JOINT BONE SPINE	4.2	1	4.2		Q1
JPAD-J PREV ALZHEIM	6.4	1	6.4	D1	Q1
JPEN-PARENTER ENTER	3.4	1	3.4		Q2
JPN J RADIOL	2.1	1	2.1		Q2
KARDIOL POL	3.3	1	3.3		Q1
KIDNEY INT	19.6	3	58.8	D1	Q1
KIDNEY INT REP	6	2	12	D1	Q1
KNEE SURG SPORT TRA	3.8	2	7.6		Q1
LAB INVEST	5	1	5		Q1
LANCET	168.9	5	844.5	D1	Q1
LANCET CHILD ADOLESC	36.4	2	72.8	D1	Q1
LANCET INFECT DIS	56.3	3	168.9	D1	Q1
LANCET MICROBE	38.2	1	38.2	D1	Q1
LANCET NEUROL	48	2	96	D1	Q1
LANCET ONCOL	51.1	2	102.2	D1	Q1
LANCET REG HEALTH-EU	20.9	1	20.9	D1	Q1
LANCET RESP MED	76.2	2	152.4	D1	Q1
LANG COGN	1.8	1	1.8		Q2
LANGENBECK ARCH SURG	2.3	1	2.3		Q2
LEUKEMIA	11.4	4	45.6	D1	Q1
LEUKEMIA LYMPHOMA	2.6	2	5.2		Q3
LIFE-BASEL	3.2	2	6.4		Q1
LIVER INT	6.7	2	13.4		Q1
MABS-AUSTIN	5.3	1	5.3		Q1
MAR DRUGS	5.4	1	5.4		Q1
MATER TODAY BIO	8.2	1	8.2	D1	Q1
MATURITAS	4.9	1	4.9		Q1

Magazine	IF (JCR 2022)	No. of publications	Cumulative IF	Decile (D)	Quartile (Q)
MAYO CLIN PROC	8.9	1	8.9	D1	Q1
MECH AGEING DEV	5.3	2	10.6		Q1
MED CLIN-BARCELONA	3.9	1	3.9		Q1
MED INTENSIVA	3	6	18		Q2
MED SCI SPORT EXER	4.1	2	8.2	D1	Q1
MEMBRANES-BASEL	4.2	1	4.2		Q2
METABOLITES	4.1	1	4.1		Q2
MICROBIOL SPECTR	3.7	1	3.7		Q2
MICROCHIM ACTA	5.7	1	5.7		Q1
MICROORGANISMS	4.5	2	9		Q2
MODERN PATHOL	7.5	3	22.5	D1	Q1
MOL GENET METAB REP	1.9	1	1.9		Q3
MOL NEUROBIOL	5.1	1	5.1		Q1
MOL ONCOL	6.6	1	6.6		Q1
MOL PSYCHIATR	11	2	22	D1	Q1
MOL THER-METH CLIN D	4.7	1	4.7		Q2
MULT SCLER J	5.8	1	5.8		Q1
MULT SCLER RELAT DIS	4	2	8		Q2
MYCOSES	4.9	1	4.9		Q1
NANOMATERIALS-BASEL	5.3	2	10.6		Q2
NAT COMMUN	16.6	9	149.4	D1	Q1
NAT MED	82.9	5	414.5	D1	Q1
NAT REV CARDIOL	49.6	1	49.6	D1	Q1
NAT REV CLIN ONCOL	78.8	2	157.6	D1	Q1
NAT REV IMMUNOL	100.3	1	100.3	D1	Q1
NATURE	64.8	2	129.6	D1	Q1
NATURE AGING	16.6	1	16.6	D1	Q1
NEFROLOGIA	2.6	6	15.6		Q2
NEPHROL DIAL TRANSPL	6.1	4	24.4		Q1
NEPHROL NURS J	0.9	1	0.9		Q4
NEURAL REGEN RES	6.1	3	18.3		Q1
NEUROCIRUGIA	0.8	3	2.4		Q4
NEUROCRIT CARE	3.5	1	3.5		Q2
NEUROENDOCRINOLOGY	4.1	2	8.2		Q2
NEUROL INDIA	2.7	1	2.7		Q4

Magazine	IF (JCR 2022)	No. of publications	Cumulative IF	Decile (D)	Quartile (Q)
NEUROL SCI	3.3	1	3.3		Q2
NEUROL THER	3.7	1	3.7		Q1
NEUROLOGIA	3.9	1	3.9		Q2
NEUROLOGY	9.9	4	39.6	D1	Q1
NEUROMUSCULAR DISORD	2.8	2	5.6		Q2
NEURO-ONCOLOGY	15.9	2	31.8	D1	Q1
NEURO-OPHTHALMOLOGY	0.8	1	0.8		Q4
NEUROPEDIATRICS	1.4	1	1.4		Q3
NEURORADIOLOGY	2.8	2	5.6		Q2
NEUROSCIENCE	3.3	1	3.3		Q2
NEUROUROL URODYNAM	2	1	2		Q3
NEW ENGL J MED	158.5	10	1585	D1	Q1
NPJ BIOFILMS MICROBI	9.2	1	9.2	D1	Q1
NPJ PARKINSONS DIS	8.7	1	8.7	D1	Q1
NURS OPEN	2.3	2	4.6		Q2
NUTRIENTS	5.9	8	47.2		Q1
NUTRITION	4.4	1	4.4		Q2
OBES SURG	2.9	1	2.9		Q1
ONCOGENE	8	1	8	D1	Q1
ONCOIMMUNOLOGY	7.2	1	7.2		Q1
ONCOL RES TREAT	2.4	1	2.4		Q3
ONCOLOGIST	5.8	2	11.6		Q1
OPEN FORUM INFECT DI	4.2	1	4.2		Q2
ORG CHEM FRONT	5.4	1	5.4		Q1
ORPHANET J RARE DIS	3.7	2	7.4		Q2
P I MECH ENG H	1.8	1	1.8		Q3
PAIN MANAG NURS	1.7	1	1.7		Q2
PATHOG GLOB HEALTH	3.4	3	10.2	D1	Q1
PATHOGENS	3.7	2	7.4		Q2
PEDIAT ALLERG IMM-UK	4.4	2	8.8	D1	Q1
PEDIATR INFECT DIS J	3.6	4	14.4		Q1
PEDIATR PULM	3.1	2	6.2		Q1
PEDIATR RES	3.6	1	3.6		Q1
PEDIATRICS	8	1	8	D1	Q1
PERFUSION-UK	1.2	2	2.4		Q4

Magazine	IF (JCR 2022)	No. of publications	Cumulative IF	Decile (D)	Quartile (Q)
PHARMACEUTICS	5.4	5	27		Q1
PHARMACOL RES	9.3	1	9.3	D1	Q1
PHLEBOLOGY	1.7	1	1.7		Q3
PHOTODIAGN PHOTODYN	3.3	1	3.3		Q2
PHYS ENG SCI MED	4.4	1	4.4		Q2
PITUITARY	3.8	1	3.8		Q2
PLOS BIOL	9.8	1	9.8	D1	Q1
PLOS NEGLECT TROP D	3.8	1	3.8		Q1
PLOS ONE	3.7	4	14.8		Q1
POSTGRAD MED	4.2	1	4.2		Q1
PROG NEURO-PSYCHOPH	5.6	2	11.2	D1	Q1
PROSTATE	2.8	2	5.6		Q2
PROSTATE CANCER P D	4.8	1	4.8	D1	Q1
PSICOTHEMA	3.6	1	3.6		Q1
PSYCHIAT RES	11.3	1	11.3		Q1
PSYCHOLASSESSMENT	3.6	1	3.6		Q1
PSYCHONEUROENDOCRINO	3.7	1	3.7		Q2
PULMONOLOGY	11.7	1	11.7	D1	Q1
REDOX BIOL	11.4	1	11.4	D1	Q1
RES PRACT THROMB HAE	4.6	1	4.6		Q1
RESP CARE	2.5	1	2.5		Q2
RESP RES	5.8	3	17.4		Q1
RESUSCITATION	6.5	1	6.5	D1	Q1
REV CLIN ESP	2.9	3	8.7		Q2
REV ESP CARDIOL	5.9	13	76.7		Q1
REV ESP ENFERM DIG	2	2	4		Q2
REV ESP MED NUCL IMA	1.2	1	1.2		Q3
REV ESP QUIM	1.9	12	22.8		Q3
REV MED INTERNE	0.9	1	0.9		Q3
REV NEUROLOGIA	1.2	5	6		Q4
RHEUMATOL THER	3.8	2	7.6		Q2
RHEUMATOLOGY	5.5	6	33		Q1
SCI REP-UK	4.6	5	23		Q1
SCI TOTAL ENVIRON	9.8	1	9.8	D1	Q1
SEIZURE-EUR J EPILEP	3	1	3		Q2

Magazine	IF (JCR 2022)	No. of publications	Cumulative IF	Decile (D)	Quartile (Q)
SEMIN ARTHRITIS RHEU	5	3	15		Q1
SENSORS-BASEL	3.9	1	3.9		Q2
SEX TRANSM INFECT	3.6	1	3.6		Q2
SLEEP BREATH	2.5	1	2.5		Q3
SMALL	13.3	1	13.3	D1	Q1
STEM CELL TRANSL MED	6	1	6		Q1
STROKE	8.3	2	16.6	D1	Q1
SURGERY	3.8	1	3.8		Q1
TARGET ONCOL	5.4	1	5.4		Q2
THERANOSTICS	12.4	1	12.4	D1	Q1
THORAX	10	2	20	D1	Q1
THROMB HAEMOSTASIS	6.7	1	6.7		Q1
THROMB RES	7.5	3	22.5		Q1
TRANSFUSION	2.9	1	2.9		Q2
TRANSL LUNG CANCER R	4	1	4		Q1
TRANSL RES	7.8	2	15.6	D1	Q1
TRANSPL CELL THER	3.2	1	3.2		Q1
TRANSPL INFECT DIS	2.6	5	13		Q2
TRANSPL INT	3.1	5	15.5		Q1
TRANSPLANT REV-ORLAN	4	4	16		Q1
TRANSPLANTATION	6.2	3	18.6	D1	Q1
TRENDS CARDIOVAS MED	9.3	1	9.3		Q1
TRIALS	2.5	1	2.5		Q3
TROP MED INT HEALTH	3.3	1	3.3		Q2
ULTRASOUND OBST GYN	7.1	5	35.5	D1	Q1
UNITED EUR GASTROENT	6	1	6		Q1
UROL INT	1.6	2	3.2		Q3
UROL ONCOL-SEMIN ORI	2.7	2	5.4		Q2
VACCINE	5.5	1	5.5		Q2
VACCINES-BASEL	7.8	1	7.8		Q1
VET MED SCI	1.7	1	1.7		Q2
VIRUSES-BASEL	4.7	1	4.7		Q2
VISION RES	1.8	1	1.8		Q3
VOX SANG	2.7	1	2.7		Q3
WORLD J BIOL PSYCHIA	3.1	1	3.1		Q2

Magazine	IF (JCR 2022)	No. of publications	Cumulative IF	Decile (D)	Quartile (Q)
WORLD J GASTRO SURG	2	1	2		Q2
WORLD J PEDIATR	8.7	1	8.7	D1	Q1
WORLD J UROL	3.4	1	3.4		Q2
WORLDV EVID-BASED NU	4.3	1	4.3	D1	Q1
WSPOLCZESNA ONKOL	1.8	1	1.8		Q4
No. of Magazines = 548	10.095 (MIF)	1.174	11.851		

CLINICAL PRACTICE GUIDELINES

During 2023, the results of the research work carried out by the professionals of the Instituto i+12 have led to their participation in the publication of 30 clinical practice guidelines, consensus documents and recommendations:

- Bischoff, SC; Ockenga, J; Eshraghian, A; Barazzoni, R; Busetto, L; Campmans Kuijpers, M; Cardinale, V et al. Practical guideline on obesity care in patients with gastrointestinal and liver diseases- Joint ESPEN/UEG guideline. *Clin. Nutr.* 2023. 42. (6): p. 987-1024. FI: 6,300. Article.
- Botana Rial, M; Pérez Pallarés, J; Cases Viedma, E; López González, FJ; Porcel, JM; Rodríguez, M; Romero, B et al. Diagnosis and Treatment of Pleural Effusion. Recommendations of the Spanish Society of Pulmonology and Thoracic Surgery. Update 2022. *Arch. Bronconeumol.* 2023. 59. (1): p. 27-35. FI: 8,000. Practice Guideline.
- Candel, FJ; Barreiro, P; Salavert, M; Cabello, A; Fernández Ruiz, M; Pérez Segura, P; San Román, J et al. Expert Consensus: Main Risk Factors for Poor Prognosis in COVID-19 and the Implications for Targeted Measures against SARS-CoV-2. *Viruses-Basel.* 2023. 15. (7): 1449. FI: 4,700. Review.
- Centeno Malfaz, F; Moráis López, A; Caro Barri, A; Peña Quintana, L; Gil Villanueva, N; Redecillas Ferreiro, S; Marcos Alonso, S et al. Nutrition in congenital heart disease: Consensus document. *An. Pediatr.* 2023. 98. (5): p. 373-383. FI: 2,100. Article.
- Chumbita, M; Puerta Alcalde, P; Yáñez, L; Cuesta, MA; China, A; Español Morales, I; Fernandez Abellán, P et al. High Rate of Inappropriate Antibiotics in Patients with Hematologic Malignancies and Pseudomonas aeruginosa Bacteremia following International Guideline Recommendations. *Microbiol. Spectr.* 2023. 11. (4): FI: 3,700. Article.
- Dagklis, T; Akolekar, R; Villalain, C; Tsakiridis, I; Kesrouani, A; Tekay, A; Plasencia, W et al. Management of preterm labor: Clinical practice guideline and recommendation by the WAPM-World Association of Perinatal Medicine and the PMF-Perinatal Medicine Foundation. *Eur. J. Obstet. Gynecol. Reprod. Biol.* 2023. 291. p. 196-205. FI: 2,600. Review.
- de la Peña, FA; Novoa, SA; Gregori, JG; Cortijo, LG; Carrasco, FH; Martínez, MTM; Estévez, CM et al. SEOM-GEICAM-SOLTI clinical guidelines for early-stage breast cancer (2022). *Clin. Transl. Oncol.* 2023. 25. (9): p. 2647-2664. FI: 3,400. Article.
- Faraldo Cabana, A; Sánchez Fructuoso, A; Pérez Flores, I; Beneit Montesinos, JV; Muñoz Jiménez, D; Jiménez, BP; Arredondo, SA et al. Development of an Information Guideline for Kidney Transplant Recipients in a Clinical Trial: Protocol for a Modified Delphi Method. *JMIR RES. Protoc.* 2023. 12. e46961. Article.
- Fernández Montes, A; Alonso, V; Aranda, E; Élez, E; García Alfonso, P; Grávalos, C; Maurel, J et al. SEOM-GEMCAD-TTD clinical guidelines for the systemic treatment of metastatic colorectal cancer (2022). *Clin. Transl. Oncol.* 2023. 25. (9): p. 2718-2731. FI: 3,400. Article.
- Gillessen, S; Bossi, A; Davis, ID; de Bono, J; Fizazi, K; James, ND; Mottet, N et al. Management of Patients with Advanced Prostate Cancer. Part I: Intermediate-/High-risk and Locally Advanced Disease, Biochemical Relapse, and Side Effects of Hormonal Treatment: Report of the Advanced Prostate Cancer Consensus Conference 2022. *Eur. Urol.* 2023. 83. (3): p. 267-293. FI: 23,400. Article.
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- Gosney, JR; Paz Ares, L; Jänne, P; Kerr, KM; Leigh, NB; Lozano, MD; Malapelle, U et al. Pathologist-initiated reflex testing for biomarkers in non-small-cell lung cancer: expert consensus on the rationale and considerations for implementation. *ESMO Open.* 2023. 8. (4): 101587. FI: 7,300. Article.

- Grávalos, C; Pereira, F; Vera, R; Arjona Sánchez, A; Losa, F; Ramos, I; García Alfonso, P et al. Recommendations for the optimal management of peritoneal metastases in patients with colorectal cancer: a TTD and GECOP-SEQ expert consensus statement. *Clin. Transl. Oncol.* 2023. 25. (12): p. 3378-3394. FI: 3,400. Article.
- Herrera, S; Aguado, JM; Candel, FJ; Cordero, E; Domínguez Gil, B; Fernández Ruiz, M; Los Arcos, I et al. Executive summary of the consensus statement of the group for the study of infection in transplantation and other immunocompromised host (GESITRA-IC) of the Spanish Society of Infectious Diseases and Clinical Microbiology (SEIMC) on the treatment of SARS-CoV-2 infection in solid organ transplant recipients. *Transplant. Rev.* 2023. 37. (4): 100788. FI: 4,000. Editorial Material.
- Humbert, M; Kovacs, G; Hoeper, MM; Badagliacca, R; Berger, RMF; Brida, M; Carlsen, J et al. 2022 ESC/ERS Guidelines for the diagnosis and treatment of pulmonary hypertension. *Eur. Resp. J.* 2023. 61. (1): 2200879. FI: 24,300. Article.
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- Lang, IM; Andreassen, AK; Andersen, A; Bouvaist, H; Coghlan, G; Escribano Subias, P; Jansa, P et al. Balloon pulmonary angioplasty for chronic thromboembolic pulmonary hypertension: a clinical consensus statement of the ESC working group on pulmonary circulation and right ventricular function. *Eur. Heart J.* 2023. 44. (29): p. 2659-2671. FI: 39,300. Review.
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- López Medrano, F; Alfayate, S; Carratalà, J; Chamorro Camazón, J; Cordero, E; Cruz Cañete, M; Fernández Prada, M et al. Executive summary - Diagnosis, treatment and prophylaxis of influenza virus infection - Consensus statement of the Spanish Society of Infectious Diseases and Clinical Microbiology (SEIMC), the Spanish Society of Pediatric Infectious Diseases (SEIP), the Spanish Association of Vaccinology (AEV), the Spanish Society of Family and Community Medicine (SEMFYC) and the Spanish Society of Preventive Medicine, Public Health and Health Management (SEMPSPGS). *An. Pediatr.* 2023. 98. (3): p. 213-227. FI: 2,100. Article.
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INNOVATION ACTIVITIES IN i+12. KNOWLEDGE TRANSFER

Throughout 2023, the Innovation Support Unit of the Instituto i+12 (UAI i+12) has carried out significant innovation activities that demonstrate the consolidation of the Unit.

INNOVATION IN FIGURES 2023

- 30** patent families in force*, for a total of **62** patents in force*.
- 1** utility model in force.
- 13** new patent applications:
 - 7** new priority patent applications (2 Spanish patents, 4 European patents, 1 priority patent in the UK).
 - 1** international extension application via PCT.
 - 5** applications in national phases or validations of European patents (1 Germany; 1 France; 1 United Kingdom; 1 European patent; 1 American patent).
- 3** Community trademark applications.
- 15** agreements with third parties (alliances, framework and specific agreements, CDAs and MTAs).

*New applications from 2023 are included.

PATENT FAMILIES IN FORCE IN 2023

1. Neutralizing antibodies against the alpha subunit of the interleukin 11 receptor (IL11RA) and their uses.
2. Interfering RNA for the treatment of type IA autoimmune lymphoproliferative syndrome.
3. Biomarker for the diagnosis, prognosis and monitoring of early-onset colorectal cancer.
4. Anti-CD19/Anti-CD3 BiTE STAb-T cells.
5. BCMA STAB-T cells for the treatment of multiple myeloma.
6. Combination of CAR-NK cells with NKG2A blocking agents, pharmaceutical composition that includes them and their applications.
7. Thiophene-derived compounds as potential viral agents.
8. Auxiliary device for insertion of peripheral venous catheter.
9. Anchoring device for umbilical catheter protection in neonates.
10. Ostomy fixation device for hernia prevention.
11. MicroRNA prognostic signature in neuroendocrine neoplasms (NENs) of gastroenteropancreatic and pulmonary origin.
12. Fusion proteins for the treatment of viral infections.
13. Galectin 1 inhibitors for use in combination with immunotherapy in the treatment of glioma.
14. Genomic sequencing analysis.
15. FGFR inhibitors for use in the treatment of lung cancer.
16. Artificial immune complexes and their use as calibres in B2GP1-AB2GP1 circulating immune complex detection systems.
17. Method for Determining the Presence or Absence of Minimal Residual Disease (MRD) in a subject who has been treated for a disease.
18. Method for Quantifying the Level of Minimal Residual Disease in a Subject.
19. Method for obtaining data to determine the risk of suffering from aortic stenosis (AS), by means of detection and quantification of the proteins endoplasmin and thrombospondin, and kit for the diagnosis and prognosis of AS.
20. In vitro method for the prognosis and/or diagnosis of diabetes mellitus in patients with aortic stenosis and/or for the prognosis and/or diagnosis of aortic stenosis in patients with diabetes mellitus.
21. Prognostic method to identify risk of recurrence in patients with stage I and II clear cell renal cell carcinoma kidney cancer and kit.

22. Method for predicting the risk of kidney damage through the detection of binucleated podocytes in urine.
23. miRNAs as predictors of response to BCG in bladder cancer.
24. Mouse model to determine the efficacy of immunotherapies in multiple myeloma.
25. Nanocapsule Compositions for the Controlled Release of Agents of Therapeutic Interest.
26. Predictive Panel for the Development of Albuminuria in Hypertensive Patients under Chronic Treatment. Metabolic Response Profile to Hypertension and Albuminuria.
27. Continuous Pasteurizer at High Temperatures and Short Times for Human Milk.
28. Procedure for the Production of Lipid Nanoparticles as Target Cells.
29. Use of DMSCS as a therapy for the treatment of stress urinary incontinence, in local injection into the urethral submucosa, in various doses over 3 months of treatment.
30. Use of the TOLL-LIKE Receptor 4/Serum Amyloid A1 (TLR4/SAA1) axis as a biomarker for the diagnosis, treatment and prognosis of acute brain injuries.

UTILITY MODELS IN FORCE IN 2023

1. Electromechanical mechanism for locating non-palpable lesions in mammograms.

The following is a description of the activity carried out in the i+12 IAB during the year 2023:

Industrial property

During 2023, work has been done on the management of a total of 13 industrial property rights (IPR) applications: 2 Spanish priority patents, 5 European patents, 5 patents in other countries (Germany, France, the United Kingdom and the United States), and 1 PCT international extension; and the application for 3 community trademarks: 'BlaDimiR +'; 'BlaDiStation' and 'BLADIMIR'.

- **Title: Método *in vitro* para el pronóstico y/o diagnóstico de diabetes mellitus en pacientes con estenosis aórtica y/ o para el pronóstico y/o diagnóstico de estenosis aórtica en pacientes con diabetes mellitus.**
Number: P202231005
Type: National patent (ES).
Date of presentation: 21/04/2023.
- **Title: Métodos para predecir el riesgo de daño renal mediante la detección de podocitos binucleados en orina.**
Number: P202330600.
Type: National patent (ES).
Date of presentation: 14/07/2023.
- **Title: Galectin 1 inhibitors for use in combination with immunotherapy in the treatment of glioma.**
Number: EP23382927.
Type: European patent.
Date of presentation: 12/09/2023.
- **Title: Fusion proteins for the treatment of viral infections.**
Number: EP23383050.
Type: European patent.
Date of presentation: 13/10/2023.
- **Title: Genomic Sequencing Analysis.**
Number: EP23383180.
Type: European patent.
Date of presentation: 17/11/2023.
- **Title: Células STAB-T BCMA para el tratamiento del mieloma múltiple.**
Number: EP23383410.
Type: European patent.
Date of presentation: 29/12/2023.

- **Title: Anticuerpos neutralizantes frente a la subunidad Alpha del receptor de interleuquina 11 (IL11RA) y usos de los mismos.**
Number: EP217431840.
Type: EFFNN PCT - European patent.
Date of presentation: 14/02/2023.
- **Title: Inhibidores de FGFR para uso en el tratamiento del cáncer de pulmón.**
Number: EP18836033-DE.
Type: Validation of European patent in GERMANY.
Date of presentation: 23/11/2023.
- **Title: Inhibidores de FGFR para uso en el tratamiento del cáncer de pulmón.**
Number: EP18836033-FR.
Type: Validation of European patent in FRANCE.
Date of presentation: 05/12/2023.
- **Title: Inhibidores de FGFR para uso en el tratamiento del cáncer de pulmón.**
Number: EP18836033-GB.
Type: European patent validation in the UNITED KINGDOM.
Date of presentation: 05/12/2023.
- **Title: Genomic sequencing analysis.**
Number: GB2311552.
Type: European patent validation in the UNITED KINGDOM.
Date of presentation: 27/07/2023.
- **Title: Anticuerpos neutralizantes frente a la subunidad Alpha del receptor de interleuquina 11 (IL11RA) y usos de los mismos.**
Number: US18016373.
Type: EFFNN PCT - US patent.
Date of presentation: 16/01/2023
- **Title: Derivados de tiofeno como potenciales agentes antivirales.**
Number: PCT/ES2023/070691.
Type: PCT international extension.
Date of presentation: 20/11/2023.

Trade mark application

- **Title: *BlaDimiR* +.**
Number: MCO18956077.
Type: Community Trademark.
Owners: Fundación i+12 (100 %).
Date of application: 24/10/2022.
- **Title: *BlaDiStation*.**
Number: MCO18956006.
Type: Community Trademark.
Owners: Fundación i+12 (100 %).
Date of application: 24/10/2022.
- **Title: *BLADIMIR*.**
Number: MCO18956032.
Type: Community Trademark.
Owners: Fundación i+12 (100 %).
Date of application: 24/10/2022.

Intellectual property

Since UAI i+12, we have participated in the registration of one piece of software in the Intellectual Property Registry of the País Vasco:

- INFORM AI ENABLED ARTERY FLOW BIOMARKER EXTRACTION FROM MRI. *Software and database design.*

Participation in innovation calls

The staff of the UAI i+12 have provided support in the preparation and presentation of proposals to different national and international calls, also participating as part of the applicant research team in most of them:

- Call for Health Research Projects (AES 2023), modality Technological Development Projects in Health. Two applications submitted, although they were not finally funded
- 2023 call for grants from the Fundación Científica de la Asociación Española Contra el Cáncer for cancer innovation projects (AECC INNOVA). One application led by Mr. Cristian Suárez was granted: "BLADIMIR AND BLADIMIRPLUS. Multicenter validation of a novel and efficient system for the diagnosis and prediction of BCG response in patients with bladder cancer"
- 2023 call for proposals from the "CAIXAIMPULSE" branch of the Fundación la Caixa . An application led by Ms. Marta Dueñas Porto was granted: "BlaDimiR, non-invasive urine-based diagnostic and therapy response predictor for bladder cancer"
- Pfizer Foundation Award for the best health innovation project arising from the nodes and centres affiliated to the ITEMAS-ISCIll platform. An application led by Ms. Marta Dueñas Porto and Cristian Suárez granted: "BlaDimiR, new diagnostic system for the early detection of bladder cancer"

Activity within the framework of the ITEMAS-ISCIll Platform

- Participation in the **Commission for the Promotion of Innovation** of ITEMAS-ISCIll.
- Attendance at the General Assembly of ITEMAS-ISCIll (October 18-20, 2023).

Cooperative activity

- Participation in different working groups of the **Consejería de Sanidad de Madrid**, Dirección General de Investigación, Docencia y Documentación, and the **Instituto de Salud Carlos III**.
- The UAI i+12 is part of the **Unidad de Cultura Científica y de la Innovación** del Hospital 12 de Octubre, accredited by the FECYT, coordinating part of its activities.

Alliances and search for partners

- Signature of 2 confidentiality agreements.
- Signature of 13 MTA (Material Transfer Agreement) agreements with third parties.

Industry 4.0

- Participation of the UAI i+12 in the Working Commission of the 3D Printing Unit set up at the Hospital Universitario 12 de Octubre.

Transfer actions

- Publication of technological offer files relating to the portfolio of patents and utility models available on the institutional website www.imas12.es.
- Search for licensees through different platforms (EEN, LinkedIn, Twitter, among others).
- Meetings with companies interested in the technology portfolio for possible licensing or development.
- Advice to healthcare professionals from the Instituto i+12 on the strategy for setting up two spin-offs in the hospital environment.

Outreach activities by the IAU i+12:

Management and promotion of the participation of professionals from the Hospital 12 de Octubre / i+12 in Semana de la Ciencia 2023 (from November 6 to 19, 2023):

- "¿Qué impacto tiene la investigación en el trasplante renal?". Dr. Natalia Redondo Sevillano, D.^a Tamara Ruiz Merlo. Infectious Diseases Unit.
- "Daño cerebral traumático. Compartiendo visiones y esperanzas". Dr. Alfonso Lagares, **Head of the Neurosurgery Department at the Hospital 12 de Octubre, Neurotraumatology and Subarachnoid Hemorrhage Group**; D.^a Aurora Lassaletta, President of the Invisible Brain Damage Association.
- "Jornada de Puertas Abiertas Biobanco i+12. Los Biobancos como Herramienta de Investigación Biomédica". D.^a Alicia Maroto, coordinator of the Biobank of the i+12.
- "Banco Regional de Leche Materna Donada. Equidad desde el principio de la vida".
- "El ciclo de la investigación traslacional: del paciente al laboratorio y viceversa". Center for Experimental Oncology.



- "Misterios del corazón: la imagen cardíaca al servicio de la salud". Dr. Jorge Solís, cardiologist, coordinator of the Cardiac Imaging Unit of the Cardiology Department of the Hospital 12 de Octubre; Sergio Casavázquez, technician specialized in echocardiography.
- "Células iPS: Nuestras aliadas para el estudio de enfermedades y para la búsqueda de tratamientos". M.ª Esther Gallardo Pérez, head of the iPS cell Translational Research Group.

07

TRAINING
ACTIVITIES

In 2023, as part of its annual training plan, the Hospital 12 de Octubre carried out various training activities aimed at providing specific training in the scientific field to all professionals who are part of the Instituto i+12.

COURSES

In 2023, various courses related to research training were held at the Instituto i+12. They are as follows:

- Course on Data Management and Analysis in Biomedical Research. From January 17 to February 9, 2023, from 4:00 p.m. to 7:30 p.m. Face-to-face and virtual course.
- 23rd Dermatopathology Course. March 3 and 4, 2023, from 09:00 to 19:00 and from 09:00 to 15:00. Face-to-face course. Auditorium of the Hospital Universitario 12 de Octubre.
- Virtual Library of the Hospital Universitario 12 de Octubre. 10 hours. From March 1 to 15, 2023. Virtual course.
- Author Signatures Workshop: Researcher Profile. 3 hours. March 8, 15 and 22, 2023. Computer Room No. 1, 6th floor, CAA.
- Bibliographic searches in PUBMED. Online course. 25 hours. March 27 - April 30, 2023. Virtual course.
- Bibliographic Managers in Health Sciences Course. 30 hours. May 3-19, 2023. Virtual course.
- Basic Research Methodology Course. 50 hours. May 22, 23, 29, and 30 and June 5, 6, 2023, from 9:00 a.m. to 2:00 p.m. June 12, 13, 2023, from 9:00 a.m. to 3:00 p.m. Face-to-face course. Training room, 6th floor, CAA.
- Virtual Library of the Hospital Universitario 12 de Octubre. Ed. 2. 10 hours. September 15-30, 2023. Virtual course.
- Resources for Scientific Evidence. 20 hours. October 2-31, 2023. Virtual course.
- Dissemination of Scientific Activity. 10 hours. October 5 - November 16, 2023. Virtual course.
- Authorship, Author's Signature and Researcher Profile. November 1-15, 2023. Virtual course.
- i+12 Scientific Dissemination Workshop. December 14, 2023, from 9:30 a.m. to 12:30 p.m. Face-to-face course.

CONFERENCES, MEETINGS AND CONGRESSES

In 2023, various types of informative scientific conferences were also held at the Instituto i+12:

- 4th Conference on Clinical Cases for Residents. March 9, 2023, from 10:00 a.m. to 3:00 p.m. Auditorium of the Hospital Universitario 12 de Octubre.
- Open House for Future Residents. March 21, 2023, from 09:00 a.m. to 12:00 p.m. Auditorium of the Hospital Universitario 12 de Octubre.
- IV Conference on Biologicals, Safety and Infection (BI-SEIF). March 22, 2023, from 4:00 p.m. to 7:15 p.m. Auditorium of the Hospital Universitario 12 de Octubre.
- 1st Juner Researchers Conference 2023 - Instituto de Investigación Hospital Universitario 12 de Octubre. May 24 and 25, 2023, from 8:30 a.m. to 5:00 p.m.. Auditorium of the Hospital Universitario 12 de Octubre.
- Conference on Systemic Autoimmune Diseases with Renal Involvement. A Joint Vision. October 10, 2023, from 2:15 p.m. to 7:00 p.m. Auditorium of the Hospital Universitario 12 de Octubre.
- 10th Update Conference on Medical and Nutritional Treatment of the Critical Patient. "From admission to the ICU to home care". November 28 and 29, 2023, from 4:00 p.m. to 7:45 p.m. and from 9:00 a.m. to 6:30 p.m. Auditorium of the Hospital Universitario 12 de Octubre.
- 5th International Conference on Pulmonary Hypertension. December 1, 2023, from 8:30 a.m. to 6:00 p.m. Auditorium of the Hospital Universitario 12 de Octubre.
- 10th Organ Transplant Update Conference. December 14 and 15, 2023, from 8:30 a.m. to 5:30 p.m. Auditorium of the Hospital Universitario 12 de Octubre.
- 5th Vascular Risk Update Conference. December 19 and 20, 2023, from 3:30 p.m. to 7:00 p.m. Auditorium of the Hospital Universitario 12 de Octubre.

i+12 SESSIONS

The i+12 research sessions are events organized by the Instituto i+12. Their objective is to inform the parties involved, i+12 researchers, the scientific community, patient groups and society in general, about the research activities carried out mainly by the professionals who form part of the institution. In addition to disseminating the knowledge generated at the Institute, they also aim to strengthen collaboration between the research groups participating in the sessions, as well as to establish new collaborative actions with external researchers.

The i+12 research sessions are accredited by the Continuing Education Unit of the Hospital 12 de Octubre. For this reason, good planning is necessary. The proper scheduling of the i+12 sessions guarantees the availability of the speakers and the elaboration of attractive content of interest to the recipients of the information. It also facilitates the attendance of as many interested parties as possible at the research sessions.

Since 2020, these sessions have been held virtually via the Zoom platform.

The sessions are given by both i+12 researchers/professionals and renowned researchers/professionals from other institutions. In them, participants present different topics of interest to the scientific community.

Given that the i+12 research sessions planned by the Institute are open sessions and can be attended by anyone, the dissemination activities carried out are very active.

The following i+12 sessions were held in 2023:

DATA	TITLE	SPEAKERS
18/01/2023	Manejo multidisciplinar del Cáncer de Recto: hacia la incorporación de nuevos paradigmas	Dr. Carlos Cerdán Santacruz*
08/02/2023	Presentación del Grupo de Neurofarmacología Comportamental Aplicada	Dr. José Antonio López Moreno Dr. Laura Orio Ortíz
15/03/2023	¿Qué nos han enseñado los estudios de cohorte en la enfermedad de Parkinson y en el temblor esencial?	Dr. Julián Benito León
24/03/2023	Presentación de la Acción Estratégica en Salud 2023 - ISCIII	Dr. Joaquín Arenas Barbero
12/04/2023	Nuevos avances en el estudio de enfermedad medible residual en mieloma múltiple	Dr. Joaquín Martínez López
13/04/2023	Solicitud de participación de la Plataforma ISCIII de soporte para la investigación clínica en los Proyectos de Investigación Clínica Independiente (PICI) 2023	Dr. David Lora Pablos
22/05/2023	Unravelling a complex conversation within the tumour microenvironment	*Dr. Tracy Putoczki
31/05/2023	Género y salud cardiovascular: un desafío para la igualdad	Dr. M.ª Lourdes Vicent Alamillos
14/06/2023	PostCOVID o Long COVID, buscando causas y soluciones. Experiencia de los 3 últimos años.	Dr. María Ruiz Ruigómez
27/09/2023	La Cultura del Cuidado del Animal. Pasos a seguir para solicitar un proyecto experimental.	Ms. Montserrat Grau Sanz Dr. Inés García-Consuegra Galiana
18/10/2023	El "ecosistema" tumoral en el cáncer de pulmón y sus posibles vulnerabilidades	Dr. Álvaro Uceró Herrería
07/11/2023	Presentación de la Memoria de Actividad Anual 2022 del Instituto i+12	Dr. Joaquín Arenas Barbero
15/11/2023	Predictores de no adherencia a las medidas de prevención secundaria en infarto: identificando a pacientes vulnerables	Dr. Guillermo Moreno Muñoz
13/12/2023	¿Por qué nos seguimos infectando por SARS-CoV-2?	Dr. Rafael Delgado Vázquez

*External speaker

i+12 SEMINARS

At i+12, monthly research seminars are also held for all the Institute's staff and are usually given by i+12's own researchers. These seminars deal with aspects related to the scientific activity carried out by the research group, as well as the main results obtained by the group in the last period. The audience for these seminars is mainly the researchers of the Instituto i+12 itself, although attendance is open to any interested public.

Since 2020, these seminars have been held virtually via the Zoom platform.

The following i+12 research seminars have been held during 2023:

- 27 January 2023 - Dr. Juan Pedro Ramírez García. Medical Director of the R+D+i Department - Laboratorio Pharmasor. **"Introducción a los Psicobióticos"**.
- 24 February 2023 - Dr. Alberto Zambrano Duarte. Stem Cell and Organoid Biotechnology Laboratory of the UFIEC (Functional Unit for Research into Chronic Diseases) - Instituto de Salud Carlos III. **"Generación de Minipulmones a partir de células troncales pluripotentes embrionarias humanas"**.
- 24 March 2023 - Dr. Daniel Arroyo Sánchez. Resident in the Immunology Department. Member of the Immunodeficiencies and Transplant Immunology Research Group - Instituto i+12. **"Respuesta frente al SARS-CoV-2 en pacientes con inmunodeficiencia común variable"**.
- 14 April 2023 - D. Javier Ramos Paradas. Predoctoral researcher in the Thoracic and Clinical-Translational Oncology Research Group. Cancer Area - Instituto i+12. **"Caracterización exhaustiva del genotipo molecular e inmunofenotipo del cáncer de pulmón no microcítico"**.
- 19 May 2023 - Dr. María Lasa Lázaro. Resident in the Immunology Department (H120). Member of the Immunodeficiencies and Transplant Immunology Research Group - Instituto i+12. **"Inmunología del Trasplante Intestinal: de la Investigación a la Clínica"**.
- 23 June 2023 - Dr. María Paz de la Torre Merino. Postdoctoral researcher in the Regenerative Medicine Research Group - Transversal Area - Instituto i+12. **"Estudio preclínico del tratamiento de la incontinencia urinaria con células perinatales"**.
- 22 September 2023 - Ms. Beatriz Herrero Fernández - Predoctoral researcher in the Inflammatory and Autoimmune Diseases Research Group, part of Area 6 of Inflammatory Diseases and Immune Disorders - Instituto i+12. **"Lámina A/C como modulador de la respuesta inmune mieloide en el contexto de enfermedades virales y enfermedad inflamatoria intestinal" (ensayo de tesis)**.
- 27 October 2023 - Dr. Jonay Poveda Núñez - Postdoctoral researcher in the Translational Research Group in Hypertension and Cardioresenal Disease within the framework of Cardiovascular Area 5 - Instituto i+12. **"TWEAK como biomarcador, diana y estrategia terapéutica en el síndrome cardiorrenal tras un fracaso renal agudo isquémico"**.
- 24 November 2023 - Dr. Pilar Sánchez-Corral Gómez - Head of the Research Group for the Diagnosis and Treatment of Pathologies Associated with Alterations of the Complement System- IdiPAZ. **"Screening inmunológico de defectos del complemento en patología renal"**.
- 15 December 2023 - Ms. Marta García López. Predoctoral researcher in the Translational Research Group with iPSC Cells. Cross-disciplinary Area - i+12. **"Generación de un modelo humano de RGCs para el estudio y aproximación a terapia de la atrofia óptica dominante"**.

i+12 TRANSFER SESSIONS

In recent years the links between basic and clinical research have been strengthened thanks to the development of so-called "translational research".

Translational research is key to the generation of scientific knowledge with potential impact on clinical practice. It is based on coordinated and multidisciplinary work, and on constant two-way communication between clinical researchers and those with more basic training.

For this reason, the Teaching Committee of the Instituto i+12 has planned the **Sesiones Transfiere12**. These are basic clinical research sessions with the following objectives:

- To carry out the clinical analysis of a problem that is being addressed through a line of basic research.
- To stimulate interaction between basic and clinical researchers and thus optimize the establishment of synergies, the development of quality translational research and the optimal translation of results into clinical practice.
- To promote communication between basic and clinical research and to make known to the parties involved the research activities carried out by the professionals who are part of i+12.

Throughout 2023, the following TRANSFIERE12 sessions have been held:

8:30 H - 9:30 H	SERVICE/GROUP i+12	BASIC CLINICAL RESEARCHER	TITLE
17 January 2023	Neuro-oncology A1 - Neuro-oncology	Dr. Juan Manuel Sepúlveda Sánchez Dr. Ricardo Gargini	La importancia de la Biología Molecular en el diagnóstico y en el tratamiento de los gliomas
21 February 2023	Rheumatology. A6 - Inflammatory and Autoimmune Diseases	Dr. José Luis Pablos Álvarez Dr. Patricia Carreira Delgado	Esclerosis Sistémica. Investigación Traslacional en las Enfermedades Fibrosantes
21 February 2023	Rheumatology. A6 - Inflammatory and Autoimmune Diseases	Dr. José Luis Pablos Álvarez Dr. Patricia Carreira Delgado	Esclerosis Sistémica. Investigación Traslacional en las Enfermedades Fibrosantes.
28 March 2023	Infectious Diseases A7 - Infectious Pathologies	Dr. Cristina Domínguez González Dr. Miguel Ángel Martín Casanueva	Miopatía Mitocondrial TK2. Ejemplo de éxito en la traslación directa de resultados del laboratorio a la clínica gracias al trabajo multidisciplinar en red y a la implicación de los pacientes
21 April 2023	Hematology and Hemotherapy A1 - Translational Hematology	Dr. Joaquín Martínez López Dr. Jesús San Miguel Izquierdo (Medical Director of the Clínica UN) Dr. Juan José Lahuerta Palacios	La investigación clínica: un reto o una obligación ¿El grupo español de Mieloma, un Modelo de Investigación Clínica?
16 May 2023	Pediatrics/ Immunology A6 - Immunodeficiencies and Transplant Immunology	Dr. Luis Ignacio González Granado Dr. Luis Allende Martínez	Combined immunodeficiencies: from bench to bedside
20 June 2023	Nephrology A2 - Clinical Nephrology A2 - Aging, Neuroimmunology and Nutrition (UCM)	Dr. Enrique Morales Ruiz Dr. Julia M.ª Carracedo Añón	Envejecimiento vascular del paciente con enfermedad renal crónica: ¿mito o realidad?
19 September 2023	Traumatology and Orthopaedic Surgery Research into Intelligent Biomaterials	Dr. Beatriz Bravo Giménez Dr. Antonio Jesús Salinas Sánchez	Diseño y evaluación de nuevos sustitutivos óseos basados en biocerámicas, biomoléculas y células mesenquimales
17 October 2023	Cardiology Research Molecules Regulating Inflammatory Processes (CNIC)	Dr. Héctor Bueno Zamora Dr. Pilar Martín Fernández	Resolución de la respuesta inmune tras daño miocárdico: desde los modelos animales hasta el paciente
21 November 2023	Internal Medicine A3 - Rare, Mitochondrial and Neuromuscular Diseases	Dr. Montserrat Morales Conejo D. Juan Francisco Quesada Espinosa	Interpretación de variantes: ¡Estudios funcionales al rescate!
19 December 2023	Pathological Anatomy A1 - Skin Oncology	Dr. José Luis Rodríguez Peralto Dr. M.ª Concepción Garrido Ruiz	Ayuda de la Inteligencia artificial al diagnóstico de Melanoma

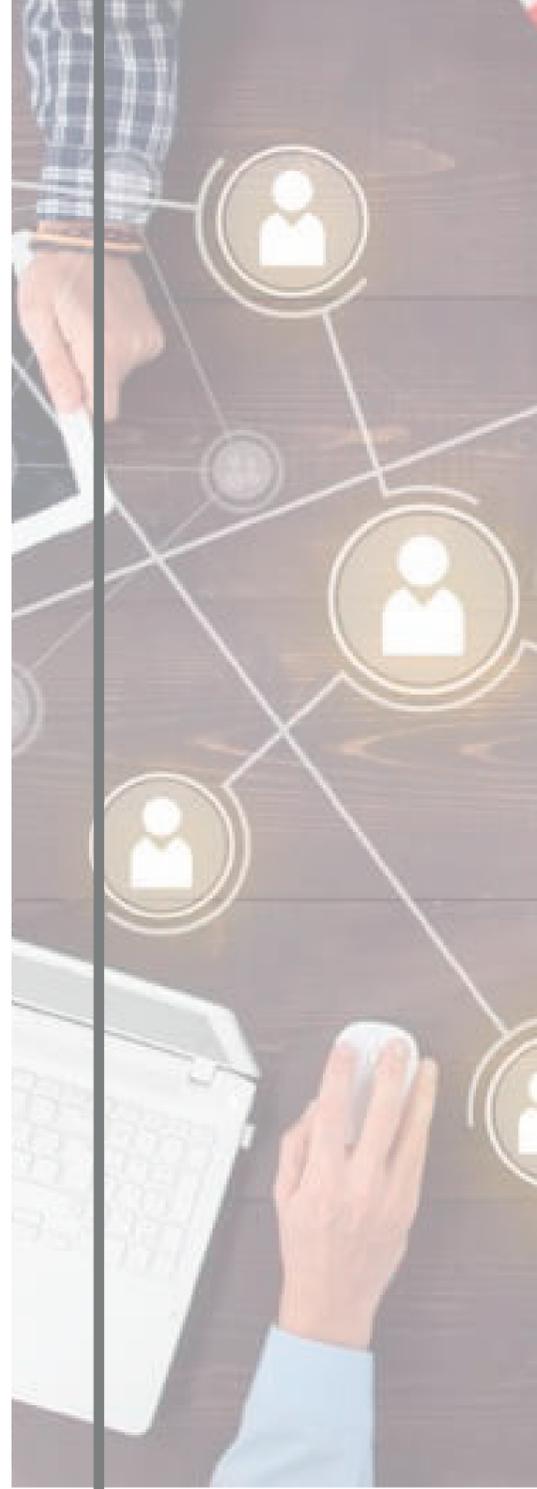
Name	Title of the thesis	University	Date of reading	Research area/ group	Thesis supervisor
Luis Alejandro Chang Azancot	Edad y reconstrucción mamaria	Universidad de Castilla-La Mancha	24/05/2023	Cancer/Breast and Gynecological Cancer	Rodrigo Sánchez Bayona
Alba Rodríguez García	El papel de los antígenos microbianos en los reordenamientos monoclonales en mieloma múltiple	Universidad Complutense de Madrid	01/02/2023	Translational Cancer/ Hematology	María Linares Gómez Joaquín Martínez López
Elena Maroto Martín	Desarrollo preclínico de la inmunoterapia adoptiva con células NK CAR alogénicas para el tratamiento del mieloma múltiple refractario y en recaída	Universidad Complutense de Madrid	20/04/2023	Translational Cancer/ Hematology	Joaquín Martínez López Antonio Valeri Lozano
Pedro Aguilar Garrido	Implicación de HNRNPK en las alteraciones nucleolares asociadas al envejecimiento	Universidad Complutense de Madrid	17/11/2023	Translational Cancer/ Hematology	Miguel Gallardo Delgado
Carmen Domínguez Alonso	Desarrollo de estrategias de optimización de la inmunoterapia "STAB"	Universidad Complutense de Madrid	18/12/2023	Cancer/Immuno-oncology and Immunotherapy	Luis Álvarez Vallina
Inés Romero Carramiñana	IF1 como regulador de la función mitocondrial y su implicación en el sistema inmune	Universidad Autónoma de Madrid	27/10/2023	Cancer/Translational Energy Metabolism	José Manuel Cuezva Marcos
Ricardo Errazquin Ciudad	Nuevos modelos de enfermedad y herramientas de diagnóstico para el carcinoma escamoso de cabeza y cuello en pacientes con Anemia de Fanconi	Universidad Autónoma de Madrid	13/11/2023	Cancer/Oncology Genitourinary and Cellular and Molecular	Ramón García Escudero
Javier Ramos Parada	Caracterización exhaustiva del genotipo molecular e inmunofenotipo del cáncer de pulmón no microcítico	Universidad Complutense de Madrid	22/03/2023	Thoracic and Clinical-Translational Oncology/ Cancer	Eva Garrido Luis Paz-Ares Rodríguez
Gabriel Heras La Calle	La Humanización de las Unidades de Cuidados Intensivos: de la utopía a la realidad a través de la investigación colaborativa multicéntrica	Universidad Francisco de Vitoria	12/05/2023	Chronic Diseases and Transplantation/ Critically Patient	María Cruz Martín Delgado

Name	Title of the thesis	University	Date of reading	Research area/ group	Thesis supervisor
Rosa María Catalán Ibars	Acciones de mejora en la seguridad durante el traslado intrahospitalario del paciente crítico	Universidad de Vic - Universidad Central de Cataluña	12/12/2023	Chronic Diseases and Transplantation/ Critically Patient	María Cruz Martín Delgado
María Illescas García	Functional involvement of actin-binding gelsolin in mitochondrial OXPHOS dysfunction	Universidad Autónoma de Madrid	18/09/2023	Rare and Genetic Diseases/Rare, Mitochondrial and Neuromuscular Diseases	Cristina Ugalde Bilbao
Francisco Javier Cotrina Vinagre	Medicina personalizada de enfermedades raras: del diagnóstico genético al fármaco	Universidad Autónoma de Madrid	03/11/2023	Rare and Genetic Diseases/Rare, Mitochondrial and Neuromuscular Diseases	Francisco Martínez Azorín
Carmen Romero Ferreiro	Variabilidad Geográfica y Temporal del Consumo de Ultraprocesados y Mortalidad Asociada en España	Universidad Complutense de Madrid	27/06/2023	Research into Health Outcomes and Digital Transformation/Digital Health	Agustín Gómez de la Cámara
Jesús Rodríguez López	Episodios de disminución de la saturación de oxígeno en recién nacidos en contacto piel con piel	Universidad Complutense de Madrid	07/02/2023	Research into Health Outcomes and Digital Transformation/ Maternal and Child Health	Carmen Pallás Alonso
Guillermo Moreno Muñoz	Predictores de incumplimiento de las medidas de prevención secundaria en infarto	Universidad Complutense de Madrid	20/02/2023	Cardiovascular/ Multidisciplinary Cardiovascular Research Translational	Héctor Bueno Zamora
Luca Vannini	Técnicas de imagen cardiopulmonar no invasivas y pruebas funcionales respiratorias: identificación de secuelas cardiopulmonares durante la pandemia por COVID 19	Universidad Rey Juan Carlos	19/09/2023	Cardiovascular/ Cardiovascular Imaging Research	María Dolores Martín Ríos Carmen Jiménez López-Guarch
Alejandro Cruz Utrilla	Prevalencia e Impacto en el Fenotipo de las Variantes Genéticas en la Hipertensión Arterial Pulmonar Pediátrica y del Adulto	Universidad Complutense de Madrid	30/03/2023	Cardiovascular/ Research into Heart Failure and Pulmonary Hypertension	María del Pilar Escribano Subías María Jesús del Cerro Marín Juan Francisco Delgado Jiménez

Name	Title of the thesis	University	Date of reading	Research area/ group	Thesis supervisor
Jesús Rodríguez Calvo	Evolución perinatal y a corto-medio plazo de los recién nacidos con crecimiento intrauterino restringido	Universidad Complutense de Madrid	03/10/2023	Cardiovascular/ Perinatal Medicine	Alberto Galindo Izquierdo Ignacio Herraiz García
María Concepción Carrera Roig	Diseño y validación de un modelo predictivo del riesgo de gestación múltiple con transferencia de dos embriones en fecundación <i>in vitro</i>	Universidad Complutense de Madrid	23/10/2023	Cardiovascular/ Perinatal Medicine	Alberto Galindo Izquierdo Laura de la Fuente Bitaine Juan Antonio García Velasco
Juan López Relaño	Efecto <i>in vitro</i> de la lenalidomida sobre la diferenciación de células dendríticas	Universidad Complutense de Madrid	28/02/2023	Inflammatory Diseases and Immune Disorders/Lymphocyte Immunobiology	Eduardo Martínez Naves, Manuel Gómez del Moral
Álvaro Torres Gómez	Activación y señalización del receptor del complemento CR3.*	Universidad Complutense de Madrid	06/03/2023	Inflammatory Diseases and Immune Disorders/Lymphocyte Immunobiology	Esther Lafuente Duarte Carlos Cabañas Gutiérrez
Teresa Fuertes Novella	Caracterización del potencial terapéutico de miR-28 para el tratamiento de linfomas B	Universidad Autónoma de Madrid	17/03/2023	Inflammatory Diseases and Immune Disorders/Lymphocyte Immunobiology	Virginia García de Yébenes Almudena R. Ramiro
Óscar Aguilar Sopena	Las fosfatasas de regeneración hepática controlan los reordenamientos de actina y la arquitectura de la sinapsis inmunitaria de los linfocitos T a través del regulador de dominios repetidos WD 1.*	Universidad Complutense de Madrid	02/11/2023	Inflammatory Diseases and Immune Disorders/Lymphocyte Immunobiology	Pedro Roda Navarro
Luis Ignacio González Granado	Caracterización clínica, molecular y funcional de las inmunodeficiencias primarias y sus implicaciones terapéuticas	Universidad Complutense de Madrid	17/06/2023	Inflammatory Diseases and Immune Disorders/ Immunodeficiency and Transplant Immunology	Jesús Ruiz Contreras Jaime de Inocencio Arocena Luis M. Allende Martínez

Name	Title of the thesis	University	Date of reading	Research area/ group	Thesis supervisor
María Ángeles Meléndez Carmona	Aspectos microbiológicos relacionados con las infecciones de prótesis articulares por estafilococos	Universidad Autónoma de Madrid	19/05/2023	Infectious Diseases and AIDS/Molecular Epidemiology of Hospital-Acquired and Emerging Infections	Esther Viedma Moreno Jaime Lora-TaMay
Nuria Labiod Becerro	Interacción y relevancia biológica de la lectina DC-SIGN con la envuelta del virus emergente SARS-CoV-2	Universidad Complutense de Madrid	06/03/2023	Infectious Diseases and AIDS/Virology-HIV/AIDS	Rafael Delgado Sánchez Joanna Luczkowiak Fátima Lasala
Leticia Gil de Biezma Elduayen	Modulación de la vía de kinurenina en el tratamiento de la dependencia alcohólica: factores neuroquímicos y respuestas cognitivo-conductuales asociadas al abuso de etanol	Universidad Complutense de Madrid	19/01/2023	Neuroscience and Mental Health/Addictions and Comorbidity	M.ª Isabel Colado Megía M.ª Esther O'Shea Gaya Pablo Giménez Gómez
Nuria Morales Puerto	Prevención del déficit de memoria inducido por la exposición intensiva a etanol en ratón mediante el compuesto neuroprotector 3,3'-diindolilmetano	Universidad Complutense de Madrid	03/02/2023	Neuroscience and Mental Health/Addictions and Comorbidity	M.ª Esther O'Shea Gaya M.ª Dolores Gutiérrez López Rebeca Vidal Casado
Marta Moya Montes	Implicación del sistema inmune innato en las alteraciones cognitivas y emocionales del Síndrome de Wernicke-Korsakoff	Universidad Complutense de Madrid	16/03/2023	Neuroscience and Mental Health/Applied Behavioral Neuropharmacology/Translational Psychiatry	Laura Orio Ortiz Eva M.ª Marco Borja García-Bueno
Cristina Torres López	Deterioro cognitivo tras ictus isquémico: mecanismos implicados en la disfunción de la neurogénesis hipocampal*	Universidad Complutense de Madrid	27/10/2023	Neuroscience and Mental Health/Neurovascular	María Ángeles Moro Ignacio Lizasoain María Isabel Cuartero
Álvaro González Bris	Inmunidad innata y neuroinflamación en modelos doble-hit de patologías neuropsiquiátricas en rata: estudio de potenciales dianas farmacológicas	Universidad Complutense de Madrid	10/03/2023	Neuroscience and Mental Health/Translational Psychiatry	Karina MacDowell Javier R. Caso Juan Carlos Leza Cerro

Name	Title of the thesis	University	Date of reading	Research area/ group	Thesis supervisor
Irene López Gutiérrez	Estudio de los efectos neuroprotectores y antiinflamatorios de la noradrenalina y del potencial terapéutico de la reboxetina en la enfermedad de Alzheimer.*	Universidad Complutense de Madrid	23/06/2023	Neuroscience and Mental Health/Translational Psychiatry	José Luis Muñoz Madrigal
Fabián Hernández Álvarez	Estrés oxidativo e inflamación en trastorno bipolar de inicio temprano.	Universidad Complutense de Madrid	10/11/2023	Neuroscience and Mental Health/Translational Psychiatry	Carmen Moreno Juan Carlos Leza Cerro
Gonzalo Luengo Alonso	Tratamiento de defectos óseos metafisarios en hueso osteoporótico mediante implantes de vidrio mesoporoso enriquecidos con células mesenquimales y osteostatina	Universidad Complutense de Madrid	08/03/2023	Cross-disciplinary/Research into Intelligent Biomaterials	Antonio Salinas Sánchez David Cecilia López
Laura Isabel Arias Rodríguez	Evaluación osteogénica <i>in vitro</i> de extractos	Tecnológico Nacional de México. Instituto Tecnológico de Tuxtla Gutiérrez	09/11/2023	Cross-disciplinary/Research into Intelligent Biomaterials	Sandra Sánchez Salcedo
Victoria Cerrada López	Enfermedad de McArdle: Generación de un modelo de músculo esquelético humano basado en el uso de iPSCs	Universidad Complutense de Madrid	18/05/2023	Transversal/Translational Research with iPSCs	María Esther Gallardo Pérez
Bernardo López Torres	Neurotoxicidad inducida por el piretroide lambda cialotrin	Universidad Complutense de Madrid	26/05/2023	Transversal/Toxicology and Safety of Chemical and Biological Agents	María Aránzazu Martínez Caballero Irma Ares Lombán



08

COMMUNICATION
ACTIVITIES



The communication and dissemination of information is one of the main tools available to an institution to improve its visibility in the environment and to promote the development of the activities it carries out in collaboration with other entities and related groups.

Among the strategic objectives identified in the Strategic Plan of the Instituto i+12 for the period 2019-2023 is to increase the visibility of the i+12. To achieve this strategic objective, communication, both internal and external, is a fundamental tool.

In this sense, in order to ensure that the knowledge generated by the professionals who make up the Instituto i+12 is adequately disseminated and effectively reaches the scientific community and the general population, the Instituto has identified and defined a series of priority communication channels, included in its Comprehensive Communication Plan.

For both internal and external communication to be effective, it is essential to periodically evaluate the communication channels in place. This will make it possible to identify the most effective channels and strengthen those that are less so.

The ultimate goal of the Communication Plan is to improve the visibility of the Institute as a center of reference in the field of biomedical research and to boost its image in society as a whole.

Below is a list of the number and impact of news items, mainly associated with professionals from the Instituto i+12 linked to HU120, disseminated by different media throughout 2023.

In 2023, 30 press releases were disseminated and another 4 news items were published on the website. In addition to the 746 impacts, which were the result of the dissemination and management of press releases, 242 more impacts were generated as a result of topics offered to the media for reporting, at the request of the media themselves or through information from other entities or institutions that mention the Instituto i+12/H120.

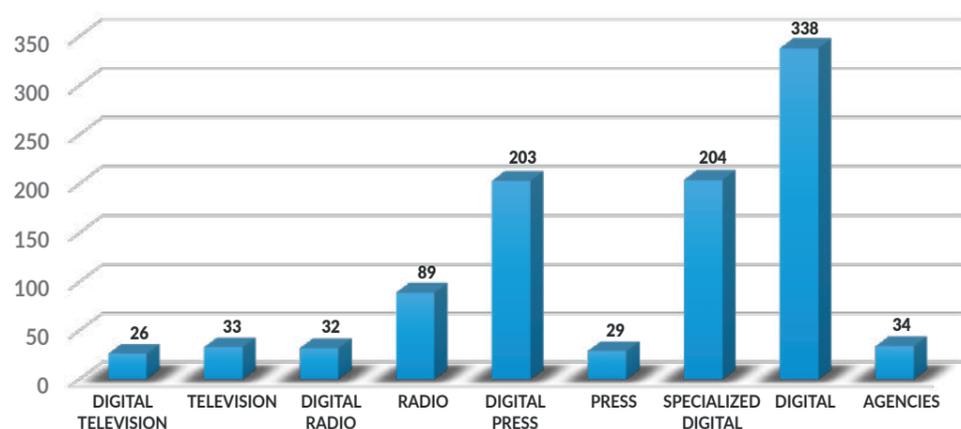
CHANNELS OF COMMUNICATION	IMPACT
Inauguration of the Center for Experimental Oncology	20
Artificial Intelligence's Soul Project	7
Test to identify patients with follicular lymphoma who will relapse	21
First drug that blocks and degrades oncoprotein in hematological tumors	24
European project App against antibiotic resistance in children	24
Drug for large cell lung cancer reduces progression 34%	40
Treatment for small cell lung cancer	22
Pill halts progression of glioblastoma for several years	83
Flu plus bacterial pneumonia triples risk of death	5
1st hospital in Madrid and 3rd in Spain in public health research projects	21
"Stab cell" based therapy against leukemia, very difficult to treat	39
Project for vision loss in patients with optic neuropathies	30
Empirical project for babies with tuberculosis and HIV	35
Jacardi project to reduce burden of cardiovascular disease and diabetes	2
Study of patients with cleft lip and palate using 3D intraoral scanner	15
Fero grant for improving lung cancer immunotherapies	25
Study of alterations in one of the most aggressive prostate cancers	20
Hybrid immunotherapy of antibodies and vaccines against future pandemics	33
Biomarker identifies alcoholic patients in abstinence with cognitive impairment	25
Protein alterations detect therapy-resistant acute myeloid leukemia	15

CHANNELS OF COMMUNICATION

IMPACT

Treatment reduces stroke mortality from 18 to 5 percent	43
Young Researchers Award	12
Immunotherapy against hematological cancers resistant to current therapy	13
Treatable genomic alterations in lung cancer detected in 72 hours	39
Mary J. Matthews Award for Pathology/Translational Research	2
Ennova Salud 2023 Award in the Big Data and Artificial Intelligence category	1
Cardiologist receives the 'VI Menudos Corazones Scholarship'	2
'Best in Class' Award for the Best Oncology Research Unit	3
Creation of virtual twins of children and adolescents with leukemia	123
Projects awarded by the Healthstart Program for Entrepreneurship in Health	2
No rating	242

Impacts by average type



*Digital press: refers to the online edition of the written press as opposed to digital publications that do not have a paper edition.

The website of an institution is the first point of contact for any person or entity interested in learning about its structure, activity and results. A dynamic and up-to-date website offers an image of activity and continuous improvement.

The Instituto i+12 website is a priority communication channel and, as such, is configured as an instrument for the comprehensive dissemination of all information relating to the institution, as well as its activity and results.

The general access data for the corporate website throughout 2023 is shown below:

- Total number of users: 30,697.
- Number of new users: 30,002.
- Number of sessions or visits (number of interactions made by a user on the website in a given time): 63,474.
- Average session duration: 2 min 07 s.
- Views per session (average number of pages viewed during a session): 3.67.
- Number of events (number of interactions that users have with specific elements of the website): 352,170.
- No. of page views: 233,094.
- No. of visits per user: 7.61.

ACTIVITIES OF THE SCIENTIFIC CULTURE AND INNOVATION UNIT (UCC+i) OF i+12

The Scientific Culture and Innovation Unit (UCC+i), accredited in May 2019 by the Fundación Española para la Ciencia y la Tecnología (FECYT), acts as an intermediary between the Instituto i+12 and citizens with the main objective of promoting scientific, technological and innovation culture, as well as its dissemination, through the organization of activities of various kinds: scientific communication, dissemination, training, etc.

Below we present the different scientific, cultural and innovative dissemination activities carried out by the UCC+i of the i+12 throughout 2023. These activities were broadcast in the hospital rooms so that inpatients and their companions could enjoy them:

- **Venice Carnival exhibition at i+12.** Exhibition of carnival costumes made by Santiago García Pastor, a professional from the Hospital 12 de Octubre.
The María Skłodowska-Curie Space for Science and Culture at H12O hosted this exhibition from February 6 to March 31, 2023.
- **Exhibition Colores de Vida, by Felipao.** The exhibition covers the author's work with pieces dedicated to various breeds of dog, the Love Bomb heart, the Klever monkey, and gives special prominence to the Speedy turtle and his iconic Menina.
The H12O María Skłodowska-Curie Space for Science and Culture hosted this exhibition from May 22 to September 15, 2023.
- **06/11/2023. Conference Tributes to Ramón y Cajal. Correos and Lotería Nacional.** Analysis of the works by Sorolla and Madrazo used on the stamps and lottery tickets dedicated to Cajal on the occasion of the International Cajal Year. Ms. Belén Yuste, head of the Unit, and Ms. Ana Ruíz Zapata, art historian. Assembly Hall of the Maternal and Child Health Center.
- **November 2023. Science and Art: Cajal, Sorolla, Simarro exhibition.** Organized as part of the inauguration of the Cajal Space in 2022 in the Pathological Anatomy Service of H12O and as a continuation of the activities framed in the International Cajal Year.
- **Sorolla through the light.** EA audiovisual and interactive experience inspired by the artist's works, inaugurated on the 100th anniversary of his death. This sensory journey through the exhibition Sorolla through the light could be enjoyed in the lobby of the H12O General Residence from October 5, 2023 to January 6, 2024.

SCIENTIFIC OUTREACH ACTIVITIES i+12 2023

CONFERENCES, SESSIONS, WORKSHOPS

- **05/12/2023. International Nurses Day.** Official presentation of the postage stamp dedicated to Florence Nightingale by the Spanish postal service. Auditorium Hospital Universitario 12 de Octubre.
- **November 6 and 7, 2023.** Course/workshop "¿Qué impacto tiene la investigación en el trasplante renal?". **Dra. Natalia Redondo Sevillano, Ms. Tamara Ruiz Merlo.** Infectious Diseases Unit. Activity carried out within the framework of #SemanaCienalInnovacion2023. Face-to-face and live online conference format.
- **07/11/2023.** Round tablea "Daño cerebral traumático. Compartiendo visiones y esperanzas". **Dr. Alfonso Lagares,** Head of the Neurosurgery Department at the Hospital 12 de Octubre; **Ms. Aurora Lassaletta,** president of the Invisible Brain Damage Association. Activity carried out within the framework of #SemanaCienalInnovacion2023. Format of live face-to-face and online conference.
- **07/11/2023. Biobanco i+12 Open Day. Biobanks as a Tool for Biomedical Research.** **Ms. Alicia Maroto,** coordinator of the i+12 Biobank. Activity carried out within the framework of #SemanaCienalInnovacion2023.
- **08/11/2023.** Visit to the "Banco Regional de Leche Materna Donada. Equidad desde el principio de la vida". Activity carried out within the framework of #SemanaCienalInnovacion2023.
- **November 8 and 10, 2023.** Open day and guided tours. **The translational research cycle: from patient to laboratory and vice versa.** Center for Experimental Oncology. Activity carried out within the framework of #SemanaCienalInnovacion2023.
- **13/11/2023.** Theoretical-practical workshop "Misterios del corazón: la imagen cardíaca al servicio de la salud". **Dr. Jorge Solís,** cardiologist coordinator of the Cardiac Imaging Unit of the Cardiology Service of the Hospital 12 de Octubre; **Sergio Casalvázquez,** echocardiography technician. Activity carried out within the framework of #SemanaCienalInnovacion2023.
- **16/11/2023.** Training course/workshop "Células iPS: Nuestras aliadas para el estudio de enfermedades y para la búsqueda de tratamientos". **M.ª Esther Gallardo Pérez,** head of the Translational Research Group with iPS cells. Activity carried out within the framework of #SemanaCienalInnovacion2023. Course format: face-to-face.
- **16/11/2023.** Lecture **La huella imborrable de Santiago Ramón y Cajal.** **Ms. Ana Puras.** Anatomical Pathologist. Former President of the Sociedad Española de Anatomía Patológica. Pathological Anatomy Service Classroom.

- **14/12/2023. Science Communication Workshop.** 3.5-hour course. Aimed at those interested in the communication of science in any of its aspects (written, oral or through audiovisual media) to key non-scientific stakeholders.
- **19/12/2023.** The Hospital 12 de Octubre hosts the final of the scientific video competition of the program **“Reimagina la Ciencia: ensayos clínicos, investigación y desarrollo de medicamentos”**. Auditorium Hospital Universitario 12 de Octubre.

OTHER ACTIVITIES

- **22/02/2023.** Visit by high school students to the Instituto de Investigación Hospital 12 de Octubre (Instituto i+12) - Oncology Laboratories.
- **March-April 2023.** Participation in the Educational Stay Program for **4th year ESO students + COMPANY**. In line with the commitment of the Instituto i+12 - H12O to Responsible Research and Innovation (RRI) and as part of its activities to disseminate and promote scientific vocations, secondary school students interested in studies related to the health sciences were welcomed to carry out the 4th ESO + Company Program.
- **05/05/2023. 2nd Edition of the 12 de Octubre University Hospital Poster and Photography Competition: “Cuida el arte de lavarte”.** To mark World Hand Hygiene Day, the Hospital Universitario 12 de Octubre organized the 2nd Edition of the Photography, Poster and Artistic Interpretation Competition for Spanish authors, in which professionals from different categories, patients and family members participated, both individually and in groups.
- **May 24 and 25, 2023. 1st Edition of the Junior Research Conference.** A landmark meeting for researchers and healthcare professionals who are in the early stages of their research career, at which the scientific activity carried out at the Instituto i+12 was disseminated.
- **29/09/2023. All Science Fair. CSIC Night at the 12 - European Night of Researchers.** Researchers from the Instituto i+12 participated in the stands and workshops planned for this science outreach fair. Open to the general public.
- **05/10/2023.** To celebrate the 50th anniversary of the Hospital 12 de Octubre, the following scientific outreach activities were carried out by its Research Institute:
 - **EXPO i+12 - STANDS:** The 9 areas of scientific research of the Instituto i+12 were represented at seven stands, where the research staff presented their work and carried out outreach activities for the general public.
 - **MEETING WITH PATIENTS - VIDEOS AND DIALOGUE:** Every 30 minutes, a central thematic event took place (for a total of 5), which consisted of the screening of an informative video presenting different clinical research groups. Afterwards, recognized professionals from the Instituto i+12 talked with patients about their specific experiences, about the pathology in general and the diagnostic/therapeutic advances in it.
 - **CELEBRATING THE FIGURE OF THE RESEARCHER:** The Spanish writer and paleoanthropologist, and Scientific Director of the Museum of Human Evolution in Burgos, Dr. Juan Luis Arsuaga, gave us a lecture on the figure of the researcher.

09

FINANCIAL
 REPORT

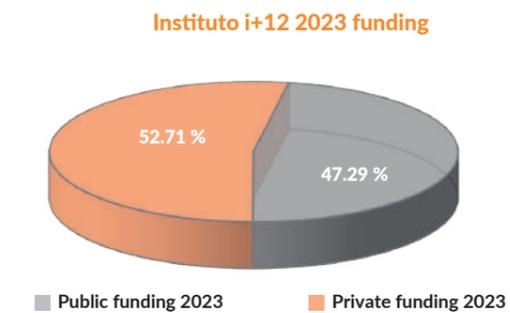
INCOME AND EXPENSES 2023

During the year 2023, the Instituto de Investigación Hospital 12 de Octubre has obtained funding of €45,954,420.81 (income collected in 2023).

The following table shows the financial resources corresponding to the year 2023, classified by **source of funding**:

	INCOME 2023	% INCOME
Public funding	21,731,830.24 €	47.29 %
Private funding	24,222,590.57 €	52.71 %
Total	45,954,420.81 €	

The following figure graphically represents the distribution of economic resources according to the type of funding:



The total funds obtained in 2023 are indicated below according to their **origin, competitive and non-competitive**:

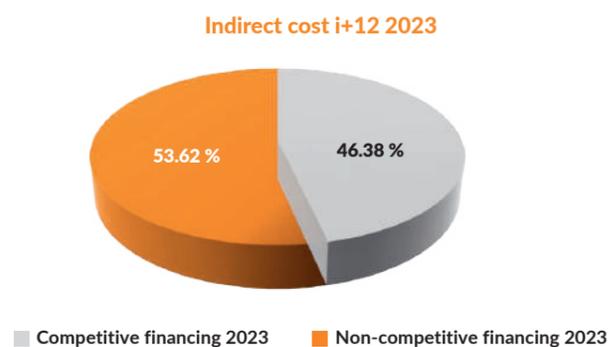
	INCOME 2023	% INCOME
Competitive financing	23,487,715.56 €	51.10 %
Non-competitive financing	22,466,705.25 €	48.90 %
Total	45,954,420.81 €	

Below is a breakdown of the economic resources obtained in 2023 according to their competitive origin (and source of funding) and non-competitive:

COMPETITIVE FINANCING		NON-COMPETITIVE FINANCING	
PUBLIC FUNDING 2023		C.T. AND OBSERVATIONAL STUDIES	
ISCIII-MICINN	15,902,301.42 €		17,948,172.95 €
MICINN	2,273,700.33 €	COTRACTS/AGREEMENTS/ DONATIONS	3,844,535.24 €
CAM	2,208,800.48 €	TRAINING	511,585.86 €
EUROPEO	1,224,028.01 €	OTHERS	162,411.20 €
CSIC	123,000.00 €		
TOTAL	21,731,830.24 €	TOTAL	22.466.705,25 €
PRIVATE FUNDING 2023			
AECC	507,660.74 €		
F. BBVA	21,192.66 €		
F. MUTUA MADRILEÑA	72,500.00 €		
FIPSE	14,000.00 €		
VARIOS	287,359.22 €		
ASOCIACION ESPAÑOLA CANCER DE MAMA METASTASICO	150,000.00 €		
LEDUCQ FOUNDATION FOR CARDIOVASCULAR RESEARCH	35,172.70 €		
LIFE TECHNOLOGIES CORPORATION	50,000.00 €		
FUNDACIÓN CRIS DE INVESTIGACIÓN PARA VENCER EL CÁNCER	349,000.00 €		
FUNDACION DE INVESTIGACIÓN ONCOLÓGICA	80,000.00 €		
GILEAD SCIENCES, S.L.U.	30,000.00 €		
FUNDACION LUZON	159,000.00 €		
TOTAL	1,755,885.32 €		
TOTAL	23,487,715.56 €		

The following is a breakdown of the income from indirect costs derived from the funds received in 2023 according to their origin:

INDIRECT COST	
Competitive financing	3,040,256.35 €
Non-competitive financing	3,515,158.85 €
TOTAL	6.555.415,20 €



The use of the indirect costs obtained in 2023 is indicated below.

As has become customary, la Fundación para la Investigación Biomédica del Hospital 12 de Octubre (FIBH12O) included within its Action Plan for 2023 the necessary funding derived from indirect costs, to finance the following actions:

- Research personnel expenses: co-funding of ISCIII HR programs and co-funding of HR stabilization programs.
- Research support actions:
 - Call for grants for the intensification of research and innovation activities, aimed at different professional profiles (medical staff, nursing staff, non-medical technical-specialist health personnel, training).
 - Call for applications for support for the incorporation of a Chief Resident/Researcher.
 - TRANSFORMA12 Specialist Physician-Researcher Contracts.
 - i+12 Platforms Contracts. Sequencing and Proteomics Technician.
 - Call for pre-doctoral grants.
- Expenses related to the areas of Research Management (Economic-Administrative Management and Scientific Management).

The table shows the information related to the expenses and income of the Foundation in the year 2023, as reflected in its income statement:

INCOME		EXPENSES	
User contributions	21,256,804.37 €	Grants and other expenses	5,837,579.02 €
Income from promotions, sponsors and collaborations	2,378,777.45 €	Procurement	5,852,493.78 €
Subsidies allocated to the surplus for the financial year	9,952,068.35 €	Staff costs	13,061,490.30 €
Donations and bequests allocated to the year's surplus	2,097,169.21 €	Other operating expenses	10,329,518.77 €
Financial income	1,063,661.12 €	Depreciation of fixed assets	864,000.33 €
		Impairment and results	192,952.90 €
		Financial expenses	50,623.80 €
TOTAL	36,748,480.50 €	TOTAL	36,188,658.90 €

BALANCE SHEET

The following table shows summarized information about the Foundation's **assets and liabilities**, as reflected in its balance sheet:

ASSETS	
NON-CURRENT ASSETS	
Intangible fixed assets	71,588.53 €
Tangible fixed assets	4,917,065.40 €
Long-term financial investments	2,650.00 €
CURRENT ASSETS	
Users and other debtors of own activity	5,187,792.14 €
Trade and other receivables	5,725,558.02 €
Short-term financial investments	12,070,657.03 €
Cash and cash equivalents	47,623,547.99 €
TOTAL ASSETS	75,598,859.11 €

LIABILITIES	
OWN FUNDS	
Own funds	5,372,378.23 €
Grants, donations and bequests received	4,845,748.83 €
NON-CURRENT LIABILITIES	
Long-term debts	2,289,930.76 €
CURRENT LIABILITIES	
Short-term provisions	26,486,954.18 €
Short-term debts	32,293,757.86 €
Trade creditors and other accounts payable	4,310,089.25 €
TOTAL LIABILITIES	75,598,859.11 €

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**RESEARCH AREAS
 AND GROUPS**

- AREA 1.** Cancer
- AREA 2.** Chronic Diseases and Transplantation
- AREA 3.** Rare and Genetically Based Diseases
- AREA 4.** Health Outcomes and Digital Transformation
- AREA 5.** Cardiovascular
- AREA 6.** Inflammatory Diseases and Immune Disorders
- AREA 7.** Infectious Diseases and Aids
- AREA 8.** Neurosciences and Mental Health
- AREA 9.** Transversal

COORDINATORS:

José Luis Rodríguez Peralto and Irene Ferrer Sánchez

Translational Biophysics
 Biomarkers in Genitourinary Tumors
 Breast and Gynecologic Cancer
 Intercellular Communication in Aging and Cancer
 Lymphoid Differentiation
 Genomics and Therapy in Prostate Cancer
 Translational Haematology
 Tumor Immunomodulation
 Immunooncology and Immunotherapy
 Translational Research in Hereditary Cancer
 Translational Energetic Metabolism
 Tumor Microenvironment and Immunotherapy
 Neuro-oncology
 Cutaneous Oncology
 Genitourinary and Cellular and Molecular Oncology
 Thoracic and Clinical-Translational Oncology
 Targeted Therapies for Precision Oncology
 Gastrointestinal and Neuroendocrine Tumors

The Cancer Area of the Instituto de Investigación i+12 is made up of 18 research groups that integrate basic, translational and clinical profiles. The researchers come from university and clinical institutions.

The mission of the Cancer Area is innovation and the generation of greater knowledge in the prevention, diagnosis and therapy of cancer.

Cooperative development objectives set in the area:

- To increase the relationship and knowledge of the activity among the different research groups in the area. Indicator: hold 2 meetings per year of all the groups in the area. Degree of achievement: high.
- Establish a common repository with databases from different cohorts of patients that can be used to generate hypotheses and/or validate results. Indicator: verify annually that the objective has been established. Degree of achievement: low.
- Increase the number of preclinical in vitro and in vivo models. Indicator: to verify an annual growth of 10%. Degree of achievement: medium.
- Increase the number of theses co-directed among different groups. Indicator: at least 1 thesis per year must meet this requirement. Degree of achievement: low.
- Increase the number of formal cooperative research projects between different groups. Indicator: at least 1 research project per year must meet this requirement. Degree of achievement: high.
- To increase the implementation in our setting of new technologies that are the result of translational research. Indicator: at least one new technology implemented in the Hospital Universitario 12 de Octubre every 2 years. Degree of achievement: high.
- Conduct joint training activities, such as seminars or courses. Indicator: certify the participation of the members of the different groups in the activities carried out. Degree of achievement: high.
- Increase the number of publications in collaboration with various groups in the area or other areas. Indicator: at least two publications per year must meet this requirement. Degree of achievement: high.
- Elaborate clinical guidelines or cross-cutting consensus documents among scientific societies involved in the management of cancer patients. Indicator: at least one guideline every 2 years. Degree of achievement: medium.

List of the 5 most relevant publications in the Cancer Area during 2023

The following are the 5 most relevant publications in the Cancer Area selected on the basis of original articles led by researchers in the area, published in quartile 1 of their thematic category in JCR and most frequently cited:

1. de Langen, AJ; Johnson, ML; Mazieres, J; Dingemans, AMC; Mountzios, G; Pless, M; Wolf, J; **Paz Ares, L** et al. Sotorasib versus docetaxel for previously treated non-small- cell lung cancer with KRASG12C mutation: a randomised, open-label, phase 3 trial. *Lancet*. 2023. 401. (10378): p. 733-746. Article.
2. **Paz Ares, L**; Champiat, S; Lai, WV; Izumi, H; Govindan, R; Boyer, M; Hummel, HD et al. Tarlatamab, a First-In-Class DLL3-Targeted Bispecific T-Cell Engager, in Recurrent Small Cell Lung Cancer: An Open-Label, Phase I Study. *J. Clin. Oncol.* 2023. 41. (16): p. 2202823-2202823. Article.
3. **Jiménez Ubieto, A; Poza, M**; Martín Muñoz, A; Ruiz Heredia, Y; Dorado, S; Figaredo, G; Rosa, JM; **Martínez López, J; Barrio García, S** et al. Real-life disease monitoring in follicular lymphoma patients using liquid biopsy ultra-deep sequencing and PET/CT. *Leukemia*. 2023. 37. (3): p. 659-669. Article.
4. **Tundidor, I; Seijo Vila, M**; Blasco Benito, S; Rubert Hernández, M; Adámez, S; Andradás, C; Manzano, S; **Sánchez, C; Pérez-Gómez, E** et al. Identification of fatty acid amide hydrolase as a metastasis suppressor in breast cancer. *Nat. Commun.* 2023. 14. (1): 3130. Article.
5. **Madariaga, A**; Garg, S; Tchakian, N; Dhani, NC; Jimenez, W; Welch, S; MacKay, H et al. Clinical outcome and biomarker assessments of a multi-centre phase II trial assessing niraparib with or without dostarlimab in recurrent endometrial carcinoma. *Nat. Commun.* 2023. 14. (1): 1452. Article.

Translational Biophysics

CENTER: Universidad Complutense de Madrid (UCM).

GROUP LEADER: Monroy Muñoz, Francisco (R4).

Becerra Gómez, Esperanza - Support technician.

Benavente Barzana, Mercedes - Manager.

Calero Calero, Macarena - Doctoral researcher (R2).

Caselli, Niccolò - Doctoral researcher (R2).

Fernández Castillo, Jesús - Doctoral researcher (R3).

García Villaluenga, Juan Pedro - Doctoral researcher (R4).

Hernández Moleiro, Lara - Postdoctoral researcher (R2).

Hernando Ospina, Natalia - Predoctoral researcher (R1).

Herráez Aguilar, Diego - Doctoral researcher (R2).

Kharbedia, Mikheil - Postdoctoral researcher (R2).

Luque Rioja, Clara - Predoctoral researcher (R1).

Santiago García, José Antonio - Doctoral researcher (R3).

ACTIVE RESEARCH PROJECTS

Type of funding	Funding body	No. of projects
Competitive	Ministerio de Economía y Competitividad	1
Total		1

- **Title:** Biofísica traslacional para la digitalización de leucemia infantil.
Principal investigator: Monroy Muñoz, Francisco.
Project No.: TED2021-132296B-C52.
Funding body: Ministerio de Economía y Competitividad.
Start date: 01/12/2022.
End date: 31/11/2024.

OTHER ACTIVE PROJECTS OF THE RESEARCH GROUP NOT MANAGED BY THE FUNDACIÓN PARA LA INVESTIGACIÓN BIOMÉDICA DEL HOSPITAL 12 DE OCTUBRE (FIBH12O)

- **Title:** Termodinámica de la célula: un encuentro de la biología con el principio de acción.
Principal investigator: Monroy Muñoz, Francisco.
Project No.: PID2019-108391RB-I00 PID2019-108391RB-I00.
Funding body: Ministerio de Ciencia e Innovación.
Start date: 01/06/2020.
End date: 31/05/2024.
- **Title:** REACT ANTICIPA UCM.
Principal investigator: Monroy Muñoz, Francisco.
Project No.: REACT ANTICIPA UCM.
Funding body: Comunidad de Madrid.
Start date: 01/01/2021.
End date: 31/12/2023.
- **Title:** Nanocontenedores y nanovehículos dirigidos al transporte y liberación de agentes bioAsset..
Principal investigator: Monroy Muñoz, Francisco.
Project No.: S2018/NMT-4389.
Funding body: Comunidad de Madrid.
Start date: 01/01/2020.
End date: 31/12/2023.

PUBLICATIONS*

Type of Document	No. of document	Σ IF (JCR 2022)
Articles	4	22.4
Total	4	22.4

Articles

- Bouthelie, A; Fernández Arroyo, L; Mesa Ciller, C; Cibrian, D; Martín Cofreces, NB; Castillo González, R; Calero, M et al. Erythroid SLC7A5/SLC3A2 amino acid carrier controls red blood cell size and maturation. *iScience*. 2023. 26. (1): p. 105739-105739. Article.
- de Lope Planelles, A; González Novo, R; Madrazo, E; Peralta Carrero, G; Rodríguez, MPC; Zamora Carreras, H; Torrano, V et al. Mechanical stress confers nuclear and functional changes in derived leukemia cells from persistent confined migration. *Cell. Mol. Life Sci*. 2023. 80. (11): 316. Article.
- Martín Asensio, A; Dávila, S; Cacheux, J; Lindstaedt, A; Dziadosz, A; Witt, D; Calero, M et al. Recapitulating Solid Stress on Tumor on a Chip for Nanomedicine Diffusive Transport Prediction. *Adv. NanoBiomed Res*. 2023. 3. (6). Article.
- Martín Roca, J; Bianco, V; Alarcon, F; Monnappa, AK; Natale, P; Monroy, F; Orgaz, B et al. Rheology of Pseudomonas fluorescens biofilms: From experiments to predictive DPD mesoscopic modeling. *J. Chem. Phys*. 2023. 158. (7): 074902. Article.
- Moleiro, LH; Martín-Romero, MT; Herráez-Aguilar, D; Santiago, JA, Caselli Niccolò, DC; Geisler Ramsia, HT; Monroy, F. Dual mechanical impact of β-escin on model lipid membranes. *Frontiers in Soft Matter*. 2023. 3. Article.
- Santiago, JA; Monroy, F. Inhomogeneous Canham-Helfrich Abscission in Catenoid Necks under Critical Membrane Mosaicity. *Membranes*. 2023. 13. (9): 796. Article.

END MASTER INVESTIGATIONS DIRECTED ON THE GROUP

- **Student:** Eduardo Díaz Delgado.
Title: Mecánica Estadística de la Célula.
Director: Francisco Monroy Muñoz.
Master: Física Biomédica.
University: Universidad Complutense de Madrid.

END GRADUATED INVESTIGATIONS DIRECTED ON THE GROUP

- **Student:** Gabriel Vázquez Ammirati.
Title: Relaciones funcionales mecánicas entre genotipo y fenotipo alterado en células hepáticas.
Director: Francisco Monroy Muñoz.
Degree: Doble Grado en Química Y Bioquímica.
University: Universidad Complutense de Madrid.
- **Student:** Ángela Ruiz Valderrey.
Title: Nanopartículas lipídicas con DNA para preparados vacunales.
Director: Francisco Monroy Muñoz
Degree: Química.
University: Universidad Complutense de Madrid.

STAYS

- Francisco Monroy Muñoz, head of the research group, stayed at the University of California at Berkeley from May 1 to September 1, 2023.

PATENTS

- **Title:** Procedimiento para la elaboración de nanopartículas lipídicas, y nanopartículas lipídicas con los macrófagos cerebrales como células diana.
Number: P201800272.
Type: SPANISH patent.
Inventors: Borja García Bueno, Aline Sayd Gaban, Francisco Monroy Muñoz, Lara Hernández Moleiro y Juan Carlos Leza Cerro.
Owners: Fundación i+12 (10 %), UCM (85 %) and CIBER (5 %).
Priority Date: 12/12/2018.
Status: Granted (09/07/2019).

* Publications: only "Article", "Review", "Editorial Material" and "Letter" have been selected in "Document Type" of ISI Web Of Knowledge. The breakdown of publications includes some not included in the 2022 JCR, which are therefore not taken into account in the final count shown in the table, since they do not have IF.

Biomarkers in Genitourinary Tumors

CENTER: Hospital Universitario 12 de Octubre (HU12O).

GROUP LEADERS: González Billalabeitia, Enrique (R3); Castellano Gauna, Daniel Ernesto (senior clinical investigator).

- De Velasco Oria de Rueda, Guillermo Antonio - Postdoctoral researcher (R2).
- Domínguez Domínguez, José Ignacio - Superior technique.
- Funes Quesada, Juan Manuel - Doctoral researcher (R2).
- García González, Lucía - Clinical researcher.
- Gil Moradillo, Javier - Clinical researcher.
- Marinas Llorente, Cecilia - Superior technique.
- Pérez Navarro, Enrique - Predoctoral researcher (R1).
- Rodríguez Antolín, Alfredo - Doctoral researcher (R3).
- Sopeña Sutil, Raquel - Clinical researcher.

ACTIVE RESEARCH PROJECTS

Type of funding	Funding body	No. of projects
Competitive	Centro de Investigación Cooperativa en Biociencias	1
Competitive	Commission of the European Communities	2
Competitive	Fundación de Investigación Médica Mutua Madrileña	1
Competitive	ISCIII	3
No competitive	Various	5
Total		12

- **Title:** Implicaciones clínicas de los perfiles de expresión génica en sangre periférica en el cáncer de próstata metastásico.
Principal investigator: González Billalabeitia, Enrique.
Project No.: P118/00883.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2019.
End date: 31/12/2021; extended to 30/06/2023.
- **Title:** Componente inmune en el cáncer de próstata asociado a la pérdida de PTEN.
Principal investigator: González Billalabeitia, Enrique.
Project No.: P121/01165.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2022.
End date: 31/12/2024.
- **Title:** Vulnerabilities of tumour and stromainteractions in castration-Naïve metastatic prostate cancer - PROSTARGET.
Principal investigator: González Billalabeitia, Enrique.
Project No.: PROSTARGET.
Funding body: Centro de Investigación Cooperativa en Biociencias.
Start date: 15/07/2020.
End date: 30/09/2023.
- **Title:** Computational models for patient stratification in urologic cancers – creating robust and trustworthy multimodal ai for health care.
Principal investigator: de Velasco Oria de Rueda, Guillermo Antonio.
Funding body: Commission of the European Communities.
Start date: 01/04/2023.
End date: 31/03/2027.
- **Title:** Cambios en el componente inmune asociados a la pérdida de PTEN en el cáncer de próstata avanzado.
Principal investigator: Castellano Gauna, Daniel Ernesto.
Funding body: Fundación de Investigación Médica Mutua Madrileña.
Start date: 16/12/2021.
End date: 15/12/2024.
- **Title:** CARE-1-PROJECT 101104801. First line randomized study platform to optimize treatment in patients with metastatic renal cell carcinoma.
Principal investigator: de Velasco Oria de Rueda, Guillermo Antonio.
Funding body: Commission of the European Communities.
Start date: 01/05/2023.
End date: 30/05/2028.
- **Title:** Análisis de determinantes dinámicos de respuesta y resistencia a inmunoterapia en cáncer renal de células claras.
Principal investigator: de Velasco Oria de Rueda, Guillermo Antonio.
Project No.: P121/01922.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2022.
End date: 31/12/2024.
- **Title:** Estudio complementario en el análisis de biomarcadores para identificación de pacientes a tratar con la combinación de atezolizumab 1 y GC en dosis dividida (AUREA).
Principal investigator: González Billalabeitia, Enrique.
Funding body: Grupo Español de Oncología Genitourinaria.
Start date: 28/01/2021.
End date: 27/01/2023.

- **Title:** Análisis de HLA-I y microbioma y su relación con la penetrancia del cáncer renal en el síndrome de Von Hippel Lindau.
Principal investigator: de Velasco Oria de Rueda, Guillermo Antonio.
Project No.: 2021/0145.
Funding body: Fundación Universidad Francisco de Vitoria.
Start date: 21/09/2021.
End date: 20/09/2024.
- **Title:** Translational Prostate Cancer Resarch Unit at Hospital Universitario 12 de Octubre.
Principal investigator: González Billalabeitia, Enrique.
Funding body: Fundación de Investigación Oncológica.
Start date: 01/06/2022.
End date: 31/05/2025.
- **Title:** Estudio complementario de biomarcadores asociado al ensayo clínico: Phase II non randomized clinical trial of nivolumab/ ipilimumab maintenance following first-line chemotherapy in unresectable locally advanced or metastatic urothelial cancer (SOGUG-VEXILLUM).
Principal investigator: González Billalabeitia, Enrique.
Project No.: 2022/0153.
Funding body: Grupo Español de Oncología Genitourinaria.
Start date: 22/11/2022.
End date: 21/11/2024.
- **Title:** Estudio complementario de biomarcadores asociado al ensayo clínico: A Phase 2, open-label, multi-centre, multi-national interventional trial to evaluate the efficacy and safety of erdafitinib (ERDA) monotherapy and erdafitinib (ERDA) and cetrelimab (CET) combination as neoadjuvant treatment in cisplatin-ineligible patients with muscle-invasive bladder cancer (MIBC) whose tumours express FGFR gene alterations (SOGUG-NEOWIN).
Principal investigator: González Billalabeitia, Enrique.
Funding body: Grupo Español de Oncología Genitourinaria.
Start date: 23/11/2023.
End date: 22/05/2026.
- **Title:** COMputational Models FOR patient stratification in urologic cancers – Creating robust and trustworthy multimodal AI for health care.
Principal investigator: González Billalabeitia, Enrique.
Funding body: Grupo Español de Oncología Genitourinaria.
Start date: 01/04/2023.
End date: 31/03/2027.
- **Title:** CARE-1- Project 101104801 First line randomized study platform to optimize treatment in patients with metastatic renal cell carcinoma.
Principal investigator: González Billalabeitia, Enrique.
Funding body: Commission of the European Communities.
Start date: 01/05/2023.
End date: 30/05/2028.
- **Title:** Vulnerabilities of tumour and stromainteractions in castration-Naïve metastatic prostate cancer - PROSTARGET.
Principal investigator: González Billalabeitia, Enrique.
Project No.: PROSTARGET.
Funding body: Centro de Investigación Cooperativa en Biociencias.
Start date: 15/07/2020.
End date: 30/09/2023.
- **Title:** Cambios en el componente inmune asociados a la pérdida de PTEN en el cáncer de próstata avanzado.
Principal investigator: Castellano Gauna, Daniel Ernesto.
Funding body: Fundación de Investigación Médica Mutua Madrileña.
Start date: 16/12/2021.
End date: 15/12/2024.
- **Title:** Análisis de determinantes dinámicos de respuesta y resistencia a inmunoterapia en cáncer renal de células claras.
Principal investigator: de Velasco Oria de Rueda, Guillermo Antonio.
Project No.: PI21/01922.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2022.
End date: 31/12/2024.
- **Title:** Componente inmune en el cáncer de próstata asociado a la pérdida de PTEN.
Principal investigator: González Billalabeitia, Enrique.
Project No.: PI21/01165.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2022.
End date: 31/12/2024.
- **Title:** Computational models for patient stratification in urologic cancers – creating robust and trustworthy multimodal ai for health care.
Principal investigator: de Velasco Oria de Rueda, Guillermo Antonio.
Funding body: Commission of the European Communities.
Start date: 01/04/2023.
End date: 31/03/2027.
- **Title:** CARE-1-PROJECT 101104801. First line randomized study platform to optimize treatment in patients with metastatic renal cell carcinoma.
Principal investigator: de Velasco Oria de Rueda, Guillermo Antonio.
Funding body: Commission of the European Communities.
Start date: 01/05/2023.
End date: 30/05/2028.
- **Title:** Estudio complementario en el análisis de biomarcadores para identificación de pacientes a tratar con la combinación de atezolizumab 1 y GC en dosis dividida (AUREA).
Principal investigator: González Billalabeitia, Enrique.
Funding body: Grupo Español de Oncología Genitourinaria.
Start date: 28/01/2021.
End date: 27/01/2023.
- **Title:** Análisis de HLA-I y microbioma y su relación con la penetrancia del cáncer renal en el síndrome de Von Hippel Lindau.
Principal investigator: de Velasco Oria de Rueda, Guillermo Antonio.
Project No.: 2021/0145.
Funding body: Fundación Universidad Francisco de Vitoria.
Start date: 21/09/2021.
End date: 20/09/2024.

- **Title:** Translational Prostate Cancer Resarch Unit at Hospital Universitario 12 de Octubre.
Principal investigator: González Billalabeitia, Enrique.
Funding body: Fundación de Investigación Oncológica.
Start date: 01/06/2022.
End date: 31/05/2025.
- **Title:** Estudio complementario de biomarcadores asociado al ensayo clínico: Phase II non randomized clinical trial of nivolumab/ ipilimumab maintenance following first-line chemotherapy in unresectable locally advanced or metastatic urothelial cancer (SOGUG-VEXILLUM).
Principal investigator: González Billalabeitia, Enrique.
Project No.: 2022/0153.
Funding body: Grupo Español de Oncología Genitourinaria.
Start date: 22/11/2022.
End date: 21/11/2024.
- **Title:** Estudio complementario de biomarcadores asociado al ensayo clínico: A Phase 2, open-label, multi-centre, multi-national interventional trial to evaluate the efficacy and safety of erdafitinib (ERDA) monotherapy and erdafitinib (ERDA) and cetrelimab (CET) combination as neoadjuvant treatment in cisplatin-ineligible patients with muscle-invasive bladder cancer (MIBC) whose tumours express FGFR gene alterations (SOGUG-NEOWIN).
Principal investigator: González Billalabeitia, Enrique.
Funding body: Grupo Español de Oncología Genitourinaria.
Start date: 23/11/2023.
End date: 22/05/2026.
- **Title:** COMputational Models FOR patient stratification in urologic cancers – Creating robust and trustworthy multimodal AI for health care.
Principal investigator: González Billalabeitia, Enrique.
Funding body: Grupo Español de Oncología Genitourinaria.
Start date: 01/04/2023.
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- **Title:** CARE-1- Project 101104801 First line randomized study platform to optimize treatment in patients with metastatic renal cell carcinoma.
Principal investigator: González Billalabeitia, Enrique.
Funding body: Commission of the European Communities.
Start date: 01/05/2023.
End date: 30/05/2028.

PUBLICATIONS*

Type of Document	No. of document	Σ IF (JCR 2022)
Articles	35	766.8
Reviews	3	10.7
Editorials	3	19.8
Total	41	797.3

Articles

- Abida, W; Campbell, D; Patnaik, A; Bryce, AH; Shapiro, J; Bamby, RM; Zhang, JS et al. Rucaparib for the Treatment of Metastatic Castration-resistant Prostate Cancer Associated with a DNA Damage Repair Gene Alteration: Final Results from the Phase 2 TRITON2 Study. Eur. Urol. 2023. 84. (3): p. 321-330. Article.
- Bakaloudi, DR; Talukder, R; Lin, GI; Makrakis, D; Diamantopoulos, LN; Tripathi, N; Agarwal, N et al. Response and Outcomes of Maintenance Avelumab After Platinum-Based Chemotherapy (PBC) in Patients With Advanced Urothelial Carcinoma (aUC): "Real World" Experience. Clin Genitourin Cancer. 2023. 21. (5): p. 584-593. Article.
- Balar, AV; Castellano, DE; Grivas, P; Vaughn, DJ; Powles, T; Vuky, J; Fradet, Y et al. Efficacy and safety of pembrolizumab in metastatic urothelial carcinoma: results from KEYNOTE-045 and KEYNOTE-052 after up to 5 years of follow-up. Ann. Oncol. 2023. 34. (3): p. 289-299. Article.
- Bamias, A; Merseburger, A; Llorca, Y; James, N; Choy, E; Castellano, D; Lopez Rios, F et al. New prognostic model in patients with advanced urothelial carcinoma treated with second-line immune checkpoint inhibitors. J. Immunother. Cancer. 2023. 11. (1): e005977. Article.
- Bergerot, C; Rha, SY; Pal, S; Koralewski, P; Stroyakovskiy, D; Alekseev, B; Parnis, F et al. Health-Related Quality of Life Outcomes With Two Different Starting Doses of Lenvatinib in Combination With Everolimus for Previously Treated Renal Cell Carcinoma. Oncologist. 2023. 28. (1): p. 59-71. Article.
- Carles, J; Medina Lopez, RA; Puente, J; Gómez Ferrer, A; Nebra,

* Publications: only "Article", "Review", "Editorial Material" and "Letter" have been selected in "Document Type" of ISI Web Of Knowledge. The breakdown of publications includes some not included in the 2022 JCR, which are therefore not taken into account in the final count shown in the table, since they do not have IF.

- JC; Medina, MIS; Ribal, MJ et al. Darolutamide in Spanish patients with nonmetastatic castration-resistant prostate cancer: ARAMIS subgroup analysis. *Future Oncol.* 2023. 19. (12): p. 819-828. Article.
- Carneiro, F; de Velasco, G. Is immunotherapy safe and effective for older patients with kidney cancer? *J. Geriatr. Oncol.* 2023. 14. (5): p. 101527-101527. Article.
 - Carril Ajuria, L; Colomba, E; Romero Ferreiro, C; Cerbone, L; Ratta, R; Barthelemy, P; Vindry, C et al. Frontline immune checkpoint inhibitor-based combination therapy in metastatic renal cell carcinoma patients with poor performance status. *Eur J Cancer.* 2023. 180. p. 21-29. Article.
 - Choueiri, TK; Albiges, L; Tomczak, P; Suárez, C; Voss, MH; de Velasco, G; Chahoud, J et al. Efficacy and safety of atezolizumab plus cabozantinib vs cabozantinib alone after progression with prior immune checkpoint inhibitor (ICI) treatment in metastatic renal cell carcinoma (RCC): Primary PFS analysis from the phase 3, randomized, open-label CONTACT-03 study. *J. Clin. Oncol.* 2023. 41. (17_SUPPL): p. 4500-4500. Article.
 - Climent, MA; Alvarez, C; Morales, R; Maroto, P; Rodriguez Vida, A; Méndez Vidal, MJ; del Muro, XG et al. Exploratory analyses of treatment subgroup interaction by PD-L1 status and according to PD-L1 expression in the JAVELIN Bladder 100 trial. *Clin Transl Oncol.* 2023. Article.
 - de la Blanca, RSP; Medina Polo, J; González Padilla, D; Cano Galán, MM; Arrébola Pajares, A; Hernández Arroyo, M; Rodríguez Antolín, A. Evaluation of Quality of Life and Self-reported Complications in Patients With Clean Intermittent Catheterization. *J. Wound Ostomy Cont. Nurs.* 2023. 50. (5): p. 400-405. Article.
 - de Vries, EGE; Rüschoff, J; Lolkema, M; Tabernero, J; Gianni, L; Voest, E; de Groot, DJA et al. Phase II study (KAMELEON) of single-agent T-DM1 in patients with HER2-positive advanced urothelial bladder cancer or pancreatic cancer/cholangiocarcinoma. *Cancer Med.* 2023. 12. (11): p. 12071-12083. Article.
 - Drakaki, A; Powles, T; Bamias, A; Martin Liberal, J; Shin, SJ; Friedlander, T; Tosi, D et al. Atezolizumab plus Magrolimab, Niraparib, or Tocilizumab versus Atezolizumab Monotherapy in Platinum-Refractory Metastatic Urothelial Carcinoma: A Phase Ib/II Open-Label, Multicenter, Randomized Umbrella Study (MORPHEUS Urothelial Carcinoma). *Clin. Cancer Res.* 2023. 29. (21): p. 4373-4384. Article.
 - El Zarif, T; Nassar, AH; Pond, GR; Zhuang, TZ; Master, V; Nazha, B; Niglio, S et al. Safety and efficacy of immune checkpoint inhibitors in advanced penile cancer: report from the Global Society of Rare Genitourinary Tumors. *JNCI-J. Natl. Cancer Inst.* 2023. 115. (12): p. 1605-1615. Article.
 - Esteban Villarrubia, J; Ferreiro, CR; Carril Ajuria, L; Carretero González, A; Iacovelli, R; Albiges, L; Castellano, D et al. Meta-analysis of perioperative immunotherapy in renal cell carcinoma: Available, but the jury is still out. *Urol. Oncol.-Semin. Orig. Investig.* 2023. 41. (9). Article.
 - Fernandez Perez, MP; Perez Navarro, E; Alonso Gordo, T; Conteduca, V; Font, A; Vazquez Estevez, S; Gonzalez Alba, A et al. A correlative biomarker study and integrative prognostic model in chemotherapy-naive metastatic castration-resistant prostate cancer treated with enzalutamide. *Prostate.* 2023. 83. (4): p. 376-384. Article.
 - Fizazi, K; Piulats, JM; Reaume, MN; Ostler, P; McDermott, R; Gingerich, JR; Pintus, E et al. Rucaparib or Physician's Choice in Metastatic Prostate Cancer. *N. Engl. J. Med.* 2023. 388. (8): p. 719-732. Article.
 - Font, A; Domenech, M; Ramirez, JL; Marqués, M; Benítez, R; de Porras, VR; Gago, JL et al. Predictive signature of response to neoadjuvant chemotherapy in muscle-invasive bladder cancer integrating mRNA expression, taxonomic subtypes, and clinicopathological features. *Front. Oncol.* 2023. 13. 1155244. Article.
 - Font, A; Mellado, B; Climent, MA; Virizuela, JA; Oudard, S; Puente, J; Castellano, D et al. Phase II trial of afatinib in patients with advanced urothelial carcinoma with genetic alterations in ERBB1-3 (LUX-Bladder 1). *Br. J. Cancer.* 2023. Article.
 - Gillissen, S; Bossi, A; Davis, ID; de Bono, J; Fizazi, K; James, ND; Mottet, N et al. Management of Patients with Advanced Prostate Cancer. Part I: Intermediate-/High-risk and Locally Advanced Disease, Biochemical Relapse, and Side Effects of Hormonal Treatment: Report of the Advanced Prostate Cancer Consensus Conference 2022. *Eur. Urol.* 2023. 83. (3): p. 267-293. Article.
 - Gillissen, S; Bossi, A; Davis, ID; de Bono, J; Fizazi, K; James, ND; Mottet, N et al. Management of patients with advanced prostate cancer-metastatic and/or castration-resistant prostate cancer: report of the Advanced Prostate Cancer Consensus Conference (APCCC) 2022. *Eur J Cancer.* 2023. 185. p. 178-215. Article.
 - Gomez, EG; Castineira, RC; Burgos, J; Antolin, AR; Miles, BJ; Salamanca, JIM; Bianco, F et al. ProSTAV, a novel blood-based test for biopsy decision management in significant prostate cancer. *Prostate.* 2023. 83. (14): p. 1323-1331. Article.
 - Grimm, MO; Esteban, E; Barthelemy, P; Schmidinger, M; Busch, J; Valderrama, BP; Charnley, N et al. Tailored immunotherapy approach with nivolumab with or without nivolumab plus ipilimumab as immunotherapeutic boost in patients with metastatic renal cell carcinoma (TITAN-RCC): a multicentre, single-arm, phase 2 trial. *Lancet Oncol.* 2023. 24. (11): p. 1252-1265. Article.
 - Hernando, J; Roca Herrera, M; García Alvarez, A; Raymond, E; Ruzniewski, P; Kulke, MH; Grande, E et al. Sex differences on multikinase inhibitors toxicity in patients with advanced gastroenteropancreatic neuroendocrine tumours. *Eur J Cancer.* 2023. 188. p. 39-48. Article.
 - Kristeleit, R; Leary, A; Delord, JP; Moreno, V; Oaknin, A; Castellano, D; Shappiro, GI et al. Lurbinectedin in patients with pretreated endometrial cancer: results from a phase 2 basket clinical trial and exploratory translational study. *Invest. New Drugs.* 2023. 41. (5): p. 677-687. Article.
 - Loehr, A; Hussain, A; Patnaik, A; Bryce, AH; Castellano, D; Font, A; Shapiro, J et al. Emergence of BRCA Reversion Mutations in Patients with Metastatic Castration-resistant Prostate Cancer After Treatment with Rucaparib. *Eur. Urol.* 2023. 83. (3): p. 200-209. Article.
 - Mar, N; Zakharia, Y; Falcon, A; Morales Barrera, R; Mellado, B;

- Duran, I; Oh, D et al. Results from a Phase 1b/2 Study of Ibrutinib Combination Therapy in Advanced Urothelial Carcinoma. *Cancers.* 2023. 15. (11): 2978. Article.
- Oh, D; Maqueda, MA; Quinn, DI; O'Dwyer, PJ; Chau, I; Kim, SY; Duran, I et al. Ibrutinib combination therapy for advanced gastrointestinal and genitourinary tumours: results from a phase 1b/2 study. *BMC Cancer.* 2023. 23. (1): 1056. Article.
- Ossorio, JLA; Aliagac, MR; Antolind, AR; Urzaize, MU; Callejaf, MA; Ruizg, MD; Quilezh, JB et al. Hormone sensitive protocol for metastatic prostate cancer, an update. *Actas Urol. Esp.* 2023. 47. (4): p. 244-249. Article.
- Pal, SK; Albiges, L; Tomczak, P; Suárez, C; Voss, MH; de Velasco, G; Chahoud, J et al. Atezolizumab plus cabozantinib versus cabozantinib monotherapy for patients with renal cell carcinoma after progression with previous immune checkpoint inhibitor treatment (CONTACT-03): a multicentre, randomised, open-label, phase 3 trial. *Lancet.* 2023. 402. (10397): p. 185-195. Article.
- Rosenberg, JE; Park, SH; Kozlov, V; Dao, TV; Castellano, D; Li, JR; Mukherjee, SD et al. Durvalumab Plus Olaparib in Previously Untreated, Platinum-Ineligible Patients With Metastatic Urothelial Carcinoma: A Multicenter, Randomized, Phase II Trial (BAYOU). *J. Clin. Oncol.* 2023. 41. (1): p. 43-53. Article.
- Rosenberg, JE; Powles, T; Sonpavde, GP; Loriot, Y; Duran, I; Lee, JL; Matsubara, N et al. EV-301 long-term outcomes: 24-month findings from the phase III trial of enfortumab vedotin versus chemotherapy in patients with previously treated advanced urothelial carcinoma. *Ann. Oncol.* 2023. 34. (11): p. 1047-1054. Article.
- Santos Pérez de la Blanca, R; Medina Polo, J; Peña Vallejo, H; Juste Álvarez, S; Pamplona Casamayor, M; Duarte Ojeda, JM; Miranda Utrera, N et al. Ureteral Stenosis and Fistula after Kidney Transplantation. *Urol.Int.* 2023. 107. (2): p. 1-8. Article.
- Santos, M; Lanillos, J; Caleiras, E; Valdivia, C; Roldan Romero, JM; Lainez, N; Puente, J et al. PBRM1 and KDM5C cooperate to define high-angiogenesis tumors and increased antiangiogenic response in renal cancer. *Am. J. Cancer Res.* 2023. 13. (5): p. 2116-2125. Article.
- Sutil, RS; Vázquez Martul, D; de Pablos Rodríguez, P; Vallejo, EP; Fernández, CA; Lozano, AGF; Tobar, JT et al. European Association of Urology biochemical recurrence risk groups after radical prostatectomy: external validation and identification of independent risk factors for progression and death. *Actas Urol. Esp.* 2023. 47. (7): p. 422-429. Article.

Reviews

- Alvarez, SJ; Utrera, NRM; Ojeda, JMD; Sutil, RS; Gil Moradillo, J; Guerrero Ramos, F; Hernández Arroyo, M et al. Extraperitoneal Retroperitoneal Leiomyomas: 3 Case Reports and Review of the Literature. *Urol.Int.* 2023. 107. (8): p. 814-818. Review.
- Rodríguez Izquierdo, M; del Cañizo, CG; Rubio, C; Reina, IA; Arroyo, MH; Antolin, AR; Porto, MD et al. Immune Predictors of Response after Bacillus Calmette-Guerin Treatment in Non-Muscle-Invasive Bladder Cancer. *Cancers.* 2023. 15. (23): 5554. Review.

Letters

- Albiges, L; Tannir, NM; Burotto, M; McDermott, D; Plimack, ER; Barthélémy, P; Porta, C et al. First-line Nivolumab plus Ipilimumab Versus Sunitinib in Patients Without Nephrectomy and With an Evaluable Primary Renal Tumor in the CheckMate 214 Trial. *J. Urol.* 2023. 209. (2): p. 442-442. Editorial Material.
- Fizazi, K; Mella, PG; Castellano, D; Minatta, JN; Kalebasty, AR; Shaffer, D; Limón, JCV et al. Nivolumab Plus Docetaxel in Patients With Chemotherapy-naive Metastatic Castration-resistant Prostate Cancer: Results From the Phase II Checkmate 9KD Trial. *J. Urol.* 2023. 209. (2): p. 445-446. Editorial Material.
- van der Heijden, MS; Powles, T; Petrylak, D; de Wit, R; Necchi, A; Sternberg, CN; Matsubara, N et al. Re: Predictive Biomarkers for Survival Benefit With Ramucirumab in Urothelial Cancer in the RANGE Trial Editorial Comment. *J. Urol.* 2023. 209. (1): p. 291-291. Editorial Material.

END GRADUATED INVESTIGATIONS DIRECTED ON THE GROUP

- **Student:** Katia Molina Barrio.
Title: Estudio traslacional sobre cáncer de próstata metastásico.
Director: Enrique González Billalabeitia.
Degree: Medicina.
University: Universidad Católica San Antonio de Murcia.

PATENTS

- Title:** Método pronóstico para identificar riesgo de recidiva en pacientes de cáncer de riñón tipo carcinoma renal de células claras estadios I y II y kit.
Number: P201531360.
Type: SPANISH patent.
Inventors: Natalia Miranda Utrera, Felipe Villacampa Aubá, Juan Ángel Fresno Vara, Ángel Gámez Pozo, Daniel Castellano Gauna.
Owners: Fundación i+12 (70 %), Fundación para la Investigación Biomédica del Hospital Universitario la Paz (30 %).
Priority Date: 23/09/2015.
Status: Granted (10/01/2018).
Graduate: Biomedica Molecular Medicine S.L.
- Title:** 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.
Number: EP16774644-FR.
Type: Validation of the European patent in GERMANY.
Inventors: Natalia Miranda Utrera, Felipe Villacampa Aubá, Daniel Castellano Gauna, Juan Ángel Fresno Vara, Ángel Gámez Pozo.
Owners: Fundación i+12 (70 %), Fundación para la Investigación Biomédica del Hospital Universitario la Paz (30 %).
Date of validation: 15/04/2020.
Priority data: P201531360 (23/09/2015).
Status: Granted.
Graduate: Biomedica Molecular Medicine S.L.
- Title:** 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.
Number: EP16774644-FR.
Type: Validation of the European patent in FRANCE.
Inventors: Natalia Miranda Utrera, Felipe Villacampa Aubá, Daniel Castellano, Juan Ángel Fresno Vara, Angelo Gámez Pozo.
Owners: Fundación i+12 (70 %), Fundación para la Investigación Biomédica del Hospital Universitario la Paz (30 %).
Date of validation: 15/04/2022.
Priority data: P201531360 (23/09/2015).
Status: Granted.
Graduate: Biomedica Molecular Medicine S.L.
- Title:** 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.
Número: EP16774644-GB.
Type: Validation of the European patent in the UNITED KINGDOM.
Inventors: Natalia Miranda Utrera, Felipe Villacampa Aubá, Daniel Castellano Gauna, Juan Ángel Fresno Vara, Ángel Gámez Pozo.
Owners: Fundación i+12 (70 %), Fundación para la Investigación Biomédica del Hospital Universitario la Paz (30 %).
Date of validation: 15/04/2020.
Priority data: P201531360 (23/09/2015).
Status: Granted.
Graduate: Biomedica Molecular Medicine S.L.
- Title:** 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.
Number: US11401556B2.
Type: Entry into national phases of PCT/EP2016/072723 - UNITED STATES.
Inventors: Natalia Miranda Utrera, Felipe Villacampa Aubá, Daniel Castellano Gauna, Juan Ángel Fresno Vara, Ángel Gámez Pozo.
Owners: Fundación i+12 (70 %), Fundación para la Investigación Biomédica del Hospital Universitario la Paz (30 %).
EFFNN Date: 20/03/2018.
Priority data: P201531360 (23/09/2015).
Status: Granted (02/08/2022).
Graduate: Biomedica Molecular Medicine S.L.
- Title:** 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.
Number: CN201680059656.
Type: Entry into national phases of PCT/EP2016/072723 - CHINA.
Inventors: Natalia Miranda Utrera, Felipe Villacampa Aubá, Daniel Castellano Gauna, Juan Ángel Fresno Vara, Ángel Gámez Pozo.
Owners: Fundación i+12 (70 %), Fundación para la Investigación Biomédica del Hospital Universitario la Paz (30 %).
EFFNN Date: 12/04/2018.
Priority data: P201531360 (23/09/2015).
Status: Granted (23/08/2022).
Graduate: Biomedica Molecular Medicine S.L.

Breast and Gynecologic Cancer

CENTER: Hospital Universitario 12 de Octubre (HU12O), Universidad Complutense de Madrid (UCM) and Centro de Investigaciones Energéticas, Medioambientales y Tecnológicas (CIEMAT).

GROUP LEADER: Ciruelos Gil, Eva M.^a (R4).

- Alva Bianchi, Manuel - Graduate researcher.
- Aragón Sánchez, Sofía - Predoctoral researcher (R1).
- Bárcena García, Carmen - Clinical researcher.
- Blasco Benito, Sandra - Doctoral researcher.
- Bravo Violeta, Victoria - Clinical researcher.
- Cobos Fernández, María de los Ángeles - Doctoral researcher (R2).
- Díaz Salgado, Irene - Support technician.
- García Martínez-Illescas, Nuria - Predoctoral researcher (R1).
- Gil Ibáñez, Blanca - Doctoral researcher (R2).
- López González, Gregorio - Doctoral researcher (R2).
- Madariaga Urrutia, Ainhoa - Predoctoral researcher (R1).
- Manso Sánchez, Luis Manuel - Doctoral researcher (R4).
- Martínez López, Mario - Predoctoral researcher (R1).
- Moreno Villa, María del Rocío - Support technician.
- Navarro Espinel, José Manuel - Postdoctoral researcher (R3).
- Oliver Pérez, María de los Reyes - Predoctoral researcher (R1).

- Olloqui Escalona, Alejandro - Clinical researcher.
- Page Peñuelas, María Angustias - Doctoral researcher (R2).
- Parrilla Rubio, Lucía - Graduate researcher (R1).
- Pérez Gómez, Eduardo - Principal investigator (PI) (R4).
- Ramírez Merino, Ángel - Postdoctoral researcher (R3).
- Rubert Hernández, María - Predoctoral researcher (R1).
- Salazar Roa, María - Doctoral researcher (R3).
- Sánchez Baltasar, Raquel - Graduate researcher (R1).
- Sánchez Bayona, Rodrigo - Doctoral researcher (R2).
- Sánchez García, Cristina - Principal investigator (PI) (R4).
- Sanz Ferrández, María Consuelo - Clinical researcher.
- Seijo Vila, Marta - Predoctoral researcher (R1).
- Tejerizo García, Álvaro - Postdoctoral researcher (R3).
- Tolosa Ortega, Pablo - Predoctoral researcher (R1).
- Tundidor Pérez, Isabel - Predoctoral researcher (R1).

ACTIVE RESEARCH PROJECTS

Type of funding	Funding body	No. of projects
Competitive	Fundación Española de Oncología Médica	1
Competitive	Fundación Menudos Corazones	1
Competitive	Gilead Sciences, S.L.U.	1
Competitive	ISCIII	5
Competitive	Ministerio de Economía y Competitividad	1
No competitive	Various	5
Total		15

- Title:** Análisis de la eficacia de inhibidores de CDK4/6 en combinación con tratamiento hormonal en cáncer de mama luminal en relación con el subtipo intrínseco y marcadores de inmunidad.
Principal investigator: Ciruelos Gil, Eva María.
Project No.: PI18/01408.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2019.
End date: 31/12/2021, extended to 30/06/2023.
- Title:** Potencial del sistema endocannabinoide como diana terapéutica y herramienta de cribado de cáncer de mama.
Principal investigator: Sánchez García, Cristina.
Project No.: PI20/00590.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2021.
End date: 31/12/2023.
- Title:** Rasa1 as a central hub in triple negative breast cancer and chemoresistance.
Principal investigator: Navarro Espinel, José Manuel.
Project No.: PI20/01173.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2021.
End date: 31/12/2023, extended to 31/12/2024.
- Title:** Plataforma (ONODEEPLASM) para inmunoensayos optoplasmónicos ultrasensibles para la detección temprana del cáncer de mama basada en biomarcadores de proteínas en la región profunda del proteoma sanguíneo.
Principal investigator: Ciruelos Gil, Eva María.
Project No.: PLEC2021-007892.
Funding body: Ministerio de Economía y Competitividad.
Start date: 01/12/2021.
End date: 30/11/2024.

- **Title:** Prediciendo fenotipos moleculares clínicamente relevantes de cáncer de ovario para personalizar el tratamiento.
Principal investigator: Manso Sánchez, Luis Manuel.
Project No.: PI21/01932.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2022.
End date: 31/12/2024.
- **Title:** Una nueva plataforma para predecir la respuesta a inhibidores de CDK4/6 en pacientes con cáncer de mama metastásico.
Principal investigator: Ciruelos Gil, Eva María.
Project No.: DTS21/00111.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2022.
End date: 31/12/2023, extended to 31/12/2024.
- **Title:** Estudio farmacogenómico de la toxicidad de trastuzumab-deruxtecan en pacientes con cáncer de mama.
Principal investigator: Sánchez Bayona, Rodrigo.
Funding body: Fundación Menudos Corazones.
Start date: 29/07/2022.
End date: 28/07/2023; extended to 30/06/2024.
- **Title:** Terapia celular adoptiva mediante transferencia de linfocitos CD3+/PD1+ infiltrantes de tumor en cáncer de mama avanzado.
Principal investigator: Ciruelos Gil, Eva María.
Project No.: GCAEC19010PRAT.
Funding body: Fundació Clínic per a la Recerca Biomèdica.
Start date: 01/12/2022.
End date: 30/11/2024, extended to 30/11/2025.
- **Title:** Deep learning and morphological patterns of homologous recombination deficiency in ovarian cancers from whole slide images.
Principal investigator: Manso Sánchez, Luis Manuel.
Funding body: Gilead Sciences, S.L.U.
Start date: 04/05/2023.
End date: 03/05/2025.
- **Title:** Validación de la heterogeneidad intratumoral y su impacto clínico en el tratamiento inicial del cáncer de ovario avanzado.
Principal investigator: Manso Sánchez, Luis Manuel.
Funding body: Fundación Española de Oncología Médica.
Start date: 12/09/2023.
End date: 11/09/2025.
- **Title:** Correlación del valor de HE4 con la carga tumoral en pacientes con cáncer de ovario avanzado.
Principal investigator: Gil Ibáñez, Blanca.
Funding body: Roche Diagnostics, S.L.U.
Start date: 13/04/2022.
End date: 31/12/2023.
- **Title:** Impacto de la invasión del espacio infovascular en el carcinoma de endometrio en estadio inicial (ESTUDIO LYSEC).
Principal investigator: Oliver Pérez, María de los Reyes.
Funding body: Medtronic Ibérica S.A.
Start date: 02/02/2023.
End date: 01/08/2024.
- **Title:** Caracterización de biomarcadores inmunes en carcinoma de cérvix.
Principal investigator: Madariaga Urrutia, Ainhoa.
Funding body: Funded by the PI.
Start date: 11/07/2023.
End date: 10/07/2024.
- **Title:** Caracterización clínico-patológica y genómica del cáncer de mama metastásico HER2 positivo.
Principal investigator: Ciruelos Gil, Eva María.
Project No.: SP230331006.
Funding body: Roche Farma, S.A.
Start date: 05/09/2023.
End date: 04/09/2024.
- **Title:** Machine learning to predict genomic risk in early breast cancer.
Principal investigator: Ciruelos Gil, Eva María.
Funding body: Seagen Spain, S.L.U.
Start date: 25/10/2023.
End date: 24/10/2026.

OTHER ACTIVE PROJECTS OF THE RESEARCH GROUP NOT MANAGED BY THE FUNDACIÓN PARA LA INVESTIGACIÓN BIOMÉDICA DEL HOSPITAL 12 DE OCTUBRE (FIBH12O)

- **Title:** Cannabinoids as breast cancer differentiation drivers: novel strategies for tumour differentiation therapy.
Principal investigator: Salazar Roa, María.
Project No.: CNS2022-135364.
Funding body: Ministerio de Ciencia, Innovación y Universidades.
Start date: 01/07/2023.
End date: 30/06/2025.
- **Title:** Exploring the therapeutic advantages of cannabinoids as tumour differentiation drivers in breast cancer.
Principal investigator: Salazar Roa, María.
Project No.: PID2022-136508OA-I00.
Funding body: Ministerio de Ciencia, Innovación y Universidades.
Start date: 01/09/2023.
End date: 31/08/2026.

PUBLICATIONS*

Type of Document	No. of document	Σ IF (JCR 2022)
Articles	37	626,2
Editorials	4	18,1
Reviews	6	104,008
Total	47	748,308
Letters	1	6,5
Total	48	754,808

Articles

- Aguilera Buenosvinos, I; Martínez González, MA; Zazpe, I; Romanos Nanclares, A; Sánchez Bayona, R; Toledo, E. Associations between overall, healthful, and unhealthful low-fat dietary patterns and breast cancer risk in a Mediterranean cohort: Nutrition. 2023. 109. 111967. Article.
- Antolín Novoa, S; Escrivá Romaní, S; Tolosa Ortega, P; Oliva Fernández, L; López, R; López González, A; de la Morena Barrio, P et al. Real world data on the demographic and clinicopathological profile and management of patients with early-stage HER2-positive breast cancer and residual disease treated with adjuvant trastuzumab emtansine (KARMA study). Cancer Treat Res Commun. 2023. 37. p. 100772-100772. Article.
- Azcona, L; Heras, M; Arencibia, O; Minig, L; Martí, L; Baciú, A; Cespedes, J et al. Prognostic factors in young women with epithelial ovarian cancer: the Young Ovarian Cancer-Care (YOC-Care) study. Int. J. Gynecol. Cancer. 2023. Article.
- Bueno, MJ; Mouron, S; Caleiras, E; Martínez, M; Manso, L; Colomer, R; Quintela Fandino, M. Distribution of PD-L1, TROP2 and HER2-"lowness" in early triple-negative breast cancer: an opportunity for treatment de-escalation. Clin. Transl. Oncol. 2023. Article.
- Cabrera, S; Gómez Hidalgo, NR; García Pineda, V; Bebia, V; Fernández González, S; Alonso, P; Rodríguez Gómez, T et al. Accuracy and Survival Outcomes after National Implementation of Sentinel Lymph Node Biopsy in Early Stage Endometrial Cancer. Ann. Surg. Oncol. 2023. 30. (12): p. 7653-7662. Article.
- Cedillo, S; Gari, C; Aceituno, S; Manso, L; Lleti, ACC; Bosch, PV; Casado, A et al. Cost-effectiveness of olaparib plus bevacizumab versus bevacizumab monotherapy in the maintenance of patients with homologous recombination deficiency-positive advanced ovarian cancer after response to first-line platinum-based chemotherapy. Int. J. Gynecol. Cancer. 2023. Article.
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- Cueva, JF; Palacio, I; Churrua, C; Herrero, A; Pardo, B; Constenla, M; Santaballa, A et al. Real-world safety and effectiveness of maintenance niraparib for platinum-sensitive recurrent ovarian cancer: A GEICO retrospective observational study within the Spanish expanded-access programme. Eur. J. Cancer. 2023. 182. p. 3-14. Article.
- Chang Azancot, L; Abizanda, P; Gijón, M; Kenig, N; Campello, M; Juez, J; Talaya, A et al. Age and Breast Reconstruction. Aesthetic Plast Surg. 2023. 47. (1): p. 63-72. Article.
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- de la Torre, P; Pérez Lorenzo, MJ; Alcázar Garrido, A; Collado, J; Martínez López, M; Forcén, L; Masero Casasola, AR et al. Perinatal mesenchymal stromal cells of the human decidua restore continence in rats with stress urinary incontinence induced by simulated birth trauma and regulate senescence of fibroblasts from women with stress urinary incontinence. Front. Cell. Dev. Biol. 2023. 10. p. 1033080-1033080. Article.
- Gambacorta, N; Gasperi, V; Guzzo, T; Di Leva, FS; Ciriaco, F; Sánchez, C; Tullio, V et al. Exploring the 1,3-benzoxazine chemotype for cannabinoid receptor 2 as a promising anti-cancer therapeutic. Eur J Med Chem. 2023. 259. p. 115647-115647. Article.
- Gil Ibanez, B; Tejerizo Garcia, A; Oliver, MR; Madariaga, A; Jimenez, MM; Garcia, AG; Lopez Gonzalez, G. Side effects screening and early intervention to impact in quality of life of patients with gynecological cancers (HALIS study). Int. J. Gynecol. Cancer. 2023. 33. (10): p. 1645-1648. Article.
- Guerrero Zotano, A; Belli, S; Zielinski, C; Gil, M; Fernandez Serra, A; Ruiz Borrego, M; Gil, EMC et al. CCNE1 and PLK1 Mediate Resistance to Palbociclib in HR+/HER2-Metastatic Breast Cancer. Clin. Cancer Res. 2023. 29. (8): p. 1557-1568. Article.
- Hogeboom, A; Bárcena, C; Parrilla Rubio, L; Revilla, E; Ruano, Y; Gallego Gutiérrez, I; Martínez López, M. A Case of COL1A1-PDGFB Fusion Uterine Sarcoma. Int. J. Gynecol. Pathol. 2023. 42. (2): p. 147-150. Article.
- Jiménez Ubieta, A; Poza, M; Martín Muñoz, A; Ruiz Heredia, Y; Dorado, S; Figaredo, G; Rosa, JM et al. Real-life disease

* Publications: only "Article", "Review", "Editorial Material" and "Letter" have been selected in "Document Type" of ISI Web Of Knowledge. The breakdown of publications includes some not included in the 2022 JCR, which are therefore not taken into account in the final count shown in the table, since they do not have IF.

- monitoring in follicular lymphoma patients using liquid biopsy ultra-deep sequencing and PET/CT. *Leukemia*. 2023. 37. (3): p. 659-669. Article.
- Jimeno, R; Mouron, S; Salgado, R; Loi, S; Perez Mies, B; Sanchez Bayona, R; Manso, L et al. Tumor P70S6K hyperactivation is inversely associated with tumor-infiltrating lymphocytes in triple-negative breast cancer. *Clin. Transl. Oncol.* 2023. 25. (4): p. 1124-1131. Article.
 - Luen, SJ; Viale, G; Nik Zainal, S; Savas, P; Kammler, R; Dell'Orto, P; Biasi, O et al. Genomic characterisation of hormone receptor-positive breast cancer arising in very young women. *Ann. Oncol.* 2023. 34. (4): p. 397-409. Article.
 - Madariaga, A; Garg, S; Tchakian, N; Dhani, NC; Jimenez, W; Welch, S; MacKay, H et al. Clinical outcome and biomarker assessments of a multi-centre phase II trial assessing niraparib with or without dostarlimab in recurrent endometrial carcinoma. *Nat. Commun.* 2023. 14. (1): 1452. Article.
 - Mair, MJ; Cardone, C; Connolly, L; Kfoury, M; Lambertini, M; Lim, J; Mariamidze, E et al. Career and Professional Development for Young Oncologists. *Oncol Res Treat.* 2023. 46. (3): p. 67-71. Article.
 - Martínez Illescas, NG; Leal, S; González, P; Graña Castro, O; Muñoz Oliveira, JJ; Cortés Peña, A; Gómez Gil, M et al. miR-203 drives breast cancer cell differentiation. *Breast Cancer Res.* 2023. 25. (1): 91. Article.
 - Meric Bernstam, F; Makker, V; Oaknin, A; Oh, D; Banerjee, SN; Martín, AG; Jung, KH et al. Efficacy and safety of trastuzumab deruxtecan (T-DXd) in patients (pts) with HER2-expressing solid tumors: DESTINY-PanTumor02 (DP-02) interim results. *J. Clin. Oncol.* 2023. 41. (17_SUPPL): p. 3000-3000. Article.
 - Minig, L; Segovia, MG; Arencibia, O; Zorrero, C; Martí, L; Pineda, VG; Cespedes, J et al. Oncological outcomes among young women with non-epithelial ovarian cancer: the YOC-Care study (Young Ovarian Cancer - Care). *Int. J. Gynecol. Cancer.* 2023. 33. (6): p. 915-921. Article.
 - Mouron, S; Bueno, MJ; Muñoz, M; Torres, R; Rodríguez, S; Apala, JV; Silva, J et al. p27Kip1 V109G as a biomarker for CDK4/6 inhibitors indication in hormone receptor-positive breast cancer. *JNCI Cancer Spectr.* 2023. 7. (2): pkad014. Article.
 - Oliveira, M; Falato, C; Cejalvo, JM; Vila, MM; Tolosa, P; Salvador Bo, FJ; Cruz, J et al. Patritumab deruxtecan in untreated hormone receptor-positive/HER2-negative early breast cancer: final results from part A of the window-of-opportunity SOLTI TOT-HER3 pre-operative study. *Ann. Oncol.* 2023. 34. (8): p. 670-680. Article.
 - Oliver Perez, MR; Padilla Iserte, P; Arencibia Sanchez, O; Martín Arriscado, C; Muruzabal, JC; Díaz Feijóo, B; Cabrera, S et al. Lymphovascular Space Invasion in Early-Stage Endometrial Cancer (LySEC): Patterns of Recurrence and Predictors. A Multicentre Retrospective Cohort Study of the Spain Gynecologic Oncology Group. *Cancers.* 2023. 15. (9): 2612. Article.
 - Olivera Salguero, R; Seguí, E; Cejalvo, JM; Oliveira, M; Tolosa, P; Vidal, M; Malumbres, M et al. HOPE (SOLTI-1903) breast cancer study: real-world, patient-centric, clinical practice study to assess the impact of genomic data on next treatment decision-choice in patients with locally advanced or metastatic breast cancer. *Front. Oncol.* 2023. 13. 1151496. Article.
 - Pagani, O; Walley, BA; Fleming, GF; Colleoni, M; Láng, I; Gomez, HL; Tondini, C et al. Adjuvant Exemestane With Ovarian Suppression in Premenopausal Breast Cancer: Long-Term Follow-Up of the Combined TEXT and SOFT Trials. *J. Clin. Oncol.* 2023. 41. (7): p. 1376-1382. Article.
 - Pascual, J; Gil, M; Proszek, P; Zielinski, C; Reay, A; Ruiz Borrego, M; Cutts, R et al. Baseline Mutations and ctDNA Dynamics as Prognostic and Predictive Factors in ER-Positive/HER2-Negative Metastatic Breast Cancer Patients. *Clin. Cancer Res.* 2023. 29. (20): p. 4166-4177. Article.
 - Perez Fidalgo, JA; Guerra, E; García, Y; Iglesias, M; Hernández Sosa, M; Estevez García, P; Sánchez, LM et al. Clinical and molecular signature of survival and resistance to olaparib plus pegylated liposomal doxorubicin in platinum-resistant ovarian cancer: a stratified analysis from the phase II clinical trial ROLANDO, GEICO-1601. *Int. J. Gynecol. Cancer.* 2023. 33. (6): p. 929-936. Article.
 - Prat, A; Brasó Maristany, F; Martínez Sáez, O; Sanfeliu, E; Xia, YL; Bellet, M; Galván, P et al. Circulating tumor DNA reveals complex biological features with clinical relevance in metastatic breast cancer. *Nat. Commun.* 2023. 14. (1): 1157. Article.
 - Quintana Bertó, R; Padilla Iserte, P; Lago, V; Tauste, C; Díaz Feijoo, B; Cabrera, S; Oliver Pérez, R et al. Endometrial cancer: predictors and oncological safety of tumor tissue manipulation. *Clin. Transl. Oncol.* 2023. Article.
 - Rugo, HS; Bardia, A; Marme, F; Cortes, J; Schmid, P; Loirat, D; Tredan, O et al. Overall survival with sacituzumab govitecan in hormone receptor-positive and human epidermal growth factor receptor 2-negative metastatic breast cancer (TROPICS-02) a randomised, open-label, multicentre, phase 3 trial. *Lancet.* 2023. 402. (10411): p. 1423-1433. Article.
 - Sánchez Cánovas, M; Jimenez Fonseca, P; Garay, DF; Solís, MC; Elía, DC; Salvans, EC; Vacas, ID et al. Prediction of serious complications in patients with pulmonary thromboembolism and solid cancer: Validation of the EPIPHANY Index in a prospective cohort of patients from the PERSEO study. *PLoS One.* 2023. 18. (5): e0266305. Article.
 - Sarkis, R; Burri, O; Royer Chardon, C; Schyrr, F; Blum, S; Costanza, M; Cherix, S et al. MarrowQuant 2.0: A Digital Pathology Workflow Assisting Bone Marrow Evaluation in Experimental and Clinical Hematology. *Mod. Pathol.* 2023. 36. (4): 100088. Article.
 - Terán, S; Alva, M; Tolosa, P; Rey Cardenas, M; Madariaga, A; Lema, L; Ruano, Y et al. Analysis of the association of HER-2 low carcinomas and PAM50 assay in hormone receptor positive early-stage breast cancer. *Breast.* 2023. 71. p. 42-46. Article.
 - Tundidor, I; Seijo Vila, M; Blasco Benito, S; Rubert Hernández, M; Adámez, S; Andradas, C; Manzano, S et al. Identification of fatty acid amide hydrolase as a metastasis suppressor in breast cancer. *Nat. Commun.* 2023. 14. (1): 3130. Article.
 - Villa Morales, M; Pérez Gómez, L; Pérez Gómez, E; López Nieva, P; Fernández Navarro, P; Santos, J. Identification of NRF2 Activation as a Prognostic Biomarker in T-Cell Acute

- Lymphoblastic Leukaemia. *Int. J. Mol. Sci.* 2023. 24. (12): 10350. Article.
- Wang, XQ; Danenberg, E; Huang, CS; Egle, D; Callari, M; Bermejo, B; Dugo, M et al. Spatial predictors of immunotherapy response in triple-negative breast cancer. *Nature.* 2023. 621. (7980): p. 868-868. Article.
- Yubero, A; Estévez, P; Barquín, A; Sánchez, L; Santaballa, A; Pajares, B; Reche, P et al. Rucaparib for PARP inhibitor-pretreated ovarian cancer: A GEICO retrospective subgroup analysis from the Spanish Rucaparib Access Program. *Gynecol. Oncol. Rep.* 2023. 48. 101211. Article.

Editorials

- Cabrera, S; Gómez Hidalgo, NR; García Pineda, V; Bebia, V; Fernández González, S; Alonso, P; Rodríguez Gómez, T et al. ASO Visual Abstract: Accuracy and Survival Outcomes After National Implementation of Sentinel Lymph Node Biopsy in Early-Stage Endometrial Cancer. *Ann. Surg. Oncol.* 2023. 30. (12): p. 7669-7670. Editorial Material.
- Madariaga, A; Coleman, RL; González Martín, A. Novel therapies leading to a new landscape in gynecologic tumors. *Int. J. Gynecol. Cancer.* 2023. 33. (3): p. 321-322. Editorial Material.
- Oliver, MD; Betoret, RM. Treatment of primary and recurrent vulvar and vaginal cancer including rare vulvo-vaginal malignancies. *Int. J. Gynecol. Cancer.* 2023. 33. p. 19-19. Editorial Material.

Reviews

- Bravo, V; Serrano, M; Duque, A; Ferragud, J; Coronado, PJ. Glycyrrhizic Acid as an Antiviral and Anticancer Agent in the Treatment of Human Papillomavirus. *J. Pers. Med.* 2023. 13. (12): 1639. Review.
- El Bairi, K; Madariaga, A; Trapani, D; Al Jarroudi, O; Afqir, S. New horizons for platinum-resistant ovarian cancer: insights from the 2023 American Society of Clinical Oncology (ASCO) and European Society for Medical Oncology (ESMO) Annual Meetings. *Int. J. Gynecol. Cancer.* 2023. Review.
- Gil Ibanez, B; Davies Oliveira, J; Lopez, G; Díaz Feijoo, B; Tejerizo Garcia, A; Sehouli, J. Impact of gynecological cancers on health-related quality of life: historical context, measurement instruments, and current knowledge. *Int. J. Gynecol. Cancer.* 2023. 33. (11): p. 1800-1806. Review.
- Madariaga, A; Sanchez Bayona, R; Herrera, FG; Ramirez, PT; González Martín, A. Outcomes and endpoints of relevance in gynecologic cancer clinical trials. *Int. J. Gynecol. Cancer.* 2023. 33. (3): p. 323-332. Review.
- Schettini, F; Martínez Sáez, O; Falato, C; I; Conte, B; Garcia Fructuoso, I; Gomez Bravo, R et al. Prognostic value of intrinsic subtypes in hormone-receptor-positive metastatic breast cancer: systematic review and meta-analysis. *ESMO Open.* 2023. 8. (3): 101214. Review.
- Veneziani, AC; Gonzalez Ochoa, E; Alqaisi, H; Madariaga, A; Bhat, G; Rouzbahman, M; Sneha, S et al. Heterogeneity and treatment landscape of ovarian carcinoma. *Nat. Rev. Clin. Oncol.* 2023. 20. (12): p. 820-842. Review.

Letters

- Lahera, A; Vela Martín, L; López Nieva, P; Salgado, RN; Rodríguez Perales, S; Torres Ruiz, R; López Lorenzo, JL et al. Comprehensive characterization of a novel, oncogenic and targetable SEPTIN6::ABL2 fusion in T-ALL. *Br. J. Haematol.* 2023. 202. (3): p. 693-698. Letter.

THESES DEFENDED OR SUPERVISED WITHIN THE GROUP

- **Doctoral candidate:** Luis Alejandro Chang Azancot.
Thesis title: Edad y reconstrucción mamaria.
University: Universidad de Castilla-La Mancha.
Date read: 24/05/2023.
Thesis director: Rodrigo Sánchez Bayona.
International mention: No.

END MASTER INVESTIGATIONS DIRECTED ON THE GROUP

- **Student:** Miranda Muñoz Aznar.
Title: Molecular characterization of RASA1 partial deletions.
Director: Manuel Navarro Espinel.
Master: Biomedicina Molecular.
University: Universidad Autónoma de Madrid.

END GRADUATED INVESTIGATIONS DIRECTED ON THE GROUP

- **Student:** Paula Gijón Rodríguez.
Title: Cancer stem cell- targeted therapies.
Directors: Nuria García Martínez-Illescas and María Salazar Roa.
Degree: Biología.
University: Universidad Complutense de Madrid.
- **Student:** Raúl García.
Title: Determinación del potencial del heterómero HER2-CB 2 R como diana terapéutica en cáncer de mama HER2+.
Directors: Eduardo Pérez-Gómez and Marta Seijo Vila.
Degree: Biología.
University: Universidad Complutense de Madrid.
- **Student:** Eugenia Cañete.
Title: Análisis del cociente neutrófilo/linfocito y plaqueta/linfocito en pacientes con cáncer de mama HER2+ en tratamiento con anticuerpos conjugados.
Directors: Rodrigo Sánchez Bayona and Eva Ciruelos.
Degree: Medicina.
University: Universidad Complutense de Madrid.
- **Student:** Ignacio Escudero Gutiérrez.
Title: Identificación de variables clínico-patológicas asociadas a fenotipos extremos de respuesta en cáncer de mama HER2+ avanzado.
Directors: Rodrigo Sánchez Bayona and Eva Ciruelos.
Degree: Medicina.
University: Universidad Complutense de Madrid.

PRIZES AND AWARDS

- First prize of the V Edition of the M. Chiara Giorgetti Award of the Spanish Association of Metastatic Breast Cancer (AECMM), endowed with 150,000 €, to Eva Ciruelos Gil, for the work "Análisis de expresión de microRNAs y perfiles de citoquinas en sangre y saliva en pacientes que desarrollan neumonitis por trastuzumab-deruxtecan".
- SEOM Grant in breast cancer projects, with a financial endowment of 20,000 €, to Rodrigo Sánchez-Bayona, for the paper "Uso de ctDNA y vesículas extracelulares en plasma y fluido linfático para identificar enfermedad mínima residual en pacientes con cáncer de mama precoz".

Intercellular Communication in Aging and Cancer

CENTER: Hospital Universitario 12 de Octubre (HU12O).

GROUP LEADER: Ucero Herrería, Álvaro Conrado (R3).

Gutiérrez Pérez, María - Predoctoral researcher (R1).

Khoroz, Roksolyana - Support technician.

Núñez Buiza, Ángel - Predoctoral researcher (R1).

ACTIVE RESEARCH PROJECTS

Type of funding	Funding body	No. of projects
Competitive	ISCIII	1
Total		1

- **Title:** Fra-2, a new therapeutic target against lung cancer in the tumor and its microenvironment.
Principal investigator: Ucero Herrería, Álvaro Conrado.
Project No.: PI21/01997.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2022.
End date: 31/12/2024.

OTHER ACTIVE PROJECTS OF THE RESEARCH GROUP NOT MANAGED BY THE FUNDACIÓN PARA LA INVESTIGACIÓN BIOMÉDICA DEL HOSPITAL 12 DE OCTUBRE (FIBH12O)

- **Title:** iLUNG 2.0. ONCOLOGÍA Y NANOTECNOLOGÍA TRASLACIONAL PARA LA MEDICINA PERSONALIZADA EN CÁNCER DE PULMÓN
Principal investigator: Paz-Ares, Luis.
IG researcher participating in the project: Ucero Herrería, Álvaro.
Project No.: P2022/BMD-7437-CM.
Funding body: Comunidad de Madrid.
Start date: 01/01/2023.
End date: 31/12/2026.

PUBLICATIONS*

Type of Document	No. of document	Σ IF (JCR 2022)
Reviews	1	78.800
Total	1	78.800

* Publications: only "Article", "Review", "Editorial Material" and "Letter" have been selected in "Document Type" of ISI Web Of Knowledge. The breakdown of publications includes some not included in the 2022 JCR, which are therefore not taken into account in the final count shown in the table, since they do not have IF.

Reviews

- Otano, I; Ucerro, AC; Zugazagoitia, J; Paz Ares, L. At the crossroads of immunotherapy for oncogene-addicted subsets of NSCLC. Nat. Rev. Clin. Oncol. 2023. 20. (3): p. 143-159. Review.

STAYS

- Ángel Núñez Buiza, predoctoral student, stayed from September 1 to 30, 2023 at the Centre d'Immunologie et des Maladies Infectieuses (CIMI) of the Facultad de Medicina de la Universidad de la Sorbona (Paris, France).

Lymphoid Differentiation

CENTER: Universidad Complutense de Madrid (UCM).

GROUP LEADER: Alfaro Sánchez, David - Doctoral researcher (R3).

Cortes Peña, Alfonso - Support technician.

García-Ceca Hernández, Javier - Doctoral researcher (R3).

Hernández López, Carmen - Support technician.

Montero Herradón, Sara - Postdoctoral researcher (R3).

Muñoz Oliveira, Juan José - Support technician.

Rodríguez Sosa, Mariano Rubén - Predoctoral researcher (R1).

Vicente López, María Ángeles - Doctoral researcher (R4).

PUBLICATIONS*

Type of Document	No. of document	Σ IF (JCR 2022)
Letters	1	4.8
Total	1	4.8

Articles

- Sánchez Guijo, F; Avendaño Solá, C; Badimón, L; Bueren, JA; Canals, JM; Delgadillo, J; Delgado, J et al. Role of Hospital Exemption in Europe: position paper from the Spanish Advanced Therapy Network (TERAV). Bone Marrow Transplant. 2023. 58. (6): p. 727-728. Letter.

STAYS

- Mariano Rubén Rodríguez Sosa stayed at the Hospital Universitario Virgen de la Arrixaca (Murcia) from September 11 to December 11, 2023.

* Publications: only "Article", "Review", "Editorial Material" and "Letter" have been selected in "Document Type" of ISI Web Of Knowledge. The breakdown of publications includes some not included in the 2022 JCR, which are therefore not taken into account in the final count shown in the table, since they do not have IF.

Genomics and Therapy in Prostate Cancer

CENTER: Hospital Universitario 12 de Octubre (HU12O).

GROUP LEADER: Olmos Hidalgo, David (R4).

Hilario Barrio, Amaya - Postdoctoral researcher (R2).
Alonso Sánchez, Miguel - Support technician.
Brown Araujo, Samuel Owen - Predoctoral researcher (R1).
Esteban Villarrubia, Jorge - Predoctoral researcher (R1).
Velasco Esteban, Héctor - Superior technique.

Díaz Candeleda, Paula - Predoctoral researcher (R1).
Iglesias Matesanz, Paula - Predoctoral researcher (R1).
López Casas, Pedro Pablo - Doctoral researcher (R3).
Martín Forero, Esther - Superior technique.
Tello Velasco, Daniel - Doctoral researcher (R2).

ACTIVE RESEARCH PROJECTS

Type of funding	Funding body	No. of projects
Competitive	Fundación CRIS de Investigación para Vencer el Cáncer	1
Competitive	ISCIII	2
Competitive	Ministerio de Economía y Competitividad	1
Total		4

- Title:** Identificación de subtipos letales de cáncer de próstata mediante la integración de datos transcriptómicos, genómicos y clínicos.
Principal investigator: Olmos Hidalgo, David.
Project No.: PI19/01380.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 31/12/2021.
End date: 31/12/2022; extended to 30/06/2024.
- Title:** Rol de la pérdida de 13Q más allá de BRCA2 y RB1 en la biología y curso clínico del cáncer de próstata.
Principal investigator: Olmos Hidalgo, David.
Project No.: PI22/01593.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2023.
End date: 31/12/2025.
- Title:** Manipulación de la replicación tumor para resensibilizar frente a inmunoterapia.
Principal investigator: Olmos Hidalgo, David.
Project No.: PLEC2022-009241.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/12/2022.
End date: 30/11/2025.
- Title:** ReBePCa: Addressing the biological and clinical role of RB1 loss and DNA repair defects in lethal prostate cancer.
Principal investigator: Olmos Hidalgo, David.
Funding body: Fundación CRIS de Investigación para Vencer el Cáncer.
Start date: 16/05/2023.
End date: 31/12/2026.

PUBLICATIONS*

Type of Document	No. of document	Σ IF (JCR 2022)
Articles	6	115.3
Reviews	1	5.2
Editorials	1	23.4
Total	8	143.9

Articles

- Chi, KN; Barnicle, A; Sibilla, C; Lai, ZW; Corcoran, C; Barrett, JC; Adelman, CA et al. Detection of BRCA1, BRCA2, and ATM Alterations in Matched Tumor Tissue and Circulating Tumor DNA in Patients with Prostate Cancer Screened in PROfound. *Clin. Cancer Res.* 2023. 29. (1): p. 81-91. Article.
- Chi, KN; Rathkopf, D; Smith, MR; Efstathiou, E; Attard, G; Olmos, D; Lee, JY et al. Niraparib and Abiraterone Acetate for Metastatic Castration-Resistant Prostate Cancer. *J. Clin. Oncol.* 2023. 41. (18): p. 3339-3339. Article.

* Publications: only "Article", "Review", "Editorial Material" and "Letter" have been selected in "Document Type" of ISI Web Of Knowledge. The breakdown of publications includes some not included in the 2022 JCR, which are therefore not taken into account in the final count shown in the table, since they do not have IF.

- Chi, KN; Sandhu, S; Smith, MR; Attard, G; Saad, M; Olmos, D; Castro, E et al. Niraparib plus abiraterone acetate with prednisone in patients with metastatic castration-resistant prostate cancer and homologous recombination repair gene alterations: second interim analysis of the randomized phase III MAGNITUDE trial. *Ann. Oncol.* 2023. 34. (9): p. 772-782. Article.
- Esteban Villarrubia, J; Ferreiro, CR; Carril Ajuria, L; Carretero González, A; Iacovelli, R; Albiges, L; Castellano, D et al. Meta-analysis of perioperative immunotherapy in renal cell carcinoma: Available, but the jury is still out. *Urol. Oncol.-Semin. Orig. Investig.* 2023. 41. (9). Article.
- Matsubara, N; de Bono, J; Sweeney, C; Chi, KN; Olmos, D; Sandhu, S; Massard, C et al. Safety Profile of Ipatasertib Plus Abiraterone vs Placebo Plus Abiraterone in Metastatic Castration-resistant Prostate Cancer. *Clin. Genitourin. Cancer.* 2023. 21. (2): p. 230-230. Article.
- Smith, MR; Sandhu, S; George, DJ; Chi, KN; Saad, F; Thierry Vuillemin, A; Stáhl, O et al. Health-related quality of life in GALAHAD: A multicenter, open-label, phase 2 study of niraparib for patients with metastatic castration-resistant prostate cancer and DNA-repair gene defects. *J. Manag. Care Spec. Pharm.* 2023. 29. (7): p. 758-768. Article.

Reviews

- Esteban Villarrubia, J; Torres Jiménez, J; Bueno Bravo, C; García Mondaray, R; Subiela, JD; Gajate, P. Current and Future Landscape of Perioperative Treatment for Muscle-Invasive Bladder Cancer. *Cancers.* 2023. 15. (3): 566. Review.

Editorials

- Beije, N; Abida, W; Antonarakis, ES; Castro, E; de Wit, R; Fizazi, K; Gillissen, S et al. PARP Inhibitors for Prostate Cancer: Tangled up in PROfound and PROpel (and TALAPRO-2) Blues. *Eur. Urol.* 2023. 84. (3): p. 253-256. Editorial Material.

Translational Haematology

CENTER: Hospital Universitario 12 de Octubre (HU12O) and Universidad Complutense de Madrid (UCM).

GROUP LEADERS: Martínez López, Joaquín (R4) and Ayala Díaz, Rosa M.^a (R3).

Aguilar Garrido, Pedro - Predoctoral researcher (R1).
 Álvarez Sánchez-Redondo, Noemí - Predoctoral researcher (R1).
 Ancos Pintado, Raquel - Senior Researcher.
 Arroyo Barea, Andrés - Superior technique.
 Barrio García, Santiago - Doctoral researcher (R2).
 Baumann, Tycho Stephan - Doctoral researcher (R2).
 Belinchón Adán, Alba - Support nurse.
 Bienert García, Álvaro - Graduate researcher.
 Bragado García, Irene - Support technician.
 Cabello Rubio, María - Manager.
 Calbacho Robles, María - Doctoral researcher (R4).
 Carabajal Robles, Marta - Support nurse.
 Carneros Blanco, Laura - Superior technique.
 Carreño Gómez-Tarragona, Gonzalo - Researcher (R2).
 Carreras Romeo, María Pilar - Doctoral researcher.
 Castellano Esparza, Eva - Predoctoral researcher (R1).
 Colmenares Gil, Rafael - Predoctoral researcher (R1).
 Córdoba Espejo, Laura - Predoctoral researcher (R1).
 De la Serna Torroba, Javier - Principal investigator (PI) (R4).
 Del Moral Sáez, Patricia - Graduate researcher.
 Encinas Mayoral, Jessica - Predoctoral researcher (R1).
 Fernández Fernández, Javier - Superior technique.
 Fernández Guijarro, Manuela - Clinical researcher.
 Fernández Martín, Adrián - Predoctoral researcher (R1).
 Fraile Martín, Laura - C. T. coordinator.
 Gallardo Delgado, Miguel - Postdoctoral researcher (R3).
 Garcés Gorgoso, Paula - C. T. coordinator.
 García Navas Sánchez, Helena - Support nurse.
 García Ortiz, Almudena - Postdoctoral researcher (R2).
 García Vicente, Roberto - Predoctoral researcher (R1).
 Gil Sánchez, María Esther - Manager.
 Giménez Sánchez, Alicia - Support technician.
 Gómez Torres, Natalia - C. T. coordinator.
 Guerra Torres, María José - Support nurse.
 Gutiérrez de la Peña, Alba - C. T. coordinator.
 Hernández Sánchez, María - Doctoral researcher (R3).
 Hoyo Blasco, Juan - Support nurse.

Jiménez Ubieta, Ana Isabel - Principal investigator. (PI) (R4).
 Juez Gastañaga, Carolina - C. T. coordinator.
 Leivas Aldea, Alejandra - Postdoctoral researcher (R2).
 Linares Gómez, María - Doctoral researcher (R3).
 López Muñoz, María de las Nieves - Graduate researcher.
 Lores Salcedo, Lorena - Superior technique.
 Maroto Martín, Elena - Predoctoral researcher (R1).
 Martínez Sánchez, María Pilar - Principal investigator. (PI) (R4).
 Meléndez Mulio, Marina - Manager.
 Merino González, Isabel - Manager.
 Miras Calvo, Fátima - Graduate researcher.
 Molina Gargantilla, Ana María - Manager.
 Montoro Arroyo, Noemí - Support nurse.
 Moreno Sanz, Laura - Support technician.
 Morillo Vélez, Carlos - Researcher Nursing.
 Navarro Aguadero, Miguel Ángel - Support technician.
 Oliva Martín, Raquel - Superior technique.
 Oliva Taravilla, Tamara - Support technician.
 Ortiz Ruiz, Alejandra - Manager.
 Otero Sobrino, Álvaro - Predoctoral researcher (R1).
 Pardo Sánchez, Yasmín - Manager.
 Rapado Martínez, María Inmaculada - Postdoctoral researcher (R3).
 Rivero Ruiz, Ana - C. T. coordinator.
 Robles Marín, María José - Support technician.
 Rodríguez García, Alba - Predoctoral researcher (R1).
 Rodríguez Izquierdo, Antonia - Principal investigator. (PI) (R4).
 Romero Rodrigo, Alejandro - Manager.
 Rosa Rosa, Juan Manuel - Doctoral researcher (R2).
 Rufián Vázquez, Laura - Support technician.
 Sánchez Pérez, Ricardo - Doctoral researcher (R3).
 Sánchez Pina, José María - Clinical researcher.
 Sánchez Vega, Laura - Support technician.
 Sanjurjo Tártalo, Diana - Graduate researcher.
 Sastre Vergara, Lucía - Support technician.
 Valeri Lozano, Antonio - Doctoral researcher (R3).

ACTIVE RESEARCH PROJECTS

Type of funding	Funding body	No. of projects
Competitive	Fundación CRIS de Investigación para Vencer el Cáncer	1
Competitive	Fundación para la Investigación Médica Aplicada	1
Competitive	ISCIII	15
Competitive	Ministerio de Economía y Competitividad	2
No competitive	Various	17
Total		36

- Title:** Accelerator award - Early detection and intervention: understanding the mechanisms of transformation and hidden resistance of incurable haematological malignancies.
Principal investigator: Martínez López, Joaquín.
Funding body: Fundación para la Investigación Médica Aplicada.
Start date: 01/12/2018.
End date: 30/11/2023.
- Title:** Caracterización y seguimiento del sistema inmune en pacientes mayores con mm tratados dentro del ensayo GEM2017FIT: tratando de personalizar el tratamiento para maximizar la respuesta.
Principal investigator: Cedená Romero, M.^a Teresa.
Project No.: PI18/01709.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2019.
End date: 31/12/2021, extended to 30/06/2023.
- Title:** Expansión y optimización de la inmunoterapia adoptiva con receptores quiméricos de antígeno en neoplasias hematológicas.
Principal investigator: Martínez López, Joaquín.
Project No.: PI18/01519.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2019.
End date: 31/12/2021, extended to 30/06/2023.
- Title:** Uso como diana terapéutica del nuevo oncogén regulador de C-MYC en leucemia y linfoma, HNRNP K.
Principal investigator: Gallardo Delgado, Miguel.
Project No.: PI18/00295.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2019.
End date: 31/12/2021, extended to 30/06/2023.
- Title:** Medicina de precisión en Leucemia Mieloide Aguda: detección de pacientes resistentes a drogas y desarrollo de nuevas aproximaciones terapéuticas.
Principal investigator: Ayala Díaz, Rosa M.^a.
Project No.: PI19/01518.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2020.
End date: 31/12/2022; extended to 30/06/2024.
- Title:** Ensayo Clínico Fase I para explorar la factibilidad y seguridad de la terapia con células NKG2D-CAR NK alogénicas para leucemia mieloide aguda en recaída o refractaria (SUPERNK VS. LMA).
Principal investigator: Martínez López, Joaquín.
Project No.: ICI20/00022.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2021.
End date: 31/12/2024.
- Title:** Caracterización génica y seguimiento longitudinal por secuenciación masiva (NGS-EMR) de pacientes con leucemia linfática crónica tratados con nuevos fármacos.
Principal investigator: Baumann, Tycho Stephan.
Project No.: PI21/01637.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2022.
End date: 31/12/2024.
- Title:** CRISPR-CAS9 gene editing and chemical modification for the development of a next-generation CAR-NK platform in multiple myeloma (EMPOWEREDCAR).
Principal investigator: Martínez López, Joaquín.
Project No.: PI21/00426.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2022.
End date: 31/12/2024.
- Title:** Descifrando el rol de HNRNP K en el mieloma múltiple.
Principal investigator: Gallardo Delgado, Miguel.
Project No.: PI21/00191.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2022.
End date: 31/12/2024.
- Title:** Ensayo clínico en fase I, primero en humanos para evaluar la seguridad de las células STAbT19: linfocitos T autólogos modificados genéticamente que secretan anticuerpos biespecíficos cd19xcd3, para neoplasias malignas de células B.
Principal investigator: Paciello Coronel, María Liz.
Project No.: ICI21/00119.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2022.
End date: 31/12/2025.
- Title:** Identificación temprana de pacientes con linfoma folicular con mal pronóstico combinando técnicas de EMR en biopsia líquida y PET/TC.
Principal investigator: Barrio García, Santiago.
Project No.: PI21/00314.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2022.
End date: 31/12/2024.
- Title:** Improving minimal residual disease assessment in peripheral blood for multiple myeloma deep response evaluation.
Principal investigator: Cedená Romero, María Teresa.
Project No.: PI21/01751.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2022.
End date: 31/12/2024.
- Title:** Programa CRIS de Talento Clínico 2021. Liquid biopsy MRD and PET-TC techniques to early identify high risk follicular lymphoma and anticipate progression.
Principal investigator: Jiménez Ubieta, Ana Isabel.
Project No.: PR_TCL_2021-07.
Funding body: Fundación CRIS de Investigación para Vencer el Cáncer.
Start date: 30/03/2022.
End date: 29/06/2027.
- Title:** Desarrollo de un producto de investigación para terapia celular adoptiva, OP Tcells para pacientes con cáncer.
Principal investigator: Martínez López, Joaquín.
Project No.: CPP2021-009092.
Funding body: Ministerio de Economía y Competitividad.
Start date: 01/11/2022.
End date: 30/10/2025.
- Title:** ALMA, inteligencia artificial para diagnóstico, tratamiento y pronóstico de enfermedades hematológicas.

- Principal investigator:** Martínez López, Joaquín.
Project No.: PMPTA22/00041.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2023.
End date: 31/12/2024.
- **Title:** Ayuda adicional Miguel Servet.
Principal investigator: Barrio García, Santiago.
Project No.: CP22/00082.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2023.
End date: 31/12/2026.
 - **Title:** Medicina de precisión en leucemia mieloide aguda: implementación de biomarcadores de respuesta farmacológica y nuevas dianas para pacientes inelégibles para tratamiento intensivo.
Principal investigator: Ayala Díaz, Rosa María.
Project No.: PI22/01088.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2023.
End date: 31/12/2025.
 - **Title:** Ayuda adicional Miguel Servet - Therapeutic targeting of a novel master toggle regulator in cancer, HNRNP K.
Principal investigator: Gallardo Delgado, Miguel.
Project No.: MS19/00140.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/02/2023.
End date: 31/12/2023.
 - **Title:** Desarrollo y evaluación del valor predictivo de una prueba NGS ultrasensible para la detección de enfermedad residual mínima después de tratamientos eficientes en diferentes biopsias líquidas, incluyendo sangre, orina y saliva.
Principal investigator: Barrio García, Santiago.
Project No.: CPP2022-009937.
Funding body: Ministerio de Economía y Competitividad.
Start date: 01/06/2023.
End date: 31/05/2026.
 - **Title:** Programa para el desarrollo de nuevas terapias avanzadas y búsqueda de biomarcadores en tumores hematológicos.
Principal investigator: Martínez López, Joaquín.
Funding body: Fundación CRIS de Investigación para Vencer el Cáncer.
Start date: 01/01/2018.
End date: 31/12/2020; extended to 31/03/2023.
 - **Title:** Expansión y optimización de la inmunoterapia adoptiva con receptores quiméricos de antígeno en neoplasias hematológicas y tumores sólidos (OPTIMI-CAR). HIGEA AIE OPTIMICAR1.
Principal investigator: Martínez López, Joaquín.
Funding body: HIGEA BIOTECH, A.I.E.
Start date: 01/06/2019.
End date: 21/12/2019, extended to 31/01/2023.
 - **Title:** Estudio de biomarcadores en el tratamiento de la leucemia mieloide aguda dentro del ensayo clínico PEVOLAM. Detección de pacientes farmacológicamente resistentes e identificación de nuevas opciones terapéuticas.
Principal investigator: Ayala Díaz, Rosa M.^a.
 - **Funding body:** Fundación PETHEMA para el tratamiento de la leucemia y el linfoma.
Start date: 01/11/2019.
End date: 31/10/2023.
 - **Title:** Estudio de biomarcadores en el tratamiento de la leucemia mieloide aguda dentro del ensayo clínico QUIWI. Detección de pacientes farmacológicamente resistentes e identificación de nuevas opciones terapéuticas.
Principal investigator: Ayala Díaz, Rosa M.^a.
Funding body: Fundación PETHEMA para el tratamiento de la leucemia y el linfoma.
Start date: 01/07/2020.
End date: 30/06/2025.
 - **Title:** Programa para el desarrollo de inmunoterapia, inmunohematología, medicina de precisión y nuevos biomarcadores en hematología.
Principal investigator: Martínez López, Joaquín.
Funding body: Funded by the PI.
Start date: 01/01/2021.
End date: 31/12/2023.
 - **Title:** Proyecto CAVEX: estudio de enfermedad mínima residual en mieloma múltiple mediante citometría de nueva generación.
Principal investigator: Martínez López, Joaquín.
Funding body: JANSSEN-CILAG, S.A.
Start date: 01/01/2021.
End date: 31/12/2023.
 - **Title:** Dissecting the oncogenic function of a master key of cancer, hnRNP K (aceonym: pan-key).
Principal investigator: Gallardo Delgado, Miguel.
Funding body: Compañía de Jesús Provincia Canónica de España.
Start date: 10/12/2021.
End date: 31/12/2024.
 - **Title:** Identificación de secuencias asociadas a reconocimiento de antígenos lipídicos en reordenamientos de las cadenas ligera y pesada de las inmunoglobulinas en pacientes con mieloma múltiple.
Principal investigator: Rosa Rosa, Juan Manuel.
Funding body: GlaxoSmithKline, S.A.
Start date: 01/03/2022.
End date: 28/02/2023.
 - **Title:** Developing a molecular diagnostic platform for personalized medicine for acute myeloid leukemia.
Principal investigator: Ayala Díaz, Rosa María.
Funding body: Fundación PETHEMA para el tratamiento de la leucemia y el linfoma.
Start date: 25/04/2022.
End date: 24/04/2023.
 - **Title:** Ensayo clínico de fase I-II multicéntrico y abierto para evaluar la seguridad y la tolerabilidad de la combinación de azacitidina o citarabina en dosis bajas con venetoclax y quizartinib en pacientes de 60 años de edad o más con nuevo diagnóstico de leucemia mieloide aguda y no candidatos a inducción estándar con quimioterapia - Estudio ven-a-qui.
Principal investigator: Ayala Díaz, Rosa María.
Funding body: Fundación PETHEMA para el tratamiento de la leucemia y el linfoma.

- Start date:** 03/05/2022.
End date: 02/05/2026.
- **Title:** Ultra deep next generation sequencing of IG genes for measurable residual disease detection in multiple myeloma and acute lymphoblastic leukemia.
Principal investigator: Martínez López, Joaquín.
Funding body: Adaptive Biotechnologies Corporation.
Start date: 23/06/2022.
End date: 22/06/2024.
 - **Title:** Estudio de biomarcadores (enfermedad mínima residual y perfil inmune) en el tratamiento del mieloma múltiple en los ensayos clínicos del Grupo Español de Mieloma (GEM).
Principal investigator: Cedená Romero, María Teresa.
Funding body: Fundación PETHEMA para el tratamiento de la leucemia y el linfoma.
Start date: 24/11/2022.
End date: 23/11/2026.
 - **Title:** Optimización de la persistencia de productos NK CAR destinados a terapia en tumores hematológicos mediante el bloqueo de la inmunosenescencia con edición genómica multiplexada CRISPR/CAS9 (SENESCAR).
Principal investigator: Martínez López, Joaquín.
Funding body: Bionam Biotech.
Start date: 01/01/2023.
End date: 31/12/2025.
 - **Title:** Programa de paciente experto en el autocuidado de pacientes con tumores hematológicos. Escuela para enfermos hematológicos.
Principal investigator: Martínez López, Joaquín.
Funding body: Celgene, S.L.
Start date: 01/01/2023.
End date: 31/12/2023.
 - **Title:** Programa de formación: MiExpert. Experiencia integral en el mieloma múltiple.
Principal investigator: Sánchez Pina, José María.
Funding body: Clover Soluciones Globales de Marketing, S.L.
Start date: 03/02/2023.
End date: 31/12/2023.
 - **Title:** Plataforma diagnóstica de alto rendimiento para medicina personalizada en pacientes con leucemia aguda mieloblástica.
Principal investigator: Ayala Díaz, Rosa María.
Project No.: PMP22/00069.
Funding body: Instituto de Investigación Sanitaria La Fe.
Start date: 02/05/2023.
End date: 31/12/2025.
 - **Title:** Protocol for the treatment of newly diagnosed bcr::abl1-positive adult acute lymphoblastic leukemia.
Principal investigator: Martínez López, Joaquín.
Funding body: Pfizer, S.L.U.
Start date: 22/11/2023.
End date: 31/10/2025.

OTHER ACTIVE PROJECTS OF THE RESEARCH GROUP NOT MANAGED BY THE FUNDACIÓN PARA LA INVESTIGACIÓN BIOMÉDICA DEL HOSPITAL 12 DE OCTUBRE (FIBH12O)

- **Title:** Urolithin production by gut microbiota: a new paradigm for multiple myeloma prognosis.
Principal investigator: Linares Gómez, María.
Project No.: PID2021-123056OA-I00.
Funding body: Agencia Estatal de Investigación. Ministerio de Ciencia e Innovación.
Start date: September 2022.
End date: August 2025.
- **Title:** Microbiota productora de butirato en la respuesta del linfoma a la inmunoterapia.
Principal investigator: Linares Gómez, María.
Project No.: PR27/21-031.
Funding body: UCM. Ayudas para la realización de proyectos de I+D para jóvenes doctores.
Start date: 09/01/2022.
End date: 31/08/2024.
- **Title:** ALMA - Inteligencia artificial para diagnóstico, tratamiento y pronóstico de enfermedades hematológicas.
Principal investigator: Linares Gómez, María.
Project No.: ALMA.
Funding body: Subvenciones de proyectos de I+D+i vinculados a la medicina personalizada y terapias avanzadas dentro de la actuación coordinada ISCIII-CDTI para el fomento de la colaboración público-privada del PERTE para la Salud de Vanguardia.
Start date: 2023.
End date: 2025.

PUBLICATIONS*

Type of Document	No. of document	Σ IF (JCR 2022)
Articles	73	861.6
Reviews	2	12.8
Total	76	874.4
Reviews	8	92.8
Total	84	967.2

Articles

- Alegre, A; Benzo, G; Alonso, R; Martinez Lopez, J; Jimenez Ubieta, A; Cuellar, C; Askari, E et al. Real-World Outcomes of Belantamab Mafodotin for Relapsed/Refractory Multiple Myeloma (RRMM): Preliminary Results of a Spanish Expanded Access Program (EAP). *Oncol Ther.* 2023. 11. (1): p. 83-96. Article.
- Alvarez Larrán, A; Cuevas, B; Velez, P; Noya, S; Caballero Navarro, G; Ferrer Marín, F; Carbonell, S et al. Application of IPSET-thrombosis in 1366 Patients Prospectively Followed From the Spanish Registry of Essential Thrombocythemia. *Hemasphere.* 2023. 7. (8): e936. Article.
- Avivi, I; Vesole, DH; Davila Valls, J; Usnarska Zubkiewicz, L; Olszewska Szopa, M; Milunovic, V; Baumert, B et al. Outcome of Second Primary Malignancies Developing in Multiple Myeloma Patients. *Cancers.* 2023. 15. (17): 4359. Article.
- Ayala, R; Fernández, RA; García Gutiérrez, V; Alvarez Larrán, A; Osorio, S; Sánchez Pina, JM; Carreño Tarragona, G et al. Janus kinase inhibitor ruxolitinib in combination with nilotinib and prednisone in patients with myelofibrosis (RuNiC study): A phase Ib, multicenter study. *EJHaem.* 2023. 4. (2): p. 401-409. Article.
- Bailén, R; Alenda, R; Herruzo Delgado, B; Acosta Fleitas, C; Vallés, A; Esquirol, A; Fonseca, M et al. Results of haploidentical transplant in patients with donor-specific antibodies: a survey on behalf of the Spanish Group of Hematopoietic Transplant and Cell Therapy. *Front. Immunol.* 2023. 14. 1165759. Article.
- Barba, P; Morgades, M; Montesinos, P; Gonzalez Campos, J; Torrent, A; Gil, C; Bernal, T et al. Impact of Center-related Characteristics and Macroeconomic Factors on the Outcome of Adult Patients With Acute Lymphoblastic Leukemia Treated With Pediatric-inspired Protocols. *Hemasphere.* 2023. 7. (1): e810. Article.
- Bastos Oreiro, M; Gutierrez, A; Iacoboni, G; Corral, LL; Reguera, JL; Abrisqueta, P; Delgado, J et al. Impact of SCHOLAR-1 Criteria on Chimeric Antigen Receptor T Cell Therapy Efficacy in Aggressive B Lymphoma: A Real-World GELTAMO/GETH Study. *Transplant Cell Ther.* 2023. 29. (12). Article.
- Bernal, T; Moreno, AF; de Lalglesia, A; Benavente, C; García Noblejas, A; Belmonte, DG; Rianza, R et al. Clinical outcomes after CPX-351 in patients with high-risk acute myeloid leukemia: A comparison with a matched cohort from the Spanish PETHEMA registry. *Cancer Med.* 2023. 12. (14): p. 14892-14901. Article.
- Botta, C; Perez, C; Larrayoz, M; Puig, N; Cedena, MT; Termini, R; Goicoechea, I et al. Large T cell clones expressing immune checkpoints increase during multiple myeloma evolution and predict treatment resistance. *Nat. Commun.* 2023. 14. (1): 5825. Article.
- Buenache, N; Sánchez delaCruz, A; Cuenca, I; Giménez, A; Moreno, L; Martínez López, J; Rosa, JM. Identification of Immunoglobulin Gene Rearrangement Biomarkers in Multiple Myeloma through cfDNA-Based Liquid Biopsy Using tchDNA-Seq. *Cancers.* 2023. 15. (11): 2911. Article.
- Burgos, L; Tamariz Amador, LE; Puig, N; Cedena, MT; Guerrero, C; Jelínek, T; Johnson, S et al. Definition and Clinical Significance of the Monoclonal Gammopathy of Undetermined Significance-Like Phenotype in Patients With Monoclonal Gammopathies. *J. Clin. Oncol.* 2023. 41. (16): p. 3019-3019. Article.
- Carreño Tarragona, G; Alvarez Larrán, A; Harrison, C; Martínez Avila, JC; Hernández Boluda, JC; Ferrer Marín, F; Radia, DH et al. Chronic neutrophilic leukemia and aCML should be considered a single entity based on molecular profiles and outcomes. *Blood Adv.* 2023. 7. (9): p. 1672-1681. Article.
- Chatzikonstantinou, T; Scarfò, L; Karakatsoulis, G; Minga, E; Chamou, D; Iacoboni, G; Kotaskova, J et al. Other malignancies in the history of CLL: an international multicenter study conducted by ERIC, the European Research Initiative on CLL, in HARMONY. *EClinicalMedicine.* 2023. 65. 102307. Article.
- Chumbita, M; Puerta Alcalde, P; Yáñez, L; Cuesta, MA; China, A; Español Morales, I; Fernandez Abellán, P et al. High Rate of Inappropriate Antibiotics in Patients with Hematologic Malignancies and Pseudomonas aeruginosa Bacteremia following International Guideline Recommendations. *Microbiol. Spectr.* 2023. 11. (4). Article.
- Clavero, E; Sanchez Maldonado, JM; Macaudo, A; Ter Horst, R; Sampaio Marques, B; Jurczyszyn, A; Clay Gilmour, A et al. Polymorphisms within Autophagy-Related Genes as Susceptibility Biomarkers for Multiple Myeloma: A Meta-Analysis of Three Large Cohorts and Functional Characterization. *Int. J. Mol. Sci.* 2023. 24. (10): 8500. Article.
- Crees, ZD; Rettig, MP; Jayasinghe, RG; Stockerl Goldstein, K; Larson, SM; Arpad, I; Milone, GA et al. Motixafortide and G-CSF to mobilize hematopoietic stem cells for autologous transplantation in multiple myeloma: a randomized phase 3 trial. *Nat. Med.* 2023. Article.

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- Doesum, JAV; Salmanton García, J; Marchesi, F; Di Blasi, R; Falces Romero, I; Cabirta, A; Farina, F et al. Impact of SARS-CoV-2 vaccination and monoclonal antibodies on outcome post-CD19-directed CAR T-cell therapy: an EPICOVIDEHA survey. *Blood Adv.* 2023. 7. (11): p. 2645-2655. Article.
- El Ashwah, S; Salmanton García, J; Bilgin, YM; Itri, F; Zák, P; Weinbergerová, B; Verga, L et al. The mortality of COVID-19 in CML patients from 2020 until 2022: results from the EPICOVIDEHA survey. *Leuk. Lymphoma.* 2023. 65. (2): p. 199-208. Article.
- Fernandez, RA; Mayoral, JE; Pierre Louis, L; Yao, Y; Xu, Y; Mu, SD; Martinez Lopez, J et al. Improving NK cell function in multiple myeloma with NKTR-255, a novel polymer-conjugated human IL-15. *Blood Adv.* 2023. 7. (1): p. 9-19. Article.
- Figaredo, G; Martín Muñoz, A; Barrio, S; Parrilla, L; Campos Martín, Y; Poza, M; Rufián, L et al. Genetic Profiling of Cell-Free DNA in Liquid Biopsies: A Complementary Tool for the Diagnosis of B-Cell Lymphomas and the Surveillance of Measurable Residual Disease. *Cancers.* 2023. 15. (16): 4022. Article.
- Gómez Rojas, S; Segura, GP; Ollé, J; Gómez Tarragona, GC; Medina, JG; Aguado, JM; Guerrero, EV et al. A machine learning tool for the diagnosis of SARS-CoV-2 infection from hemogram parameters. *J. Cell. Mol. Med.* 2023. 27. (22): p. 3423-3430. Article.
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* Publications: only "Article", "Review", "Editorial Material" and "Letter" have been selected in "Document Type" of ISI Web Of Knowledge. The breakdown of publications includes some not included in the 2022 JCR, which are therefore not taken into account in the final count shown in the table, since they do not have IF.

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Reviews

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Letters

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- Lopez Muñoz, N; Hernández Ibarburu, G; Alonso, R; Sanchez Pina, JM; Ayala, R; Calbacho, M; Cuellar, C et al. Large-scale real-life analysis of survival and usage of therapies in multiple myeloma. *J. Hematol. Oncol.* 2023. 16. (1): 76. Letter.
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- Moreau, P; Chari, A; Oriol, A; Martínez Lopez, J; Haenel, M; Touzeau, C; Ailawadhi, S et al. Daratumumab, carfilzomib, and dexamethasone in relapsed or refractory myeloma: final analysis of PLEIADES and EQUULEUS. *Blood Cancer J.* 2023. 13. (1): 33. Letter.
- Ocio, EM; Brinthen, S; Martínez Lopez, J; San Miguel, J; Oliva, S; Rodríguez Otero, P; Le Roux, N et al. Phase 1b Study of Isatuximab in Combination With Bortezomib, Cyclophosphamide, and Dexamethasone in Newly Diagnosed, Transplant-ineligible Multiple Myeloma Patients. *Hemasphere.* 2023. 7. (2): e829. Letter.
- Simoes, C; Villar, S; Ariceta, B; Garcés, JJ; Burgos, L; Alignani, D; Sarvide, S et al. Transcriptional and genomic characterization of measurable residual disease in acute myeloid leukaemia. *BRIT J HAEMATOL.* 2023. 201. (6): p. 1239-1244. Letter.
- Strykh, C; Pons Brun, B; Russiñol, N; Playa Albinyana, H; Baumann, T; Duran Ferrer, M; Kulis, M et al. IGLV3-21^{R110} mutation has prognostic value in patients with treatment-naive chronic lymphocytic leukemia. *Blood Adv.* 2023. 7. (23): p. 7384-7391. Letter.

THESES DEFENDED OR SUPERVISED WITHIN THE GROUP

- **Doctoral candidate:** Pedro Aguilar Garrido.
Thesis title: Implicación de HNRNPK en las alteraciones nucleolares asociadas al envejecimiento.
University: Universidad Complutense de Madrid.
Date read: 17/11/2023.
Thesis director: Miguel Gallardo Delgado.
International mention: No.
- **Doctoral candidate:** Alba Rodríguez García.
Thesis title: El papel de los antígenos microbianos en los reordenamientos monoclonales en mieloma múltiple.
University: Universidad Complutense de Madrid.
Date read: 01/02/2023.
Thesis director: María Linares Gómez, Joaquín Martínez López.
International mention: No.
- **Doctoral candidate:** Elena Maroto Martín.
Thesis title: Desarrollo preclínico de la inmunoterapia adoptiva con células NK CAR alogénicas para el tratamiento del mieloma múltiple refractario y en recaída.
University: Universidad Complutense de Madrid.
Date read: 20/04/2023.
Thesis director: Joaquín Martínez López, Antonio Valeri Lozano.
International mention: No.

END MASTER INVESTIGATIONS DIRECTED ON THE GROUP

- **Student:** Alba Garrote.
Title: La mecanorrecepción en la leucemia linfática crónica: el papel de PIEZO1.
Directors: María Velasco and María Hernández-Sánchez.
Master: Bioquímica, Biología Molecular and Biomedicina.
University: Universidad Complutense de Madrid.
- **Student:** Miguel Ángel Marugal.
Title: El impacto clínico-biológico de PIEZO1 en la leucemia linfocítica crónica.
Directors: María Velasco and María Hernández-Sánchez.
Master: Investigación en Medicina Traslacional.
University: Universidad Complutense de Madrid.
- **Student:** David Ortega.
Title: La microbiota en un modelo transgénico de linfoma.
Directors: María Linares and María Hernández-Sánchez.
Master: Bioquímica, Biología Molecular and Biomedicina.
University: Universidad Complutense de Madrid.

END GRADUATED INVESTIGATIONS DIRECTED ON THE GROUP

- **Student:** Marta Casas García.
Title: Primera aproximación a la terapia NK-CAR con las moléculas químicas CD44v6, NKG2D y su combinación para el mieloma múltiple refractario y recidivante.
Directors: Antonio Valeri and Joaquín Martínez López.
Degree: Biología Sanitaria.
University: Universidad de Alcalá de Henares.
- **Student:** Lucía García-Rojo Vázquez.
Title: Papel de la microbiota en la respuesta del linfoma a la terapia CAR-T.
Director: María Linares.
Degree: Farmacia.
University: Universidad Complutense de Madrid.
- **Student:** Irene Ortega Cediél.
Title: Estudio del rol de la proteína HNRNP K como supresora de tumores.
Director: Pedro Aguilar-Garrido and Miguel Gallardo.
Degree: Biología.
University: Universidad Complutense de Madrid.
- **Student:** Rafael González Santín.
Title: Aplicaciones de CRISPR en inmunoterapia celular en cánceres hematológicos.
Director: María Hernández Sánchez.
Degree: Farmacia.
University: Universidad Complutense de Madrid.
- **Student:** Rosalía Mañanes Saori.
Title: Avances en la investigación de la leucemia linfática crónica mediante la tecnología de CRISPR/Cas9.
Director: María Hernández Sánchez.
Degree: Farmacia.
University: Universidad Complutense de Madrid.
- **Student:** Alejandra Perona.
Title: Validación y utilidad clínica del *optical genome mapping* en el diagnóstico de neoplasias hematológicas.
Director: Rosa Ayala.
Degree: Biología.
University: Universidad Autónoma de Madrid.
- **Student:** Jeanet Macías Maeso.
Title: Influencia del perfil mutacional en el pronóstico de los pacientes con leucemia mieloide crónica.
Director: Rosa Ayala.
Degree: Medicina.
University: Universidad Complutense de Madrid.
- **Student:** Marina Calvo Cifuentes.
Title: Influencia del perfil mutacional en el pronóstico de los pacientes con leucemia mieloide crónica.
Director: Rosa Ayala.
Degree: Medicina.
University: Universidad Complutense de Madrid.
- **Student:** Sandra Millán.
Title: Factores pronósticos en una cohorte de pacientes con mielofibrosis.
Director: Rosa Ayala.
Degree: Medicina.
University: Universidad Complutense de Madrid.
- **Student:** Carmen del Río García
Title: Caracterización molecular de las trombocitemias esenciales triple negativas y el diferente riesgo trombótico y de progresión a mielofibrosis o leucemia.
Director: Rosa Ayala.
Degree: Medicina.
University: Universidad Complutense de Madrid.

STAYS

- Roberto García Vicente stayed at the Dana Farber Cancer Institute from September to December 2023.

PATENTS

- **Title:** Método para cuantificar el nivel de enfermedad mínima residual en un sujeto.
Number: E14191967-ES.
Type: European patent validation in SPAIN.
Inventors: Joaquín Martínez López, Rosa María Ayala Díaz, Santiago Barrio García, Carlos Marín Sebastián, María Inmaculada Rapado Martínez, Beatriz Sánchez-Vega Carrión.
Owners: Fundación i+12 (100 %).
Date of validation: 09/02/2018.
Priority data: EP14191967 (05/11/2014).
Status: Granted (15/03/2018).
Graduate: ALTUM Sequencing S.L.
- **Title:** Method for quantifying the level of minimal residual disease in a subject.
Number: EP14191967-CH.
Type: European patent validation in SWITZERLAND.
Inventors: Joaquín Martínez López, Rosa María Ayala Díaz, Santiago Barrio García, Carlos Marín Sebastián, María Inmaculada Rapado Martínez, Beatriz Sánchez-Vega Carrión.

Rapado Martínez, Beatriz Sánchez-Vega Carrión.

Owners: Fundación i+12 (100 %).

Date of validation: 20/02/2018.

Priority data: EP14191967 (05/11/2014).

Status: Granted.

Graduate: ALTUM Sequencing S.L.

- Title:** Method for quantifying the level of minimal residual disease in a subject.
Number: EP14191967-NL.
Type: European patent validation in the NETHERLANDS.
Inventors: Joaquín Martínez López, Rosa María Ayala Díaz, Santiago Barrio García, Carlos Marín Sebastián, María Inmaculada Rapado Martínez, Beatriz Sánchez-Vega Carrión.
Owners: Fundación i+12 (100 %).
Date of validation: 22/02/2018.
Priority data: EP14191967 (05/11/2014).
Status: Granted.
Graduate: ALTUM Sequencing S.L.
- Title:** Method for quantifying the level of minimal residual disease in a subject.
Number: EP 14191967-UK.
Type: European patent validation in the UNITED KINGDOM.
Inventors: Joaquín Martínez López, Rosa María Ayala Díaz, Santiago Barrio García, Carlos Marín Sebastián, María Inmaculada Rapado Martínez, Beatriz Sánchez-Vega Carrión.
Owners: Fundación i+12 (100 %).
Date of validation: 22/02/2018.
Priority data: EP14191967 (05/11/2014).
Status: Granted.
Graduate: ALTUM Sequencing S.L.
- Title:** Method for quantifying the level of minimal residual disease in a subject.
Number: EP14191967-DE.
Type: European patent validation in GERMANY.
Inventors: Joaquín Martínez López, Rosa María Ayala Díaz, Santiago Barrio García, Carlos Marín Sebastián, María Inmaculada Rapado Martínez, Beatriz Sánchez-Vega Carrión.
Owners: Fundación i+12 (100 %).
Date of validation: 22/02/2018.
Priority data: EP14191967 (05/11/2014).
Status: Granted.
Graduate: ALTUM Sequencing S.L.
- Title:** Method of Treatment of Disease and Method for Quantifying the Level of Minimal Residual Disease in a Subject.
Number: US15932273.
Type: Divisional Application USA.
Inventors: Joaquín Martínez López, Rosa María Ayala Díaz, Santiago Barrio García, María Inmaculada Rapado Martínez, Beatriz Sánchez-Vega Carrión.
Owners: Fundación i+12 (100 %).
Date of presentation: 16/02/2018.
Priority data: EP14191967 (05/11/2014).
Status: In process.
Graduate: ALTUM Sequencing S.L.

- Title:** Method for determining the presence or absence of minimal residual disease (MRD) in a subject who has been treated for a disease.
Number: CN202080060145.4A
Type: Entry into national phases of PCT/EP2020/073960 - CHINA.
Inventors: Santiago Barrio García, Rosa María Ayala Díaz, María Inmaculada Rapado Martínez, Eva María Garrido Martín, Luis Paz-Ares Rodríguez, María Esther Onecha de la Fuente, Joaquín Martínez López.
Owners: Fundación i+12 (80 %), Fundación del Sector Público Estatal Centro Nacional de Investigaciones Oncológicas Carlos III F.S.P. CNIO (20 %).
EFFNN Date: 15/03/2022.
Priority data: EP19382730 (27/08/2020).
Status: In process.
Graduate: ALTUM Sequencing S.L.
- Title:** Method for determining the presence or absence of minimal residual disease (MRD) in a subject who has been treated for a disease.
Number: HK62022061259.7.
Type: Entry into national phases of PCT/EP2020/073960 - HONG KONG.
Inventors: Santiago Barrio García, Rosa María Ayala Díaz, María Inmaculada Rapado Martínez, Eva María Garrido Martín, Luis Paz-Ares Rodríguez, María Esther Onecha de la Fuente, Joaquín Martínez López.
Owners: Fundación i+12 (80 %), Fundación del Sector Público Estatal Centro Nacional de Investigaciones Oncológicas Carlos III F.S.P. CNIO (20 %).
EFFNN Date: 27/09/2022.
Priority data: EP19382730 (27/08/2019).
Status: In process.
Graduate: ALTUM Sequencing S.L.
- Title:** Method for determining the presence or absence of minimal residual disease (MRD) in a subject who has been treated for a disease.
Number: KR1020227006463A.
Type: Entry into national phases of PCT/EP2020/073960 - SOUTH KOREA.
Inventors: Santiago Barrio García, Rosa María Ayala Díaz, María Inmaculada Rapado Martínez, Eva María Garrido Martín, Luis Paz-Ares Rodríguez, María Esther Onecha de la Fuente, Joaquín Martínez López.
Owners: Fundación i+12 (80 %), Fundación del Sector Público Estatal Centro Nacional de Investigaciones Oncológicas Carlos III F.S.P. CNIO (20 %).
EFFNN Date: 19/04/2022.
Priority data: EP19382730 (27/08/2020).
Status: In process.
Graduate: ALTUM Sequencing S.L.
- Title:** Method for determining the presence or absence of minimal residual disease (MRD) in a subject who has been treated for a disease.
Number: US17/638,035.
Type: Entry into national phases of PCT/EP2020/073960 - UNITED STATES.

- Inventors:** Santiago Barrio García, Rosa María Ayala Díaz, María Inmaculada Rapado Martínez, Eva María Garrido Martín, Luis Paz-Ares Rodríguez, María Esther Onecha de la Fuente, Joaquín Martínez López.
Owners: Fundación i+12 (80 %), Fundación del Sector Público Estatal Centro Nacional de Investigaciones Oncológicas Carlos III F.S.P. CNIO (20 %).
EFFNN Date: 24/02/2022.
Priority data: EP19382730 (27/08/2020).
Status: In process.
Graduate: ALTUM Sequencing S.L.
- Title:** Method for determining the presence or absence of minimal residual disease (MRD) in a subject who has been treated for a disease.
Number: EP20768519.9A.
Type: Entry into national phases of the PCT/EP2020/073960 - EUROPEAN Patent.
Inventors: Santiago Barrio García, Rosa María Ayala Díaz, María Inmaculada Rapado Martínez, Eva María Garrido Martín, Luis Paz-Ares Rodríguez, María Esther Onecha de la Fuente, Joaquín Martínez López.
Owners: Fundación i+12 (80 %), Fundación del Sector Público Estatal Centro Nacional de Investigaciones Oncológicas Carlos III F.S.P. CNIO (20 %).
EFFNN Date: 31/01/2022.
Priority data: EP19382730 (27/08/2020).
Status: In process.
Graduate: ALTUM Sequencing S.L.

- Title:** Method for determining the presence or absence of minimal residual disease (MRD) in a subject who has been treated for a disease.
Number: JP2022507775A.
Type: Entry into national phases of PCT/EP2020/073960 - JAPAN.
Inventors: Santiago Barrio García, Rosa María Ayala Díaz, María Inmaculada Rapado Martínez, Eva María Garrido Martín, Luis Paz-Ares Rodríguez, María Esther Onecha de la Fuente, Joaquín Martínez López.
Owners: Fundación i+12 (80 %), Fundación del Sector Público Estatal Centro Nacional de Investigaciones Oncológicas Carlos III F.S.P. CNIO (20 %).
EFFNN Date: 14/02/2022.
Priority data: EP19382730 (27/08/2020).
Status: In process.
Graduate: ALTUM Sequencing S.L.
- Title:** Patient-derived fully-humanized mouse and method for predicting the response to multiple myeloma treatments using the same.
International application number: PCT/EP2022/079405.
Type: PCT.
Inventors: Antonio Valeri Lozano, Eva Castellano Esparza, Almudena García Ortiz, Elena Maroto Martín, Jessica Encinas Mayoral, Rafael Alonso Fernández, Paula Río Galdo, Joaquín Martínez López.
Owners: Fundación i+12 (80 %), CIEMAT (20 %).
International application date: 21/10/2022.
Priority data: EP21382952 (22/10/2021).
Status: In process.

Tumor Immunomodulation

CENTER: Hospital Universitario 12 de Octubre (HU12O).

GROUP LEADER: Otano Andres, Itziar (R4).

Díaz Cano, María Inés - Predoctoral researcher (R1).
García Redondo, Laura - Superior technique.

Garrido Mesa, José - Doctoral researcher (R2).
Russo Cabrera, Joan Salvador - Predoctoral researcher (R1).

OTHER ACTIVE PROJECTS OF THE RESEARCH GROUP NOT MANAGED BY THE FUNDACIÓN PARA LA INVESTIGACIÓN BIOMÉDICA DEL HOSPITAL 12 DE OCTUBRE (FIBH12O)

- Title:** iLUNG 2.0. ONCOLOGÍA Y NANOTECNOLOGÍA TRASLACIONAL PARA LA MEDICINA PERSONALIZADA EN CÁNCER DE PULMÓN.
Principal investigator: Paz-Ares, Luis.
IG researcher participating in the project: Otano Andrés, Itziar.
Project No.: P2022/BMD-7437-CM.
Funding body: Comunidad de Madrid.
Start date: 01/01/2023.
End date: 31/12/2026.
- Title:** Manipulación de la replicación tumor para resensibilizar frente a inmunoterapia.
Principal investigator: Paz-Ares, Luis.
IG researcher participating in the project: Otano Andrés, Itziar; Díaz Cano, M.ª Inés and García Redondo, Laura.
Project No.: PLEC2022-009241.
Funding body: Agencia Estatal de Investigación. Ministerio de Ciencia e Innovación.
Start date: 01/12/2022.
End date: 30/11/2025.
- Title:** Immune evasion in oncogene-addicted NSCLC subgroups (EVADIO).
Principal investigator: Otano Andrés, Itziar.
Project No.: PID2022-143169OB-I00.
Funding body: Agencia Estatal de Investigación. Ministerio de Ciencia e Innovación.
Start date: 01/11/2023.
End date: 30/11/2026.

PUBLICATIONS*

Type of Document	No. of document	Σ IF (JCR 2022)
Articles	1	3.8
Reviews	1	78.8
Total	2	82.6

Articles

- Singh, KP; Pallett, LJ; Singh, H; Chen, A; Otano, I; Duriez, M; Rombouts, K et al. Pro-fibrogenic role of alarmin high mobility group box 1 in HIV-hepatitis B virus coinfection. *Aids*. 2023. 37. (3): p. 401-411. Article.

Reviews

- Otano, I; Uceros, AC; Zugazagoitia, J; Paz Ares, L. At the crossroads of immunotherapy for oncogene-addicted subsets of NSCLC. *Nat. Rev. Clin. Oncol.* 2023. 20. (3): p. 143-159. Review.

* Publications: only "Article", "Review", "Editorial Material" and "Letter" have been selected in "Document Type" of ISI Web Of Knowledge. The breakdown of publications includes some not included in the 2022 JCR, which are therefore not taken into account in the final count shown in the table, since they do not have IF.

Immunooncology and Immunotherapy

CENTER: Hospital Universitario 12 de Octubre (HU12O).

GROUP LEADER: Álvarez Vallina, Luis (R4).

Arroyo Ródenas, Javier - Predoctoral researcher (R1).
Blanco Durango, Belén - Doctoral researcher (R3).
Díez Alonso, Laura - Predoctoral researcher (R1).
Dominguez Alonso, Carmen - Predoctoral researcher (R1).
Erce Llamazares, Ainhoa - Predoctoral researcher (R1).
García Veros, Eva - Predoctoral researcher (R1).
Gómez Rosel, Marina - Graduate researcher.
Hangiu, Oana - Predoctoral researcher (R1).
Jiménez Reinoso, Anaïs - Doctoral researcher (R2).
Lázaro Gorines, Rodrigo - Doctoral researcher (R2).

Luengo Arias, Susana - Predoctoral researcher (R1).
Morales Pérez, Pablo - Doctoral researcher (R3).
Pacheco Rodríguez, María de la Yedra - Support technician.
Ramírez Fernández, Ángel - Predoctoral researcher (R1).
Rubio Pérez, Laura - Predoctoral researcher (R1).
Segura Tudela, Alejandro - Predoctoral researcher (R1).
Tapia Galisteo, Antonio - Doctoral researcher (R2).
Velasco Sidro, Miriam - Graduate researcher.
Zagorac, Ivana - Doctoral researcher (R2).

ACTIVE RESEARCH PROJECTS

Type of funding	Funding body	No. of projects
Competitive	Comunidad de Madrid	3
Competitive	Fundación BBVA	1
Competitive	Fundación Científica de la Asociación Española Contra el Cáncer	2
Competitive	Instituto de Medicina Molecular João Lobo Antunes	1
Competitive	ISCIII	2
Competitive	Ministerio de Economía y Competitividad	2
No competitive	Various	2
Total		13

- Title:** Inmunoterapia de cánceres epiteliales metastásicos con linfocitos T infiltrantes de tumor secretores de anticuerpos biespecíficos.
Principal investigator: Álvarez Vallina, Luis.
Project No.: PROYE19084ALVA.
Funding body: Fundación Científica de la Asociación Española Contra el Cáncer (FAECC).
Start date: 01/12/2019.
End date: 30/11/2022; extended to 31/01/2023.
- Title:** Synthetic immunology to engineer pan-coronavirus immunity.
Principal investigator: Álvarez Vallina, Luis.
Funding body: Fundación BBVA.
Start date: 09/10/2020.
End date: 09/10/2022; extended to 09/03/2023.
- Title:** Terapia antitumoral mediante la secreción endógena de anticuerpos biespecíficos con capacidad de redirigir células T.
Principal investigator: Blanco Durango, Belén.
Project No.: PI20/01030.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2021.
End date: 31/12/2023.
- Title:** Validación preclínica de la inmunoterapia STAB-T en neoplasias hematológicas.
Principal investigator: Álvarez Vallina, Luis.
Project No.: DTS20/00089.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2021.
End date: 31/12/2022; extended to 31/12/2023.
- Title:** Desarrollo de una nueva generación de *trimerbodies* coestimuladores para inmunoterapia del cáncer.
Principal investigator: Álvarez Vallina, Luis.
Project No.: IND2020/BMD-17668.
Funding body: Comunidad de Madrid.
Start date: 01/01/2021.
End date: 31/12/2023; extended to 15/05/2024.
- Title:** Células STAb-T terapéuticas controlables farmacológicamente para el tratamiento seguro y efectivo de tumores sólidos y hematológicos.
Principal investigator: Álvarez Vallina, Luis.
Project No.: PID2020-117323RB-I00.
Funding body: Ministerio de Economía y Competitividad (MINECO).
Start date: 01/09/2021.
End date: 31/08/2024.

- **Title:** IL7R in lung cancer development, metastasis and resistance to immune to checkpoint inhibitor therapy.
Principal investigator: Álvarez Vallina, Luis.
Project No.: IL7T_LungCan.
Funding body: Instituto de Medicina Molecular João Lobo Antunes.
Start date: 01/10/2021.
End date: 30/09/2024.
- **Title:** Optimización y validación de la terapia celular STAB-T19 MARN para tumores hematológicos.
Principal investigator: Álvarez Vallina, Luis.
Project No.: PDC2021-121711-I00.
Funding body: Ministerio de Economía y Competitividad (MINECO).
Start date: 01/12/2021.
End date: 30/11/2023.
- **Title:** Optimization and validation of mRNA STAB-T19 cell therapy for hematological tumors.
Principal investigator: Blanco Durango, Belén.
Project No.: INNOV211832BLAN.
Funding body: Fundación Científica de la Asociación Española Contra el Cáncer (FCAECC).
Start date: 01/12/2021.
End date: 30/11/2023; extended to 01/06/2024.
- **Title:** Nueva generación de inmunoterapias STAb y CAR-T multidianas (Next Generation CART MAD).
Principal investigator: Álvarez Vallina, Luis
Project No.: P2022/BMD7225.

- **Funding body:** Comunidad de Madrid.
Start date: 01/01/2023.
End date: 31/12/2026.
- **Title:** Engineered mRNA-encoding bispecific Anti-4-1BB x Anti-PD-L1 trimerbodies for highly effective and safe cancer immunotherapy.
Principal investigator: Blanco Durango, Belén.
Project No.: IND2022/BMD-23732.
Funding body: Comunidad de Madrid.
Start date: 02/01/2023.
End date: 01/01/2026.
- **Title:** Development of next-generation T cell-redirecting immunotherapies for hematological tumors.
Principal investigator: Álvarez Vallina, Luis.
Funding body: Funded by the PI.
Start date: 01/01/2021.
End date: 31/12/2023.
- **Title:** Generation of bispecific antibodies targeting t cells and dcs to increase their interaction in the tumour setting.
Principal investigator: Álvarez Vallina, Luis.
Funding body: Adendra Therapeutics Limited.
Start date: 21/12/2022.
End date: 20/12/2025.

PUBLICATIONS*

Type of Document	No. of document	Σ IF (JCR 2022)
Articles	4	36.7
Reviews	2	40.9
Total	6	77.6

Articles

- Antunes, A; Alvarez Vallina, L; Bertoglio, F; Bouquin, N; Cornen, S; Duffieux, F; Ferré, P et al. 10th antibody industrial symposium: new developments in antibody and adoptive cell therapies. *mAbs*. 2023. 15. (1): 2211692. Article.
- Lázaro Gorines, R; Pérez, P; Heras Murillo, I; Adán Barrientos, I; Albericio, G; Astorgano, D; Flores, S et al. Dendritic Cell-Mediated Cross-Priming by a Bispecific Neutralizing Antibody Boosts Cytotoxic T Cell Responses and Protects Mice against SARS-CoV-2. *Adv. Sci.* 2023. 10. (34). Article.
- Lopez Nevado, M; Ortiz Martin, J; Serrano, C; Perez Saez, MA; Lopez Lorenzo, JL; Gil Etayo, FJ; Rodriguez Frias, E et al. Novel Germline TET2 Mutations in Two Unrelated Patients with Autoimmune Lymphoproliferative Syndrome-Like Phenotype and Hematologic Malignancy. *J. Clin. Immunol.* 2023. 43. (1): p. 165-180. Article.
- Rubio Pérez, L; Lázaro Gorines, R; Harwood, SL; Compte, M; Navarro, R; Tapia Galisteo, A; Bonet, J et al. A PD-L1/EGFR bispecific antibody combines immune checkpoint blockade and direct anti-cancer action for an enhanced anti-tumor response. *ONCOIMMUNOLOGY*. 2023. 12. (1): 2205336. Article.

Reviews

- Tapia Galisteo, A; Alvarez Vallina, L; Sanz, L. Bi- and trispecific immune cell engagers for immunotherapy of hematological malignancies. *J. Hematol. Oncol.* 2023. 16. (1): 83. Review.
- Tapia Galisteo, A; Compte, M; Alvarez Vallina, L; Sanz, L. When three is not a crowd: trispecific antibodies for enhanced cancer immunotherapy. *THERANOSTICS*. 2023. 13. (3): p. 1028-1041. Review.

THESES DEFENDED OR SUPERVISED WITHIN THE GROUP

- **Doctoral candidate:** Carmen Domínguez Alonso.
Thesis title: Desarrollo de estrategias de optimización de la inmunoterapia "STAb".
University: Universidad Complutense de Madrid.
Date read: 18/12/2023.
Thesis director: Luis Álvarez Vallina.
International mention: No.

END MASTER INVESTIGATIONS DIRECTED ON THE GROUP

- **Student:** Lucía Rivas Gómes.
Title: Generation of bispecific antibodies targeting T cells and DCs to enhance antitumor immune responses.
Directors: Rodrigo Lázaro Gorines and Luis Álvarez Vallina.
Master: Máster en Terapias Avanzadas en Biomedicina.
University: Universidad Francisco de Vitoria.
University: Universidad Complutense de Madrid.

END GRADUATED INVESTIGATIONS DIRECTED ON THE GROUP

- **Student:** Isabel López Rodrigo.
Title: Development of STAb-T cells secreting an anti-GPRC5D x anti-CD3 bispecific antibody for the treatment of multiple myeloma.
Directors: Belén Blanco Durango and Luis Álvarez Vallina.
Degree: Biología Sanitaria.
University: Universidad de Alcalá de Henares.

PRIZES AND AWARDS

- Best oral communication award to Anaïs Jiménez-Reinoso at the III Congreso Alicante - Winter Immunology Symposium in Health (A-WISH 2023), held on March 9-11, 2023, for the presentation of the paper "Efficient preclinical treatment of cortical T cell acute lymphoblastic leukemia with T lymphocytes secreting anti-CD1a T cell engagers".
- Best oral communication award to Javier Arroyo Ródenas at the III Alicante - Winter Immunology Symposium in Health (A-WISH 2023), held in Alicante on December 14-15, 2023, for the presentation of the paper "Dual-Targeted CAR-T cells secreting T cell engagers elicit enhanced cytotoxic responses compared to tandem CAR-T cells".
- Third prize ex aequo to the best poster for Ivana Zagorac, at the CNIO Lab Day 2023, held on December 12 and 13, 2023, for the paper "mRNA STAR-T therapy for the treatment of solid tumors".
- Third prize ex aequo to the best poster for Anaïs Jiménez Reinoso, at the CNIO Lab Day 2023, held on December 12 and 13, 2023, for the paper "CD4+tumor-infiltrating lymphocytes secreting T cell-engagers induce regression of autologous patient-derived non-small cell lung cancer xenografts".

PATENTS

- Title:** Fusion proteins for the treatment of viral infections.
Number: EP23383050
Type: EUROPEAN Patent.
Inventors: Luis Alvarez Vallina; Rodrigo Lazaro Gorines; David Sancho Madrid; Ignacio Heras-Murillo; Irene Adán Barrientos; Juan Francisco García-Arriaza; Patricia Pérez Ramírez.
Owners: Fundación i+12 (60 %), Fundación CNIC (40 %).
Date of application: 13/10/2023
Status: In process.
- Title:** Células T que expresan anticuerpos biespecíficos ANTI-BCMA/ANTI-CD3 y usos de los mismos.
Number: EP23383410
Type: EUROPEAN Patent.
Inventors: Luis Manuel Álvarez Vallina, Laura Díez Alonso, Beatriz Araceli, Manel Juan, Álvaro Urbano.
Owners: Fundación i+12 (35 %), Fundación CRIS (35 %), Hospital Clinic Barcelona (10 %), Inst D'investigaciones Biomediques August Pi i Sunyer (10 %), Universitat de Barcelona (10 %)
Date of application: 29/12/2023
Status: In process.
- Title:** Anti-CD19/Anti-CD3 bispecific antibody, T cells secreting the same, method of preparation and use thereof.
Number: EP4107183A1
Type: Entry into national phases of PCT/EP2021/053745 - EUROPEAN Patent.
- Inventors:** Luis Manuel Álvarez Vallina, Belén Blanco Durango, Manel Juan Otero.
Owners: Fundación i+12 (37,5 %), Fundación CRIS (37,5 %), Hospital Clinic Barcelona (15 %), Inst D'investigaciones Biomediques August Pi i Sunyer (10 %).
EFFNN Date: 15/09/2022.
Priority data: EP20382113 (17/02/2020).
Status: In process.
Graduate: STAB THERAPEUTICS S.L. (14/10/2022).
- Title:** Anti-CD19/Anti-CD3 bispecific antibody, T cells secreting the same, method of preparation and use thereof.
Number: US17800032.
Type: Entry into national phases of PCT/EP2021/053745 - UNITED STATES.
Inventors: Luis Manuel Álvarez Vallina, Belén Blanco Durango, Manel Juan Otero.
Owners: Fundación i+12 (37,5 %), Fundación CRIS (37,5 %), Hospital Clinic Barcelona (15 %), Inst D'investigaciones Biomediques August Pi i Sunyer (10 %).
EFFNN Date: 16/08/2022.
Priority data: EP20382113 (17/02/2020).
Status: In process.
Graduate: STAB THERAPEUTICS S.L. (14/10/2022).

Translational Research in Hereditary Cancer

CENTER: Hospital Universitario 12 de Octubre (HU12O).

GROUP LEADER: Castro Marcos, Elena (R3).

Casas del Pozo, Eva María - Support technician.
 Ovejero Sánchez, María - Doctoral researcher (R2).

Ruiz Vico, María - Postdoctoral researcher (R2).

ACTIVE RESEARCH PROJECTS

Type of funding	Funding body	No. of projects
Competitive	ISCIII	1
Total		1

- Title:** Integración de la información germinal y tumoral para una mejor medicina de precisión en cáncer de próstata hereditario.
Principal investigator: Castro Marcos, Elena.
Project No.: PI22/00434.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2023.
End date: 31/12/2025.

OTHER ACTIVE PROJECTS OF THE RESEARCH GROUP NOT MANAGED BY THE FUNDACIÓN PARA LA INVESTIGACIÓN BIOMÉDICA DEL HOSPITAL 12 DE OCTUBRE (FIBH12O)

- Title:** A multicenter, open label, randomized, phase II study to evaluate the efficacy of talazoparib plus enzalutamide as first line treatment for metastatic resistant prostate cancer in patients with disease progression to abiraterone.
Principal investigator: Castro Marcos, Elena.
Funding body: Pfizer.
Start date: 2023.
End date: 2026.
- Title:** Treatment patterns and outcomes in patients with prostate cancer with or without germline or somatic homologous recombination repair (HRR) mutations. CAPTURE.
Principal investigators: Castro Marcos, Elena and Bernardo Herrera, David Olmos.
Funding body: Janssen.
Start date: 2021.
End date: 2025.

PUBLICATIONS*

Type of Document	No. of document	Σ IF (JCR 2022)
Articles	3	55.8
Reviews	1	23.4
Total	4	79.2

Articles

- Chávarri Guerra, Y; Bournon, MT; Rodríguez Olivares, JL; Orozco, L; Bazua, D; Rodríguez Faure, A; Alcalde Castro, MJ et al. Germline DNA Repair Genes Pathogenic Variants Among Mexican Patients With Prostate Cancer. Clin. Genitourin. Cancer. 2023. 21. (5): p. 569-573. Article.
- Chi, KN; Sandhu, S; Smith, MR; Attard, G; Saad, M; Olmos, D; Castro, E et al. Niraparib plus abiraterone acetate with prednisone in patients with metastatic castration-resistant prostate cancer and homologous recombination repair gene alterations: second interim analysis of the randomized phase III MAGNITUDE trial. Ann. Oncol. 2023. 34. (9): p. 772-782. Article.
- Smith, MR; Sandhu, S; George, DJ; Chi, KN; Saad, F; Thierry Vuillemin, A; Stáhl, O et al. Health-related quality of life in GALAHAD: A multicenter, open-label, phase 2 study of niraparib for patients with metastatic castration-resistant prostate cancer and DNA-repair gene defects. J. Manag. Care Spec. Pharm. 2023. 29. (7): p. 758-768. Article.

* Publications: only "Article", "Review", "Editorial Material" and "Letter" have been selected in "Document Type" of ISI Web Of Knowledge. The breakdown of publications includes some not included in the 2022 JCR, which are therefore not taken into account in the final count shown in the table, since they do not have IF.

Editorials

- Beije, N; Abida, W; Antonarakis, ES; Castro, E; de Wit, R; Fizazi, K; Gillissen, S et al. PARP Inhibitors for Prostate Cancer: Tangled up in PROfound and PROpel (and TALAPRO-2) Blues. Eur. Urol. 2023. 84. (3): p. 253-256. Editorial Material.

Translational Energetic Metabolism

CENTER: Universidad Autónoma de Madrid (UAM).

GROUP LEADERS: Cuezva Marcos, José Manuel (R4) and Formentini, Laura (R3).

Domínguez Zorita, Sonia - Predoctoral researcher (R1).

Núñez de Arenas Flores, Cristina - Support technique.

Romero Carramiñana, Inés - Predoctoral researcher (R1).

Salegi Ansa, Beñat - Predoctoral researcher (R1).

Topdjian Panosian, Tzoline - Support technique.

OTHER ACTIVE PROJECTS OF THE RESEARCH GROUP NOT MANAGED BY THE FUNDACIÓN PARA LA INVESTIGACIÓN BIOMÉDICA DEL HOSPITAL 12 DE OCTUBRE (FIBH12O)

- **Title:** La mitocondria y su disfunción en patología: IF1.
Principal investigator: Cuezva Marcos, José Manuel.
Project No.: PID2019-108674RB-100.
Funding body: Ministerio de Ciencia e Innovación (MICIN).
Start date: 2020.
End date: 2023.
- **Title:** La mitocondria y su disfunción en patología.
Principal investigator: Cuezva Marcos, José Manuel.
Project No.: PID2019-136738OB-I00.
Funding body: Ministerio de Ciencia e Innovación.
Start date: 2020.
End date: 2023.
- **Title:** Papel del metabolismo mitocondrial sobre la fisiopatología del músculo esquelético: Rol de las deshidrogenasas dependientes de FAD asociadas a la fosforilación oxidativa.
Principal investigator: Formentini, Laura.
Project No.: PID2019-104241RB-100.
Funding body: Ministerio de Ciencia e Innovación (MICIN).
Start date: 2020.
End date: 2023.
- **Title:** Disfunción de la actividad mitocondrial en patología: la beta-oxidación de ácidos grasos en el mantenimiento de la homeostasia del organismo.
Principal investigator: Formentini, Laura.
Project No.: PID2022-136738OB-I00.
Funding body: Ministerio de Ciencia e Innovación (MICIN).
Start date: 2023.
End date: 2026.
- **Title:** Multiple Acyl-CoA Dehydrogenases Deficiency (MADD): a preclinical animal model and a rational approach for drug design targeting mitochondrial metabolism.
Principal investigator: Formentini, Laura.
Funding body: Fundación Ramón Areces.
Start date: 2023.
End date: 2026.

EUROPEAN PROJECT APPLICATIONS 2023:

- **Call Identifier:** HORIZON-MSCA-2023-DN-01-01.
Project title: UnderstandiNg frailty tOwards a future of healthy ageiNg.
Acronym: UNION.
Coordinator: No.
Center Coordinator: Universidad de Milán, Italia.
IG researcher participating in the project: Formentini, Laura.
Granted: Yes.

PUBLICATIONS*

Type of Document	No. of document	Σ IF (JCR 2022)
Articles	3	26.3
Reviews	1	5.2
Total	4	31.5

* Publications: only "Article", "Review", "Editorial Material" and "Letter" have been selected in "Document Type" of ISI Web Of Knowledge. The breakdown of publications includes some not included in the 2022 JCR, which are therefore not taken into account in the final count shown in the table, since they do not have IF.

Articles

- Domínguez Zorita, S; Romero Carramiñana, I; Santacatterina, F; Esparza Molto, PB; Simó, C; del Arco, A; de Arenas, CN et al. IF1 ablation prevents ATP synthase oligomerization, enhances mitochondrial ATP turnover and promotes an adenosine-mediated pro-inflammatory phenotype. *Cell Death Dis.* 2023. 14. (7): 413. Article.
- García Arroyo, R; Domènech, EB; Herrera Ubeda, C; Asensi, MA; de Arenas, CN; Cuezva, JM; Garcia Fernández, J et al. Exacerbated response to oxidative stress in the Retinitis Pigmentosa CerklKD/KO mouse model triggers retinal degeneration pathways upon acute light stress. *Redox Biol.* 2023. 66. 102862. Article.
- Romero Carramiñana, I; Esparza Moltó, PB; Domínguez Zorita, S; Nuevo Tapioles, C; Cuezva, JM. IF1 promotes oligomeric assemblies of sluggish ATP synthase and outlines the heterogeneity of the mitochondrial membrane potential. *Commun. Biol.* 2023. 6. (1): 836. Article.

Reviews

- Domínguez Zorita, S; Cuezva, JM. The Mitochondrial ATP Synthase/IF1 Axis in Cancer Progression: Targets for Therapeutic Intervention. *Cancers.* 2023. 15. (15): 3775. Review.

THESES DEFENDED OR SUPERVISED WITHIN THE GROUP

- **Doctoral candidate:** Inés Romero Carramiñana.
Thesis title: IF1 como regulador de la función mitocondrial y su implicación en el sistema inmune.
University: Universidad Autónoma de Madrid.
Date read: 27/10/2023.
Thesis director: José Manuel Cuezva.
International mention: No.

END MASTER INVESTIGATIONS DIRECTED ON THE GROUP

- **Student:** Juan Francisco Arenas Cerro.
Title: Unveiling the impact of skeletal muscle ETFDH deficiency on systemic homeostasis.
Directora: Laura Formentini.
Master: Biomoléculas y Dinámica Celular.
University: Universidad Autónoma de Madrid.

Tumor Microenvironment and Immunotherapy

CENTER: Hospital Universitario 12 de Octubre (HU12O).

GROUP LEADER: Zugazagoitia Fraile, Jon (R3).

Abraham Molero, M.^a Magdalena - Doctoral researcher (R2).

Adradas Rodríguez, Vera Sofía - Support technician.

Baena Espinar, Javier - Researcher.

Peressini Álvarez, Melina - Superior technique.

Ruiz de Garibay Ponce, Gorka - Doctoral researcher (R3).

ACTIVE RESEARCH PROJECTS

Type of funding	Funding body	No. of projects
Competitive	Fundación Científica de la Asociación Española Contra el Cáncer	1
Competitive	Fundación de Investigación Oncológica	1
Competitive	Fundación Española de Oncología Médica	2
Competitive	ISCIII	1
Competitive	Lung Cancer Research Foundation	1
Competitive	Ministerio de Economía y Competitividad	1
Total		7

- **Title:** Resistance to PD-1 checkpoint blockade in NSCLS induced by tumor cell CD127 (IL-7R) expression: validation, functional assesment, and targeted therapeutics strategies.
Principal investigator: Zugazagoitia Fraile, Jon.
Funding body: Fundación Española de Oncología Médica.
Start date: 01/01/2020.
End date: 31/12/2023.
- **Title:** Resistance to PD-1 checkpoint blockade in NSCLC induced by tumor cell CD127 (IL-7R) expression: validation, functional assesment, and targeted therapeutic strategies.
Principal investigator: Zugazagoitia Fraile, Jon.
Funding body: Lung Cancer Research Foundation.
Start date: 01/05/2020.
End date: 30/04/2022; extended to 31/10/2024.
- **Title:** Convenio AECC - Tumor cell C127 (IL-TR) overexpression and resistance to PD-1 AXIS blockade in non-small cell lung cancer.
Principal investigator: Zugazagoitia Fraile, Jon.
Project No.: LABAE20044ZUGA.
Funding body: Fundación Científica de la Asociación Española Contra el Cáncer (FCAECC).
Start date: 01/11/2020.
End date: 30/09/2023; extended to 30/09/2023.
- **Title:** Resistencia al bloqueo del eje PD-1 en cáncer no microcítico de pulmón mediada por CD127 (IL-7R) en célula tumoral: validación y estrategias terapéuticas.
Principal investigator: Zugazagoitia Fraile, Jon.
Project No.: PI20/01494.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2021.
End date: 31/12/2023; extended to 30/06/2025.
- **Title:** Uso de la inhibición de MYC para superar la resistencia a la inmunoterapia en NSCLC impulsado por KRAS con diversos perfiles mutacionales (MYCOMBIO).
Principal investigator: Zugazagoitia Fraile, Jon.
Project No.: PLEC2021-007959.
Funding body: Ministerio de Economía y Competitividad (MINECO).
Start date: 01/12/2021.
End date: 30/11/2024.
- **Title:** Sobreexpresión de IL-7R en célula tumoral y consumo de IL-7 ("IL-7 SINK"): validación de un nuevo mecanismo de supresión de la respuesta T antitumoral en cáncer de pulmón humano.
Principal investigator: Zugazagoitia Fraile, Jon.
Funding body: Fundación Española de Oncología Médica.
Start date: 30/03/2022.
End date: 29/03/2024.
- **Title:** Local upregulation of tumor cell OX40L using intratumoral delivery of exogenous OX40L mRNA as a candidate therapeutic intervention to increase the efficacy of PD-1 axis blockade in NSCLC.
Principal investigator: Zugazagoitia Fraile, Jon.
Project No.: BFERO2023.02.
Funding body: Fundación de Investigación Oncológica.
Start date: 03/07/2023.
End date: 02/07/2025.

PUBLICATIONS*

Type of Document	No. of document	Σ IF (JCR 2022)
Articles	4	29.4
Reviews	2	9.2
Total	6	38.6

Articles

- Exposito, F; Redrado, M; Houry, M; Hastings, K; Molero Abraham, M; Lozano, T; Solorzano, JL et al. PTEN Loss Confers Resistance to Anti-PD-1 Therapy in Non-Small Cell Lung Cancer by Increasing Tumor Infiltration of Regulatory T Cells. *Cancer Res.* 2023. 83. (15): p. 2513-2526. Article.
- García Campelo, R; Sullivan, I; Arriola, E; Insa, A; Vidal, O; Cruz Castellanos, P; Morán, T et al. SEOM-GECP Clinical guidelines for diagnosis, treatment and follow-up of small-cell lung cancer (SCLC) (2022). *Clin. Transl. Oncol.* 2023. 25. (9): p. 2679-2691. Article.
- Isla, D; Sánchez, A; Casal, J; Cobo, M; Majem, M; Reguart, N; Zugazagoitia, J et al. PD-1/PD-L1 Inhibitors as Monotherapy in the First-Line Treatment of Advanced Non-Small Cell Lung Cancer Patients with High PD-L1 Expression: An Expert Position Statement. *J. Clin. Med.* 2023. 12. (15): 5063. Article.
- Ponce, S; Cedrés, S; Ricordel, C; Isambert, N; Viteri, S; Herrera Juarez, M; Martínez Martí, A et al. ONCOS-102 plus pemetrexed and platinum chemotherapy in malignant pleural mesothelioma: a randomized phase 2 study investigating clinical outcomes and the tumor microenvironment. *J. Immunother. Cancer.* 2023. 11. (9): e007552. Article.

Reviews

- Hernandez, S; Conde, E; Alonso, M; Illarramendi, A; de Cabo, HB; Zugazagoitia, J; Paz Ares, L et al. A narrative review of methods for the identification of ALK fusions in patients with non-small cell lung carcinoma. *Transl. Lung Cancer Res.* 2023. 12. (7): p. 1549-1562. Review.
- Siringo, M; Baena, J; Bote de Cabo, H; Torres Jiménez, J; Zurera, M; Zugazagoitia, J; Paz Ares, L. Future Perspectives in the Second Line Therapeutic Setting for Non-Oncogene Addicted Non-Small-Cell Lung Cancer. *Cancers.* 2023. 15. (23): 5505. Review.

END MASTER INVESTIGATIONS DIRECTED ON THE GROUP

- **Student:** Laura Díez Silgo.
Title: Estudio de la expresión diferencial génica al eliminar CD44 en células no pequeñas de cáncer de pulmón.
Director: Jon Zugazagoitia Fraile.
Master: Dianas terapéuticas y señalización celular: investigación y desarrollo.
University: Universidad de Alcalá de Henares.

STAYS

- Vera Adradas Rodríguez enjoyed a stay at the Yale Cancer Center (USA) between July and August 2023.

PATENTS

- **Title:** Prediction of gene amplification.
Number: EP23383180
Type: EUROPEAN Patent.
Inventors: Geoff Macintyre; Bárbara Hernando; Ángel Fernández Sanromán; Luis Paz-Ares Rodríguez; David Gómez Sánchez; Jon Zugazagoitia Fraile; Juan Manuel Coya Raboso.
Owners: Fundación i+12 (10 %), Fundación CNIO (90 %).
Date of application: 17/11/2023
Status: In process.
- **Title:** Genomic Sequencing Analysis.
Number: GB2311552
Type: National patent in the UNITED KINGDOM.
Inventors: Geoff Macintyre; Bárbara Hernando; Ángel Fernández Sanromán; Luis Paz-Ares Rodríguez; David Gómez Sánchez; Jon Zugazagoitia Fraile; Juan Manuel Coya Raboso.
Owners: Fundación i+12 (10 %), Fundación CNIO (90 %).
Date of application: 27/07/2023
Status: In process.

* Publications: only "Article", "Review", "Editorial Material" and "Letter" have been selected in "Document Type" of ISI Web Of Knowledge. The breakdown of publications includes some not included in the 2022 JCR, which are therefore not taken into account in the final count shown in the table, since they do not have IF.

Neuro-oncology

CENTER: Hospital Universitario 12 de Octubre (HU12O).

GROUP LEADERS: Hernández Laín, Aurelio (R3) and Sepúlveda Sánchez, Juan Manuel (R3).

- Alcívar López, María Denisse - Support technician.
- Arenas Cortés, Alicia - Postdoctoral researcher (R2).
- Caamaño Moreno, Marta - Predoctoral researcher (R1).
- Gargini, Ricardo Antonio - Doctoral researcher (R3).
- González León, Pedro Juan - Clinical researcher.
- Hilario Barrio, Amaya - Doctoral researcher (R2).
- Jiménez Roldán, Luis - Doctoral researcher (R2).
- Modéjar Ruescas, Lucía - Graduate researcher.
- Pérez Núñez, Ángel - Doctoral researcher (R3).
- Pérez-Regadera Gómez, José Fermín - Doctoral researcher (R2).
- Ramos González, Ana - Doctoral researcher (R2).
- Rodríguez González, Virginia - Clinical researcher.
- Ruano Domínguez, Yolanda - Doctoral researcher (R2).
- Segura Collar, Berta - Postdoctoral researcher (R2).
- Toldos González, Óscar - Clinical researcher.
- Velilla Alonso, Gabriel - Graduate researcher.

ACTIVE RESEARCH PROJECTS

Type of funding	Funding body	No. of projects
Competitive	Fundación Científica de la Asociación Española Contra el Cáncer	1
Competitive	Fundación del Sector Público Estatal Centro Nacional de Investigaciones Oncológicas Carlos III	1
Competitive	ISCIII	4
No competitive	Various	4
Total		10

- **Title:** Study of the molecular mechanisms involved in primary (glioblastoma) and secondary (metastasis) brain tumors to identify novel therapeutic targets and anti-cancer agents, biomarkers to select treatments and novel non-invasive methods for molecular diagnosis.
Principal investigator: Sepúlveda Sánchez, Juan Manuel.
Project No.: GCTRA16015SEOA.
Funding body: Fundación Científica de la Asociación Española Contra el Cáncer (FAECC).
Start date: 16/11/2017.
End date: 15/11/2020, extended to 31/05/2023.
- **Title:** Ayuda adicional Miguel Servet.
Principal investigator: Gargini, Ricardo Antonio.
Project No.: CP21/00116.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2022.
End date: 31/12/2025.
- **Title:** Caracterización del área peritumoral de los glioblastomas: quemando los puentes hacia la progresión.
Principal investigator: Pérez Núñez, Ángel.
Project No.: PI21/01168.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2022.
End date: 31/12/2024.
- **Title:** Nuevas estrategias contra las resistencias terapéuticas de los gliomas centradas en el microambiente tumoral y sus reguladores.
Principal investigator: Sepúlveda Sánchez, Juan Manuel.
Project No.: PI21/01406.
- **Funding body:** Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2022.
End date: 31/12/2024.
- **Title:** Reprogramación epigenómica del microambiente tumoral para eliminar los oncogenes que promueven al glioma.
Principal investigator: Gargini, Ricardo Antonio.
Project No.: PI22/01171.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2023.
End date: 31/12/2025.
- **Title:** RENACER, the national network of brain metastasis, as a strategy to challenge brain metastasis associated lethality, therapeutic resistance and impact in quality of life.
Principal investigator: Pérez Núñez, Ángel.
Project No.: PRYCO234528VALI.
Funding body: Fundación del Sector Público Estatal Centro Nacional de Investigaciones Oncológicas Carlos III.
Start date: 15/10/2023.
End date: 14/10/2028.
- **Title:** Efecto de inhibidores de proteínas IDP (*intrinsically disordered proteins*) sobre el crecimiento y la supervivencia de células gliales.
Principal investigator: Sepúlveda Sánchez, Juan Manuel.
Funding body: IDP Discovery Pharma, S.L.
Start date: 01/03/2017.
End date: 31/08/2023.

- Title:** Preclinical studies for the therapeutic development of the drug ICI-118,551.
Principal investigator: Sepúlveda Sánchez, Juan Manuel.
Funding body: Varsity Pharmaceuticals Limites.
Start date: 10/02/2022.
End date: 31/07/2022; extended to 26/01/2025.
- Title:** Base de datos pública de tumores cerebrales para el desarrollo de estudios de inteligencia artificial.
Principal investigator: Sepúlveda Sánchez, Juan Manuel.
Funding body: Funded by the PI.
Start date: 01/09/2022.
End date: 31/08/2023.
- Title:** Inmunoterapia en glioma: importancia de las alteraciones epigenéticas, caracterización de potenciales dianas terapéuticas y biomarcadores.
Principal investigator: Sepúlveda Sánchez, Juan Manuel.
Funding body: Fundación CRIS de Investigación para Vencer el Cáncer.
Start date: 01/06/2023.
End date: 31/05/2026.

OTHER ACTIVE PROJECTS OF THE RESEARCH GROUP NOT MANAGED BY THE FUNDACIÓN PARA LA INVESTIGACIÓN BIOMÉDICA DEL HOSPITAL 12 DE OCTUBRE (FIBH120)

- Title:** Maladaptive effects of the aged brain in older adults with glioblastoma.
Principal investigators: Derek Wainwright (Univ. Loyola Chicago) y Pilar Sánchez-Gómez (ISCIII).
Researcher participating in the project: Pérez-Núñez, Ángel; Hernández-Laín, Aurelio; Sepúlveda-Sánchez, Juan Manuel; Romero Coronado, Juan y Navarro Main, Blanca.
Project No.: ARC2300007.
Funding body: American Brain Tumor Association.
Start date: 01/10/2023.
End date: 30/09/2025.

EUROPEAN PROJECT APPLICATIONS 2023:

- Call Identifier:** TRANSCAN3-JTC 2022 (ERANET).
Project title: Reaching the heterogeneous vascular landscape of glioblastoma with multifunctional nanomedicine.
Acronym: ReachGLIO.
Number: TRANSCAN2022-784-017.
Coordinator: No.
Center Coordinator: Instituto de Salud Carlos III.
Researcher participating in the project: Pérez-Núñez, Ángel; Sepúlveda-Sánchez, Juan Manuel y Hernández-Laín, Aurelio.
Granted: Yes.

PUBLICATIONS*

Type of Document	No. of document	Σ IF (JCR 2022)
Articles	24	353.808
Reviews	3	17.7
Total	27	371.508

* Publications: only "Article", "Review", "Editorial Material" and "Letter" have been selected in "Document Type" of ISI Web Of Knowledge. The breakdown of publications includes some not included in the 2022 JCR, which are therefore not taken into account in the final count shown in the table, since they do not have IF.

Articles

- Bermejo Guerrero, L; Fernández de la Hoz, CPD; González Quereda, L; Segarra Casas, A; Nedkova, V; Gallano, P; Martín Jiménez, P et al. Distal myopathy due to digenic inheritance of TIA1 and SQSTM1 variants in two unrelated Spanish patients. *Neuromusc. Disord.* 2023. 33. (12): p. 983-987. Article.
- Blanco García, L; Ruano, Y; Martínez Illescas, RB; Cubo, R; Sanchez, PJ; Lobo, VJSA; Falkenbach, ER et al. pTERT C250T mutation: A potential biomarker of poor prognosis in metastatic melanoma. *Heliyon.* 2023. 9. (8): e18953. Article.
- Castaño Leon, AM; Moreno Gomez, LM; Jimenez Roldan, L; Gonzalez, P; Campollo, J; Lagares, A. Task synergies in neurovascular surgery: Image-guided navigation using a thermoplastic facial mask for the resection of a symptomatic occult to MRI brain microarteriovenous malformation. *J. Neuroradiol.* 2023. 50. (2): p. 237-240. Article.
- Castaño Leon, AM; Sánchez Carabias, C; Hilario, A; Ramos, A; Navarro Main, B; Paredes, I; Munarriz, PM et al. Serum assessment of traumatic axonal injury: the correlation of GFAP, t-Tau, UCH-L1, and NfL levels with diffusion tensor imaging metrics and its prognosis utility. *J. Neurosurg.* 2023. 138. (2): p. 454-464. Article.
- Cepeda, S; Luppino, LT; Pérez Núñez, A; Solheim, O; García, S; Velasco Casares, M; Karlberg, A et al. Predicting Regions of Local Recurrence in Glioblastomas Using Voxel-Based Radiomic Features of Multiparametric Postoperative MRI. *Cancers.* 2023. 15. (6): 1894. Article.
- de la Hoz, CPD; Lupo, V; Bermejo Guerrero, L; Martín Jiménez, P; Hernández Laín, A; Olive, M; Gallardo, E et al. Distal hereditary motor neuropathy as a new phenotype associated with variants in BAG3. *J. Neurol.* 2023. 271. (2): p. 986-994. Article.
- Fita, MJ; Herranz, UA; Mendez Vidal, MJ; Gironés Sarrió, R; Munoz Langa, J; Sepúlveda Sánchez, J; Mellado, B et al. Phase II Trial Evaluating Olaparib Maintenance in Patients with Metastatic Castration-Resistant Prostate Cancer Responsive or Stabilized on Docetaxel Treatment: SOGUG-IMANOL Study. *Cancers.* 2023. 15. (21): 5223. Article.
- Garrido Ruiz, PA; González Tablas, M; Pasco Peña, A; Zelaya Huerta, MV; Ortiz, J; Otero, A; Corchete, LA et al. Clinical, Histopathologic and Genetic Features of Rhabdoid Meningiomas. *Int. J. Mol. Sci.* 2023. 24. (2): 1116. Article.
- Gately, L; Mesía, C; Sepúlveda, JM; del Barco, S; Pineda, E; Gironés, R; Fuster, J et al. A combined analysis of two prospective randomised studies exploring the impact of extended post-radiation temozolomide on survival outcomes in newly diagnosed glioblastoma. *J. Neuro-Oncol.* 2023. 166. (3): p. 407-415. Article.
- Gómez, LMM; García Pérez, D; González León, PJ; Munarriz, PM; Castaño León, AM. Pathogenesis of spinal intramedullary lipomas: two case reports. *J. Med. Case Rep.* 2023. 17. (1): 317. Article.
- Guerrero Molina, MP; Bernabeu Sanz, A; Ramos González, A; Morales Conejo, M; Delmiro, A; Domínguez González, C; Arenas, J et al. Magnetic resonance spectroscopy in MELAS syndrome: correlation with CSF and plasma metabolite levels and change after glutamine supplementation. *Neuroradiology.* 2023. 66. (3): p. 389-398. Article.
- Guerrero Molina, MP; Morales Conejo, M; Delmiro, A; Morán, M; Domínguez González, C; Arranz Canales, E; Ramos González, A et al. High-dose oral glutamine supplementation reduces elevated glutamate levels in cerebrospinal fluid in patients with mitochondrial encephalomyopathy, lactic acidosis and stroke-like episodes syndrome. *Eur. J. Neurol.* 2023. 30. (2): p. 538-547. Article.
- Hodel, J; Vernooij, MW; Beyer, MK; Severino, M; Leclerc, X; Créange, A; Wahab, A et al. Multiple sclerosis imaging in clinical practice: a European-wide survey of 428 centers and conclusions by the ESNR Working Group. *Eur. Radiol.* 2023. Article.
- Hogeboom, A; Bárcena, C; Parrilla Rubio, L; Revilla, E; Ruano, Y; Gallego Gutiérrez, I; Martínez López, M. A Case of COL1A1-PDGFB Fusion Uterine Sarcoma. *Int. J. Gynecol. Pathol.* 2023. 42. (2): p. 147-150. Article.
- Justel, M; Jou, C; Sariago Jamardo, A; Juliá Palacios, NA; Ortez, C; Poch, ML; Hedrera Fernandez, A et al. Expanding the phenotypic spectrum of TRAPPC11-related muscular dystrophy: 25 Roma individuals carrying a founder variant. *J Med Genet.* 2023. 60. (10): p. 965-973. Article.
- Kros, JM; Rushing, E; Uwimana, AL; Hernández Laín, A; Michotte, A; Al Hussaini, M; Bielle, F et al. Mitotic count is prognostic in IDH-mutant astrocytoma without homozygous deletion of CDKN2A/B. Results of consensus panel review of EORTC trials 26053 and EORTC 22033-26033. *Neuro Oncol.* 2023. 25. (8): p. 1443-1449. Article.
- Martín Jiménez, P; Sánchez Tornero, M; Llamas Velasco, S; Guerrero Molina, MP; González Sánchez, M; Herrero San Martín, A; Blanco Palmero, V et al. Cerebral amyloid angiopathy-related inflammation: clinical features and treatment response in a case series. *Neurologia (Engl Ed).* 2023. 38. (8): p. 550-559. Article.
- Mavillard, F; Servian Morilla, E; Dofash, L; Rojas Marcos, I; Folland, C; Monahan, G; Gutierrez, G et al. Ablation of the carboxy-terminal end of MAMDC2 causes a distinct muscular dystrophy. *Brain.* 2023. 146. (12): p. 5235-5248. Article.
- Mellinghoff, IK; van den Bent, MJ; Blumenthal, DT; Touat, M; Peters, KB; Clarke, J; Mendez, J et al. Vorasidenib in IDH1- or IDH2-Mutant Low-Grade Glioma. *N. Engl. J. Med.* 2023. 389. (7): p. 589-601. Article.
- Mellinghoff, IK; Van den Bent, MJ; Blumenthal, DT; Touat, M; Peters, KB; Clarke, JL; Mendez, JS et al. INDIGO: A global, randomized, double-blinded, phase 3 study of vorasidenib versus placebo in patients with residual or recurrent grade 2 glioma with an IDH1/2 mutation. *J. Clin. Oncol.* 2023. 41. (17_SUPPL): p. 1-1. Article.
- Moreno, V; Vieito, M; Sepulveda, JM; Galvao, V; Hernández Guerrero, T; Doger, B; Saavedra, O et al. BET inhibitor trodabresib in heavily pretreated patients with solid tumors and diffuse large B-cell lymphomas. *Nat. Commun.* 2023. 14. (1): 1359. Article.
- Muñoz García, MI; Guerrero Molina, MP; de Fuentemayor Fernández de la Hoz, CP; Bermejo Guerrero, L; Artech López, A; Hernández Laín, A; Martín, MA et al. Delayed Diagnosis of Congenital Myasthenic Syndromes Erroneously Interpreted as Mitochondrial Myopathies. *J. Clin. Med.* 2023. 12. (9): 3308. Article.

- Omuro, A; Brandes, AA; Carpentier, AF; Idhah, A; Reardon, DA; Cloughesy, T; Sumrall, A et al. Radiotherapy combined with nivolumab or temozolomide for newly diagnosed glioblastoma with unmethylated MGMT promoter: An international randomized phase III trial. *Neuro Oncol.* 2023. 25. (1): p. 123-134. Article.
- Sonne, A; Peverelli, L; Hernandez Lain, A; Dominguez Gonzalez, C; Andersen, JL; Milone, M; Beggs, AH et al. Myosin post-translational modifications and function in the presence of myopathy-linked truncating MYH2 mutations. *Am. J. Physiol.-Cell Physiol.* 2023. 324. (3): p. 769-776. Article.
- Terán, S; Alva, M; Tolosa, P; Rey Cardenas, M; Madariaga, A; Lema, L; Ruano, Y et al. Analysis of the association of HER-2 low carcinomas and PAM50 assay in hormone receptor positive early-stage breast cancer. *Breast.* 2023. 71. p. 42-46. Article.
- Wehl, CC; Topf, A; Bengoechea, R; Duff, J; Charlton, R; Garcia, SK; Dominguez Gonzalez, C et al. Loss of function variants in DNAJB4 cause a myopathy with early respiratory failure. *Acta Neuropathol.* 2023. 145. (1): p. 127-143. Article.
- Zhou, ZHC; Alvarez, ES; Barrio, AH; del Carre, AMC; Coronado, JR; González, AR. Primary and secondary non-traumatic intracerebral haemorrhage: MRI findings. *Radiología.* 2023. 65. (2): p. 149-164. Article.

Reviews

- Caamaño Moreno, M; Gargini, R. Tauopathies: The Role of Tau in Cellular Crosstalk and Synaptic Dysfunctions. *Neuroscience.* 2023. 518. p. 38-53. Review.
- Segura Collar, B; Hiller Vallina, S; de Dios, O; Caamaño Moreno, M; Mondejar Ruescas, L; Sepulveda Sanchez, JM; Gargini, R. Advanced immunotherapies for glioblastoma: tumor neoantigen vaccines in combination with immunomodulators. *Acta Neuropathol. Commun.* 2023. 11. (1): 79. Review.
- Valiente, M; Sepúlveda, JM; Pérez, A. Emerging targets for cancer treatment: S100A9/RAGE. *ESMO Open.* 2023. 8. (1): p. 100751-100751. Review.

PATENTS

- **Title:** Galectin 1 inhibitors for use in combination with immunotherapy in the treatment of glioma.
Number: EP23382927.
Type: EUROPEAN Patent.
Inventors: Ricardo Antonio Gargini; Berta Segura Collar; Garín Ferreira, Marina; Ramon Garcia Escudero.
Owners: Fundación i+12 (50 %), CIEMAT (35,5 %), Fundación Jiménez Díaz (9,5 %), CIBER (5 %).
Date of application: 12/09/2023.
Status: In process.

Cutaneous Oncology

CENTER: Hospital Universitario 12 de Octubre (HU12O).

GROUP LEADER: Rodríguez Peralto, José Luis (R4).

Blanco García, Leyla Patricia - Predoctoral researcher (R1).
Castillo González, Raquel Ana - Postdoctoral researcher (R1).
Cubo Martínez, Rocío - Predoctoral researcher (R1).
Engueta Valls, Ana Belén - Predoctoral researcher (R1).
Falkenhain López, Daniel - Clinical researcher.
García Álvarez, Carmen María - Graduate researcher.
García García, Ana - Predoctoral researcher (R1).
García Martín, Rosa María - Postdoctoral researcher (R2).
Garrido Ruiz, María Concepción - Postdoctoral researcher (R2).
Hernández Marcos, Susana - Superior technique.

Maroñas Jiménez, Lidia - Researcher.
Maroto Pérez, Alicia - Postdoctoral researcher (R2).
Monsálvez Honrubia, Verónica - Researcher.
Onteniente Gomis, María del Mar - Graduate researcher.
Ortiz Romero, Pablo Luis - Doctoral researcher (R3).
Postigo Llorente, Concepción - Clinical researcher.
Sánchez-Arévalo Lobo, Víctor - Doctoral researcher (R3).
Tarín Vicente, Eloy José - Clinical researcher.
Trento Martino, María Alfonsina - Doctoral researcher (R2).

ACTIVE RESEARCH PROJECTS

Type of funding	Funding body	No. of projects
Competitive	ISCIII	3
No competitive	Various	6
Total		9

- **Title:** Detection of immuno-oncological biomarkers in advanced cutaneous melanoma.
Principal investigator: Garrido Ruiz, M.ª Concepción.
Project No.: PI20/01553.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2021.
End date: 31/12/2023, extended to 30/06/2025.
- **Title:** Remodeladores de cromatina como inmunomoduladores terapéuticos en el adenocarcinoma ductal pancreático.
Principal investigator: Sánchez-Arévalo Lobo, Víctor.
Project No.: PI22/00492.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2023.
End date: 31/12/2025.
- **Title:** Translational research linked to mogat clinical trial. mogamulizumab plus total skin electron beam therapy (EUDRACT 2019-004566-17) in stages IB to IIB mycosis fungoides.
Principal investigator: Ortiz Romero, Pablo Luis.
Project No.: PI22/01912.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2023.
End date: 31/12/2025.
- **Title:** Determinación de la expresión de PD-L1 en pacientes con cáncer escamoso de cabeza y cuello.
Principal investigator: Rodríguez Peralto, José Luis.
Funding body: APICES SOLUCIONES, S.L.
Start date: 27/05/2020.
End date: 26/05/2023.
- **Title:** Determinaciones de las mutaciones RAS/BRAF para el tratamiento de pacientes con cáncer colorrectal metastásico.
Principal investigator: Rodríguez Peralto, José Luis.
Funding body: Merck, S.L.U.
Start date: 01/01/2022.
End date: 31/12/2024.
- **Title:** Evaluación diagnóstica de fusiones génicas en muestras de cáncer de pulmón con el panel GeneFusión_IVD para Idylla de Biocartis.
Principal investigator: Rodríguez Peralto, José Luis.
Funding body: Biocartis NV.
Start date: 14/02/2022.
End date: 13/02/2023.
- **Title:** Determinación de NGS en carcinoma no microcítico de pulmón.
Principal investigator: Rodríguez Peralto, José Luis.
Funding body: Pfizer, S.L.U.
Start date: 24/11/2022.
End date: 23/11/2023.
- **Title:** Determinación de biomarcadores predictivos en cáncer: biomarker point.
Principal investigator: Rodríguez Peralto, José Luis.
Funding body: Roche Farma, S.A.
Start date: 20/01/2023.
End date: 30/06/2023; extended to 31/12/2023.
- **Title:** Estudio epidemiológico observacional multicéntrico descriptivo sobre tumores digestivos. RETUD.
Principal investigator: Rodríguez Peralto, José Luis.
Funding body: Grupo Español de Tratamiento de los Tumores Digestivos.
Start date: 01/06/2023.
End date: 02/06/2027.

PUBLICATIONS*

Type of Document	No. of document	Σ IF (JCR 2022)
Articles	20	186.6
Reviews	3	22.8
Editorials	2	19.1
Total	25	228.5
Letters	6	37.1
Total	31	265.6

Articles

- Almici, E; Arshakyan, M; Carrasco, JL; Martínez, A; Ramírez, J; Enguita, AB; Monsó, E et al. Quantitative Image Analysis of Fibrillar Collagens Reveals Novel Diagnostic and Prognostic Biomarkers and Histotype-Dependent Aberrant Mechanobiology in Lung Cancer. *Mod. Pathol.* 2023. 36. (7): 100155. Article.
- Alonso, R; Rodríguez, M; García Díaz, N; Tomás Roca, L; Borregón, J; Cabezuelo Rodríguez, M; Rebollo González, M et al. NanoString analysis of mycosis fungoides reveals individual molecular identity. *Br. J. Dermatol.* 2023. 188. (6): p. 812-814. Article.
- Arriola, E; Bernabé, R; Campelo, RG; Biscuola, M; Enguita, AB; López Ríos, F; Martínez, R et al. Cost-Effectiveness of Next-Generation Sequencing Versus Single-Gene Testing for the Molecular Diagnosis of Patients With Metastatic Non-Small-Cell Lung Cancer From the Perspective of Spanish Reference Centers. *JCO Precis Oncol.* 2023. 7. e2200546. Article.
- Blanco García, L; Ruano, Y; Martínez Illescas, RB; Cubo, R; Sanchez, PJ; Lobo, VJSA; Falkenbach, ER et al. pTERT C250T mutation: A potential biomarker of poor prognosis in metastatic melanoma. *Heliyon.* 2023. 9. (8): e18953. Article.
- Carrasco, L; Torre Castro, J; Ortiz, S; Cuevas Santos, J; Jo, M; Luis Rodríguez Peralto, J; Beer, T et al. Median raphe cysts: a clinico-pathologic and immunohistochemical study of 52 cases. *J. Cutan. Pathol.* 2023. 50. (6): p. 536-543. Article.
- Castellanos Gonzalez, M; Bris, BB; Marsol, IB; Campos, MM; Ruiz Villaverde, R; Llorente, CP; Nuno Gonzalez, A et al. Predictive factors for anti-MDA5 antibody in patients with dermatomyositis: a retrospective multicenter study. *J. Dtsch. Dermatol. Ges.* 2023. 21. (7): p. 741-748. Article.
- Díaz, ML; Antón Pacheco, JL; Herrero, CG; Vals, AE; Novillo, IC; Valverde, RM; Izquierdo, AG. Diagnostic accuracy of imaging compared to histology in congenital lung malformations. *An. Pediatr.* 2023. 99. (5): p. 304-311. Article.
- Falkenhain López, D; Muniesa, C; Estrach, MT; Morillo Andújar, M; Peñate, Y; Acebo, E; Pujol, RM et al. Primary Cutaneous Lymphoma Registry of the Spanish Academy of Dermatology and Venereology (AEDV): Data for the First 5 Years. *Actas Dermosifiliogr.* 2023. 114. (4): p. 291-298. Article.
- Geskin, LJ; Kwinta, BD; Garcia Saleem, TJ; Akilov, OE; Enz, PA; Guenova, E; Ortiz Romero, PL et al. International Society for Cutaneous Lymphomas Pandemic Section (ICLYPS) analysis of cutaneous T-cell lymphoma outcomes during the COVID-19 pandemic: A retrospective cohort study. *J. Am. Acad. Dermatol.* 2023. 88. (4): p. 935-937. Article.
- Gómez Olivas, JD; Campos Rodriguez, F; Nagore, E; Martorell, A; García Rio, F; Cubillos, C; Hernandez, L et al. 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): p. 1551-1559. Article.
- González Muñoz, T; Di Giannatale, A; García Silva, S; Santos, V; Sánchez Redondo, S; Savini, C; Graña Castro, O et al. Endoglin, a Novel Biomarker and Therapeutical Target to Prevent Malignant Peripheral Nerve Sheath Tumor Growth and Metastasis. *Clin. Cancer Res.* 2023. 29. (18): p. 3744-3758. Article.
- Hodak, E; Geskin, L; Guenova, E; Ortiz Romero, PL; Willemze, R; Zheng, J; Cowan, R et al. Real-Life Barriers to Diagnosis of Early Mycosis Fungoides: An International Expert Panel Discussion. *Am. J. Clin. Dermatol.* 2023. 24. (1): p. 5-14. Article.
- Isla, D; Lozano, MD; Paz Ares, L; Salas, C; de Castro, J; Conde, E; Felip, E et al. Nueva actualización de las recomendaciones para la determinación de biomarcadores predictivos en el carcinoma de pulmón no célula pequeña: Consenso Nacional de la Sociedad Española de Anatomía Patológica y de la Sociedad Española de Oncología Médica. *Rev Esp Patol.* 2023. 56. (2): p. 97-112. Article.
- Martín, JM; Revelles, JM; Aznar, NM; Jiménez, LM; Orellana, JB; Gomariz, MA; Alfertshofer, M et al. Superficial versus deep injections of the upper midface-A prospective interventional split-face study. *J. Cosmet. Dermatol.* 2023. 22. (11): p. 2940-2949. Article.
- Muniesa, C; Gallardo, F; Garcia Doval, I; Estrach, MT; Combalia, A; Morillo Andujar, M; De la Cruz Vicente, F et al. Brentuximab vedotin in the treatment of cutaneous T-cell lymphomas: Data from the Spanish Primary Cutaneous Lymphoma Registry. *J. Eur. Acad. Dermatol. Venereol.* 2023. 37. (1): p. 57-64. Article.
- Onteniente Gomis, MM; Ortiz Romero, PL; Romero, FT; Castro, ABS; de Frutos, FJO. Spanish Version of the RECAP Questionnaire to Assess Control of Atopic Eczema: Translation, Cultural Adaptation, Validation, and Correlations With Other Patient-Reported Outcome Measures. *Actas Dermosifiliogr.*

- 2023. 114. (6): p. 488-493. Article.
- Quaglino, P; Scarisbrick, J; Rocuzzo, G; Abeldano, A; Battistella, M; McCormack, C; Cowan, R et al. Identifying unmet needs and challenges in the definition of a plaque in mycosis fungoides: An EORTC-CLTG/ISCL survey. *J. Eur. Acad. Dermatol. Venereol.* 2023. 37. (4): p. 680-688. Article.
- Recuero, E; Lázaro, S; Lorz, C; Enguita, AB; Garcia Escudero, R; Santos, M. Novel Mouse Cell Lines and In Vivo Models for Human High-Grade Neuroendocrine Lung Carcinoma, Small Cell Lung Carcinoma (SCLC), and Large Cell Neuroendocrine Carcinoma (LCNEC). *Int. J. Mol. Sci.* 2023. 24. (20): 15284. Article.
- Rodríguez Cuadrado, FJ; Nájera, L; Suárez, D; Silvestre, G; García Fresnadillo, D; Roustan, G; Sánchez Vázquez, L et al. Clinical, histopathologic, immunohistochemical, and electron microscopic findings in cutaneous monkeypox: A multicenter retrospective case series in Spain. *J. Am. Acad. Dermatol.* 2023. 88. (4): p. 856-863. Article.
- Rubio Pérez, L; Lázaro Gorines, R; Harwood, SL; Compte, M; Navarro, R; Tapia Galisteo, A; Bonet, J et al. A PD-L1/EGFR bispecific antibody combines immune checkpoint blockade and direct anti-cancer action for an enhanced anti-tumor response. *ONCOIMMUNOLOGY.* 2023. 12. (1): 2205336. Article.
- Sönmez, I; Riveros, HM; Folch, C; Suñer, C; Díaz, Y; Alonso, L; Agusti, C et al. Egocentric sexual network analysis among gay and bisexual men who have sex with men with and without mpox infection. *Sex. Transm. Infect.* 2023. 99. (8): p. 541-547. Article.
- Suñer, C; Ubals, M; Tarín Vicente, EJ; Mendoza, A; Alemany, A; Hernández Rodríguez, A; Casañ, C et al. Viral dynamics in patients with monkeypox infection: a prospective cohort study in Spain. *Lancet Infect. Dis.* 2023. 23. (4): p. 445-453. Article.
- Velasco, RM; Garcia, AG; Sanchez, PJ; Sellart, IM; Lobo, VJSA. Tumour microenvironment and heterotypic interactions in pancreatic cancer. *J Physiol Biochem.* 2023. 79. (1): p. 179-192. Article.

Reviews

- Assaf, C; Illidge, TM; Waser, N; He, M; Li, T; Zomas, A; Bent Ennakhil, N et al. A Retrospective Chart Review of Treatment Patterns and Overall Survival among a Cohort of Patients with Relapsed/Refractory Mycosis Fungoides in France, Germany, Italy, Spain and the United Kingdom. *Cancers.* 2023. 15. (23): 5669. Review.
- Guenova, E; Ortiz Romero, PL; Poligone, B; Querfeld, C. Mechanism of action of chlormethine gel in mycosis fungoides. *J. Eur. Acad. Dermatol. Venereol.* 2023. Review.
- Latzka, J; Assaf, C; Bagot, M; Cozzio, A; Dummer, R; Guenova, E; Gniadecki, R et al. EORTC consensus recommendations for the treatment of mycosis fungoides/S<acute accent>ezary syndrome - Update 2023. *Eur J Cancer.* 2023. 195. 113343. Review.

Editorials

- Caravaca Fontán, F; Ibarra, L; Rodríguez Peralto, JL; Gutiérrez, E. A rare skin lesion in a kidney transplant recipient. *Am. J. Transplant.* 2023. 23. (3): p. 447-449. Editorial Material.
- de Dios, MA; Arroyo Andres, J; Rubio Muniz, C; Concepcion Garrido, M; Tarin Vicente, E. Cutaneous features at injection sites of intravenous mephedrone. *Br. J. Dermatol.* 2023. 189. (1): p. 1-1. Editorial Material.

Letters

- Arroyo Andrés, J; Agud Dios, M; Rubio Muniz, CA; Postigo, C; Cortijo Cascajares, S; Ortiz Romero, PL. Intralesional brentuximab vedotin for the treatment of primary cutaneous T-cell lymphomas: a case series. *Int. J. Dermatol.* 2023. 63. (2): p. 57-59. Letter.
- Arroyo Andrés, J; Falkenhain López, D; Agud Dios, M; Rivera Díaz, R. Anti-Interleukin 23 Biologic Are Mostly Effective and Safe in Psoriatic Patients Who Failed Anti-Interleukin 17. A Real-Life, Retrospective 52-Week Experience. *Actas Dermosifiliogr.* 2023. 114. (4): p. 363-365. Letter.
- García Silva, S; Vico Alonso, C; Meyer, L; Enderle, D; Sanchez, JA; Onteniente, MD; Noerholm, M et al. Improved Sensitivity in BRAFV600E Detection in Combined Tissue and Extracellular Vesicle-Based Liquid Biopsy in Melanoma. *J. Invest. Dermatol.* 2023. 143. (8): p. 1606-1610. Letter.
- Gonzalez Rodriguez, B; Calderon Lozano, L; Wang, A; la Cruz, EGD; Tarin Vicente, EJ; Fulgencio Barbarin, J. Ulcero-necrotic monkeypox, a clue for an underlying immunosuppressive disease: Report of two cases. *J. Eur. Acad. Dermatol. Venereol.* 2023. 37. (6): p. 754-756. Letter.
- Hogeboom, A; Garrido Ruíz, MC; Rodríguez Peralto, JL. Acute sarcoidosis as a harbinger for pancreatic adenocarcinoma. *Pathology.* 2023. 55. (7): p. 1024-1026. Letter.
- Rubio Muniz, CA; Montero Menarguez, J; Lopez Valle, A; Agud Dios, M; Arroyo Andres, J; Rodriguez Peralto, JL; Palencia Perez, SI et al. Monkeypox: is topical cidofovir a good idea? *Clin. Exp. Dermatol.* 2023. 48. (2): p. 132-134. Letter.
- Rubio Muniz, CA; Sanchez Velázquez, A; Arroyo Andres, J; Agud de Dios, M; Tarín Vicente, EJ; Falkenhain López, D; Ortiz Romero, PL. Mogamulizumab combined with extracorporeal photopheresis for the treatment of refractory mycosis fungoides and Sezary syndrome. Report of seven cases. *J. Eur. Acad. Dermatol. Venereol.* 2023. Letter.

* Publications: only "Article", "Review", "Editorial Material" and "Letter" have been selected in "Document Type" of ISI Web Of Knowledge. The breakdown of publications includes some not included in the 2022 JCR, which are therefore not taken into account in the final count shown in the table, since they do not have IF.

PATENTS

- **Title:** Composiciones de nanocápsulas para la liberación controlada de agentes de interés terapéutico.
Number: EP18382005-ES.
Type: European patent validation in SPAIN.
Inventors: Pablo Luis Ortiz Romero, José Luis Pablos Álvarez, Alicia Usategui Corral, María Vallet Regí, M.ª Rocio Villegas Díaz and Alejandro Baeza García.
Owners: Universidad Complutense de Madrid (60 %) and Fundación para la Investigación Biomédica del Hospital 12 de Octubre (40 %).
Date of validation: 19/02/2020.
Priority data: EP18382005 (09/01/2018).
Status: Granted (10/03/2021).

Genitourinary and Cellular and Molecular Oncology

CENTER: Centro de Investigaciones Energéticas, Medioambientales and Tecnológicas (CIEMAT) and Hospital Universitario 12 de Octubre (HU12O).

GROUP LEADERS: Paramio González, Jesús M.ª (R4) and Dueñas Porto, Marta Gloria (R4).

- | | |
|--|--|
| Alameda Úbeda-Contreras, Josefa Pilar - Doctoral researcher (R2). | Lodewijk, Iris Adriana María - Predoctoral researcher (R1). |
| Alonso Sánchez, Miguel - Support technician. | Lorz López, Corina - Principal investigator. (PI) (R4). |
| Casanova Hernández, María de los Llanos - Principal investigator. (PI) (R4). | Martín de Bernardo Abellán, Álvaro - Predoctoral researcher (R1). |
| De la Rosa Kehrmann, Federico - Researcher. | Martín Hernández, María del Carmen - Predoctoral researcher (R1). |
| Duarte Ojeda, José Manuel - Senior Clinical Researcher | Montesinos Romero, Esther - Support technician. |
| Errazquin Ciudad, Ricardo - Predoctoral researcher (R1). | Morales Rodríguez, María Lucía - Postdoctoral researcher (R3). |
| García Escudero, Ramón - Doctoral researcher (R4). | Pérez Escavy, María de las Mercedes - Predoctoral researcher (R1). |
| García Martínez, Víctor Manuel - Doctoral researcher (R3). | Recuero Martínez, Enrique - Graduate researcher (R1). |
| Gómez del Cañizo, Carmen - Predoctoral researcher (R1). | Rubio Martín, Carolina - Postdoctoral researcher (R3). |
| Gómez Rodríguez, María José - Postdoctoral researcher (R3). | Santos Lafuente, Mirentxu - Postdoctoral researcher (R3). |
| Guerrero Ramos, Félix - Doctoral researcher (R3). | Suárez Cabrera, Cristian - Postdoctoral researcher (R3). |

ACTIVE RESEARCH PROJECTS

Type of funding	Funding body	No. of projects
Competitive	Fundación Científica de la Asociación Española Contra el Cáncer	1
Competitive	Fundación "la Caixa"	1
Competitive	Fundación Pfizer	1
Competitive	ISCIII	7
Total		10

- **Title:** Nuevas estrategias terapéuticas para el cáncer escamoso de cabeza y cuello.
Principal investigator: Lorz López, Corina.
Project No.: PI18/00263.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2019.
End date: 31/12/2021; extended to 30/06/2023.
- **Title:** IKK1 nuclear como diana terapéutica para los trastornos del envejecimiento.
Principal investigator: Casanova Hernández, M.ª de los Llanos.
Project No.: PI19/01262.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2020.
End date: 31/12/2022; extended to 30/06/2024.
- **Title:** Bladimir. Optimización de un dispositivo electrónico para diagnóstico y pronóstico de respuesta a BCG en biopsia líquida para pacientes de cáncer de vejiga.
Principal investigator: Dueñas Porto, Marta Gloria.
Project No.: DTS20/00043.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2021.
End date: 31/12/2022; extended to 31/12/2023.
- **Title:** Generación y caracterización de fragmentos de anticuerpos tipo SCFV tumor-específicos como nuevas estrategias inmunomoduladoras y de biopsia líquida para pacientes de cáncer.
Principal investigator: Dueñas Porto, Marta Gloria.
Project No.: PI20/00813.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2021.
End date: 31/12/2023; extended to 30/06/2025.
- **Title:** Liquid biopsy in head and neck cancer.
Principal investigator: García Escudero, Ramón.
Project No.: PI21/00208.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2022.
End date: 31/12/2024.
- **Title:** Modelos murinos de cáncer (de pulmón): nuevas estrategias de edición génica y detección preclínica de biomarcadores en biopsia líquida.
Principal investigator: Santos Lafuente, Mirentxu.
Project No.: PI21/00764.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2022.
End date: 31/12/2024.
- **Title:** Bladimir/Bladicheck. Validación de dispositivo electrónico para diagnóstico y predicción de respuesta a terapias en cáncer de vejiga.
Principal investigator: Dueñas Porto, Marta Gloria.
Project No.: DTS22/00002.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2023.
End date: 31/12/2025.

- **Title:** Bladimir, non-invasive urine-based diagnostic and therapy response predictor for bladder cancer.
Principal investigator: Dueñas Porto, Marta Gloria.
Project No.: CI23-20210.
Funding body: Fundación "la Caixa".
Start date: 17/07/2023.
End date: 15/10/2025.
- **Title:** Bladimir y Bladimirplus. Validación multicéntrica de un novedoso y eficiente sistema para el diagnóstico y predicción de respuesta a BCG en pacientes con cáncer de vejiga.
Principal investigator: Suárez Cabrera, Cristian.
Project No.: INNOV235311SUAR.
Funding body: Fundación Científica de la Asociación Española Contra el Cáncer.
Start date: 01/12/2023.
End date: 30/11/2025.
- **Title:** Bladimir, nuevo sistema diagnóstico para la detección temprana del cáncer de vejiga.
Principal investigator: Dueñas Porto, Marta Gloria.
Funding body: Fundación Pfizer.
Start date: 12/12/2023.
End date: 11/12/2024.

OTHER ACTIVE PROJECTS OF THE RESEARCH GROUP NOT MANAGED BY THE FUNDACIÓN PARA LA INVESTIGACIÓN BIOMÉDICA DEL HOSPITAL 12 DE OCTUBRE (FIBH120)

- **Title:** Generation of new in vivo gene editing (lung cancer) mouse models for preclinical use.
Principal investigator: Santos Lafuente, Mirentxu.
Project No.: Application ID IDEAS211079SANT.
Funding body: Asociación Española Contra el Cáncer (AECC).
Start date: 01/12/2021.
End date: 30/11/2023.
- **Title:** NanoPROTACs como alternativa terapéutica para el tratamiento de cáncer de mama
Principal investigator: Alonso Moreno, Carlos.
Project No.: SBPLY/21/180501/000050.
Funding body: Proyectos de investigación científica y transferencia tecnológica del Gobierno de Castilla-La Mancha.
Start date: 2022.
End date: 31/08/2025.

EUROPEAN PROJECT APPLICATIONS 2023:

- **Call Identifier:** TRANSCAN-3.
Project title: Improving CAR T-cells and Nanoparticle-drug Delivery to Target Head & Neck Squamous Cell Carcinoma Microenvironment.
Acronym: iCAN_H&N.
Application number: TRANSCAN2021-233.
Coordinator: No.
Center Coordinator: University of Duisburg-Essen, Alemania.
IG researcher participating in the project: Lorz López, Corina.
Granted: No.
- **Call Identifier:** ERC-2024-SyG.
Project title: Unlocking the full potential of AI in Drug Discovery.
Acronym: UnlockAI4Drugs.
Application number: 101166940.
Coordinator: No.
Center Coordinator: Centro Nacional de Biotecnología CNB CSIC.
IG researcher participating in the project: Paramio González, Jesús M.^a.
Granted: No.
- **Call Identifier:** TRANSCAN-3.
Project title: Integrative analysis of metastatic bladder cancer and its tumor microenvironment: Targeting Epigenetics and Epitranscriptomic plasticity.
Acronym: TRINITY.
Application number: TRANSCAN2023-1858-096.
Coordinator: Yes.
Center Coordinator: Instituto de Investigación Hospital 12 de Octubre.
IG researcher participating in the project: Paramio González, Jesús M.^a.
Granted: No.

PUBLICATIONS*

Type of Document	No. of document	Σ IF (JCR 2022)
Articles	13	81.3
Reviews	5	20.2
Total	18	101.5

Articles

- Borque Fernando, A; Gaya, JM; Esteban Escaño, LM; Gómez Rivas, J; García Baquero, R; Agreda Castañeda, F; Gallioli, A et al. Epidemiology, Diagnosis and Management of Penile Cancer: Results from the Spanish National Registry of Penile Cancer. *Cancers*. 2023. 15. (3): 616. Article.
- Errazquin, R; Carrasco, E; Del Marro, S; Suñol, A; Peral, J; Ortiz, J; Rubio, JC et al. Early Diagnosis of Oral Cancer and Lesions in Fanconi Anemia Patients: A Prospective and Longitudinal Study Using Saliva and Plasma. *Cancers*. 2023. 15. (6): 1871. Article.
- Fernández Cortés, M; Delgado Bellido, D; Bermúdez Jiménez, E; Paramio, JM; O'Valle, F; Vinckier, S; Carmeliet, P et al. PARP inhibition promotes endothelial-like traits in melanoma cells and modulates pericyte coverage dynamics during vasculogenic mimicry. *J. Pathol.* 2023. 259. (3): p. 318-330. Article.
- Hervás Salcedo, R; Fernández García, M; Hernando Rodríguez, M; Suárez Cabrera, C; Bueren, JA; Yáñez, RM. Improved efficacy of mesenchymal stromal cells stably expressing CXCR4 and IL-10 in a xenogeneic graft versus host disease mouse model. *Front. Immunol.* 2023. 14. 1062086. Article.
- Juan, A; Segrelles, C; del Campo Balguerías, A; Bravo, I; Silva, I; Peral, J; Ocaña, A et al. Anti-EGFR conjugated nanoparticles to deliver Alpelisib as targeted therapy for head and neck cancer. *Cancer Nanotechnol.* 2023. 14. (1): 29. Article.
- Lopez Nevado, M; Ortiz Martin, J; Serrano, C; Perez Saez, MA; Lopez Lorenzo, JL; Gil Etayo, FJ; Rodriguez Frias, E et al. Novel Germline TET2 Mutations in Two Unrelated Patients with Autoimmune Lymphoproliferative Syndrome-Like Phenotype and Hematologic Malignancy. *J. Clin. Immunol.* 2023. 43. (1): p. 165-180. Article.
- Nguyen, HT; Tang, WL; Webster, ALH; Whiteaker, JR; Chandler, CM; Errazquin, R; Roohollahi, K et al. Fanconi anemia-isogenic head and neck cancer cell line pairs: A basic and translational science resource. *Int. J. Cancer*. 2023. 153. (1): p. 183-196. Article.
- Ramírez Pardo, I; Villarejo Zori, B; Jiménez Loygorri, JI; Sierra Filardi, E; Alonso Gil, S; Mariño, G; de la Villa, P et al. Ambra1 haploinsufficiency in CD1 mice results in metabolic alterations and exacerbates age-associated retinal degeneration. *Autophagy*. 2023. 19. (3): p. 1-21.
- Recuero, E; Lázaro, S; Lorz, C; Enguita, AB; Garcia Escudero, R; Santos, M. Novel Mouse Cell Lines and In Vivo Models for Human High-Grade Neuroendocrine Lung Carcinoma, Small Cell Lung Carcinoma (SCLC), and Large Cell Neuroendocrine Carcinoma (LCNEC). *Int. J. Mol. Sci.* 2023. 24. (20): 15284. Article.
- Santos Pérez de la Blanca, R; Medina Polo, J; Peña Vallejo, H; Juste Álvarez, S; Pamplona Casamayor, M; Duarte Ojeda, JM; Miranda Utrera, N et al. Ureteral Stenosis and Fistula after Kidney Transplantation. *Urol.Int.* 2023. 107. (2): p. 1-8. Article.
- Soengas Gonda, E; de la Fuente, RP; Artech Lopez, A; Gomez Cano, MD; Quesada Espinosa, JF; Milla, CP; Rosales, JML et al. Expanding the Phenotypic Spectrum of Alzami Syndrome: Two Unrelated Spanish Families. *Neuropediatrics*. 2023. 54. (01): p. 31-36. Article.
- Tyson, MD; Morris, D; Palou, J; Rodriguez, O; Mir, MC; Dickstein, RJ; Guerrero Ramos, F et al. Reply by Authors. *J. Urol.* 2023. 209. (5): p. 900-900. Article.
- Tyson, MD; Morris, D; Palou, J; Rodriguez, O; Mir, MC; Dickstein, RJ; Guerrero Ramos, F et al. Safety, Tolerability, and Preliminary Efficacy of TAR-200 in Patients With Muscle-invasive Bladder Cancer Who Refused or Were Unfit for Curative-intent Therapy: A Phase 1 Study. *J. Urol.* 2023. 209. (5): p. 890-900. Article.
- Rodríguez Izquierdo, M; del Cañizo, CG; Rubio, C; Reina, IA; Arroyo, MH; Antolin, AR; Porto, MD et al. Immune Predictors of Response after Bacillus Calmette-Guerin Treatment in Non-Muscle-Invasive Bladder Cancer. *Cancers*. 2023. 15. (23): 5554. Review.
- Subiela, JD; Sellés, EG; Maldonado, A; Campos, FL; Ovide, JA; Illarramendi, OA; González Padilla, DA et al. Clinical Usefulness of Prostate-specific Membrane Antigen-ligand Positron Emission Tomography/Computed Tomography for the Detection of Prostate Cancer Biochemical Recurrence after Primary Radiation Therapy in Patients with Prostate-specific Antigen Below the Phoenix Threshold: Systematic Review and Meta-analysis. *Clin. Oncol.* 2023. 35. (12): p. 676-688. Review.
- Alvarez, SJ; Utrera, NRM; Ojeda, JMD; Sutil, RS; Gil Moradillo, J; Guerrero Ramos, F; Hernández Arroyo, M et al. Extraperitoneal Retroperitoneal Leiomyomas: 3 Case Reports and Review of the Literature. *Urol.Int.* 2023. 107. (8): p. 814-818. Review.
- Bedke, J; Black, PC; Szabados, B; Guerrero Ramos, F; Shariate, SF; Xylinas, E; Brinkmann, J et al. Optimizing outcomes for high-risk, non-muscle-invasive bladder cancer: The evolving role of PD-(L)1 inhibition. *Urol. Oncol.-Semin. Orig. Investig.* 2023. 41. (12): p. 461-475. Review.
- Lodewijk, I; Duenas, M; Paramio, JM; Rubio, C. CD44v6, STn & O-GD2: promising tumor associated antigens paving the way for new targeted cancer therapies. *Front. Immunol.* 2023. 14. 1272681. Review.

* Publications: only "Article", "Review", "Editorial Material" and "Letter" have been selected in "Document Type" of ISI Web Of Knowledge. The breakdown of publications includes some not included in the 2022 JCR, which are therefore not taken into account in the final count shown in the table, since they do not have IF.

THESES DEFENDED OR SUPERVISED WITHIN THE GROUP

- **Doctoral candidate:** Ricardo Errazquin Ciudad.
Thesis title: Nuevos modelos de enfermedad y herramientas de diagnóstico para el carcinoma escamoso de cabeza y cuello en pacientes con Anemia de Fanconi.
University: Universidad Autónoma de Madrid.
Date read: 13/11/2023.
Thesis director: Ramón García Escudero.
International mention: No.

END MASTER INVESTIGATIONS DIRECTED ON THE GROUP

- **Student:** Daniel Pastrana Ortega.
Title: Terapia celular CAR-NK en cáncer de vejiga.
Directors: María Lucía Morales Rodríguez and Jesús María Paramio González.
Master: Investigación en Medicina Traslacional.
University: Universidad Complutense de Madrid.
- **Student:** Valeria Traconis Díaz.
Title: Estudio de los mecanismos moleculares implicados en los procesos metastásicos del cáncer de vejiga.
Directors: Jesús M.^a Paramio González and Cristian Suárez Cabrera.
Master: Investigación en Medicina Traslacional.
University: Universidad Complutense de Madrid.
- **Student:** Ignacio Unanue Arratibel.
Title: Modelos *in vivo* de carcinoma sarcomatoide pulmonar mediante el uso de herramientas CRISPR/Cas.
Directors: Ángeles Mencía Rodríguez and Mirentxu Santos Lafuente.
Master: Gestión y Desarrollo de Tecnologías Biomédicas.
University: Universidad Carlos III de Madrid.

END GRADUATED INVESTIGATIONS DIRECTED ON THE GROUP

- **Student:** Laura García Gómez.
Title: Caracterización del antígeno asociado a tumores STn como potencial biomarcador y diana terapéutica en el cáncer urotelial.
Director: Carolina Rubio Martín.
Degree: Biología Sanitaria.
University: Universidad de Alcalá de Henares.

PRIZES AND AWARDS

- Pfizer Award for the best healthcare innovation project arising from the nodes and centers adhered to the ITEMAS platform in 2023. BlaDimiR project, a new diagnostic system for the early detection of bladder cancer. Authors: Cristian Suárez and Marta Dueñas.
- Best poster award at the I Jornadas de Researcher. Júnior i+12. Poster: Novel and non-invasive tool for immunotherapy-response prediction in non-muscle invasive bladder cancer patients based on miRNAs and cytokine detection in urine. Author: Álvaro Martín de Bernardo Abellán.

STAYS

- Iris Lodewijk: enjoyed a stay at the RUDBECK Laboratory (Uppsala University, Sweden) between August 20 and November 20, 2023.

PATENTS

- **Title:** Galectin 1 inhibitors for use in combination with immunotherapy in the treatment of glioma.
Number: EP23382927.
Type: EUROPEAN Patent.
Inventors: Ricardo Antonio Gargini; Berta Segura Collar; Garín Ferreira, Marina; Ramon Garcia Escudero.
Owners: Fundación i+12 (50 %), CIEMAT (35,5 %), Fundación Jiménez Díaz (9,5 %), CIBER (5 %).
Date of application: 12/09/2023.
Status: In process.
- **Title:** Método pronóstico para identificar riesgo de recidiva en pacientes de cáncer de riñón tipo carcinoma renal de células claras estadios I y II y kit.
Number: P201531360.
Type: SPANISH patent.
Inventors: Natalia Miranda Utrera, Felipe Villacampa Aubá, Juan Ángel Fresno Vara, Angelo Gámez Pozo, Daniel Castellano Gauna.
Owners: Fundación i+12 (70 %), Fundación para la Investigación Biomédica del Hospital Universitario la Paz (30 %).
Priority Date: 23/09/2015.
Status: Granted (10/01/2018).
Graduate: Biomedica Molecular Medicine S.L.
- **Title:** 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.
Número: EP16774644-DE.
Type: Validation of the European patent in GERMANY.
Inventors: Natalia Miranda Utrera, Felipe Villacampa Aubá, Daniel Castellano, Juan Ángel Fresno Vara, Angelo Gámez Pozo.
Owners: Fundación i+12 (70 %), Fundación para la Investigación Biomédica del Hospital Universitario la Paz (30 %).
Date of validation: 15/04/2020.
Priority data: P201531360 (23/09/2015).
Status: Granted.
Graduate: Biomedica Molecular Medicine S.L.
- **Title:** 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.
Número: EP16774644-FR.
Type: Validation of the European patent in FRANCE.
Inventors: Natalia Miranda Utrera, Felipe Villacampa Aubá, Daniel Castellano, Juan Ángel Fresno Vara, Angelo Gámez Pozo.
Owners: Fundación i+12 (70 %), Fundación para la Investigación Biomédica del Hospital Universitario la Paz (30 %).
Date of validation: 15/04/2022.
Priority data: P201531360 (23/09/2015).
Status: Granted.
Graduate: Biomedica Molecular Medicine S.L.
- **Title:** 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.
Número: EP16774644-GB.
Type: Validation of the European patent in the UNITED KINGDOM.
Inventors: Natalia Miranda Utrera, Felipe Villacampa Aubá, Daniel Castellano, Juan Ángel Fresno Vara, Angelo Gámez Pozo.
Owners: Fundación i+12 (70 %), Fundación para la Investigación Biomédica del Hospital Universitario la Paz (30 %).
Date of validation: 15/04/2020.
Priority data: P201531360 (23/09/2015).
Status: Granted.
Graduate: Biomedica Molecular Medicine S.L.
- **Title:** 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.
Number: US11401556B2.
Type: Entry into national phases of PCT/EP2016/072723 - UNITED STATES.
Inventors: Natalia Miranda Utrera, Felipe Villacampa Aubá, Daniel Castellano, Juan Ángel Fresno Vara, Angelo Gámez Pozo.
Owners: Fundación i+12 (70 %), Fundación para la Investigación Biomédica del Hospital Universitario la Paz (30 %).
EFFNN Date: 20/03/2018.
Priority data: P201531360 (23/09/2015).
Status: Granted (02/08/2022).
Graduate: Biomedica Molecular Medicine S.L.
- **Title:** 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.
Number: CN201680059656.
Type: Entry into national phases of PCT/EP2016/072723 - CHINA.
Inventors: Natalia Miranda Utrera, Felipe Villacampa Aubá, Daniel Castellano, Juan Ángel Fresno Vara, Angelo Gámez Pozo.
Owners: Fundación i+12 (70 %), Fundación para la Investigación Biomédica del Hospital Universitario la Paz (30 %).
EFFNN Date: 12/04/2018.
Priority data: P201531360 (23/09/2015).
Status: Granted (23/08/2022).
Graduate: Biomedica Molecular Medicine S.L.
- **Title:** Biomarcadores para predecir la respuesta de un sujeto a una terapia con BCG, métodos y usos basados en los mismos.
Number: P202030244.
Type: SPANISH patent.
Inventors: Marta Dueñas Porto, Jesús Paramio, Christian Suárez, Félix Guerrero Ramos.
Owners: Fundación i+12 (50 %), CIEMAT (50 %).
Date of presentation: 25/03/2020.
Status: In process.

- **Title:** Biomarkers for predicting a patient's response to BCG therapy, methods and uses based thereon.
Number: EP21775124.
Type: Entry into national phases of the PCT/ES2021/070204 - EUROPEAN Patent.
Inventors: Marta Dueñas Porto, Jesús Paramio, Christian Suárez, Félix Guerrero Ramos
Owners: Fundación i+12 (50 %), CIEMAT (50 %).
Date EFFNN: 27/09/2022.
Priority data: P202030244 (25/03/2020).
Status: In process.

- **Title:** Biomarkers for predicting a patient's response to BCG therapy, methods and uses based thereon.
Number: US17907315.
Type: Entry into national phases of the PCT/ES2021/070204 - UNITED STATES.
Inventors: Marta Dueñas Porto, Jesús Paramio, Christian Suárez, Félix Guerrero Ramos
Owners: Fundación i+12 (50 %), CIEMAT (50 %).
Date EFFNN: 17/11/2022.
Priority data: P202030244 (25/03/2020).
Status: In process.

Thoracic and Clinical-Translational Oncology

CENTER: Hospital Universitario 12 de Octubre (HU12O).

GROUP LEADER: Paz-Ares Rodríguez, Luis (R4).

Abraham Molero, M.ª Magdalena - Graduate researcher.
Adradas Rodríguez, Vera Sofía - Support technician.
Agullo Ortuño, María Teresa - Doctoral researcher (R4).
Brancato, Sara - Manager.
Carrizo Mijarra, Nuria - Support technician.
Conde Gallego, Esther - Postdoctoral researcher (R2).
Cortijo Cascajares, Ana - Graduate researcher.
Coya Raboso, Juan Manuel - Doctoral researcher (R3).
Cozar López, Patricia - Support technician.
Flández Canet, Marta - Doctoral researcher.
Gómez Abecia, Sara - Graduate researcher.
Gómez Sánchez, David - Predoctoral researcher (R1).
Gracia Rodríguez, José María - Superior technique.
Hernández Prieto, Susana - Doctoral researcher (R2).
Iglesias Docampo, Lara Carmen - Senior Clinical Researcher

Jalvo Sánchez, Alicia - Support technician.
López Amezcua, Raquel - Superior technique.
López-Ríos, Fernando - Doctoral researcher (R3).
Luengo Rodríguez, Alicia - Superior technique.
Manzano Prieto, Rita - Predoctoral researcher (R1).
Núñez Sobrino, Juan Antonio - Senior Clinical Researcher
Ortiz Cortés, Nieves - Support technician.
Ponce Aix, Santiago - Senior Clinical Researcher
Ramos Paradas, Javier - Predoctoral researcher (R1).
Rodríguez Aguilar, Francisco de Borja - Support technician.
Ruiz de Garibay Ponce, Gorka - Doctoral researcher (R3).
Suárez Beltrán, Rocío - Support technician.
Vélez Casanova, César - Support technician.
Yagüe Sanz, Patricia - Predoctoral researcher (R1).

ACTIVE RESEARCH PROJECTS

Type of funding	Funding body	No. of projects
Competitive	Comunidad de Madrid	1
Competitive	Fundación Científica de la Asociación Española Contra el Cáncer	2
Competitive	Fundación de Investigación Médica Mutua Madrileña	1
Competitive	ISCIII	9
Competitive	Ministerio de Economía y Competitividad	3
No competitive	Various	17
Total		27

- **Title:** A translational platform for the orphaning malignant pleural mesothelioma.
Principal investigator: Paz-Ares Rodríguez, Luis.
Funding body: Fundación Científica de la Asociación Española Contra el Cáncer (FCAECC).
Start date: 01/12/2018.
End date: 30/11/2021; extended to 01/06/2023.
- **Title:** Rol de triptófano y sus metabolitos en la caquexia asociada al cáncer, en pacientes y en modelos murinos.
Principal investigator: Flández Canet, Marta.
Project No.: PI19/01422.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2020.
End date: 31/12/2022; extended to 30/06/2024.
- **Title:** Caracterización exhaustiva del perfil inmuno del cáncer microcítico de pulmón (SCLC): identificación de nuevas vulnerabilidades terapéuticas y validación funcional.
Principal investigator: Paz-Ares Rodríguez, Luis.
Project No.: PI20/00870.
Funding body: Instituto de Salud Carlos III (ISCIII).

- Start date:** 01/01/2021.
End date: 31/12/2023; extended to 30/06/2025.
- **Title:** Personalized multimodal therapies for the treatment of lung cancer.
Principal investigator: Paz-Ares Rodríguez, Luis.
Project No.: AC20/00070.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2021.
End date: 31/12/2023; extended to 30/06/2025.
- **Title:** CAPN12-IO: Desarrollo preclínico y primer ensayo clínico en humanos de un inhibidor selectivo para calpaína-12 como una nueva estrategia para la inmunoterapia del cáncer.
Principal investigator: Paz-Ares Rodríguez, Luis.
Project No.: CPP2021-009090.
Funding body: Ministerio de Economía y Competitividad.
Start date: 01/06/2022.
End date: 31/05/2025.
- **Title:** Desarrollo y validación de algoritmos digitales inteligentes para la identificación de dianas terapéuticas en los pacientes con cáncer de pulmón.

- Principal investigator:** López-Ríos, Fernando.
Funding body: Fundación de Investigación Médica Mutua Madrileña.
Start date: 19/09/2022.
End date: 18/09/2025.
- **Title:** Implementación de algoritmos digitales inteligentes para la predicción de respuesta al tratamiento en pacientes con cáncer de pulmón candidatos a terapias dirigidas e inmunoterapia.
Principal investigator: López-Ríos, Fernando.
Project No.: PI22/01700.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2023.
End date: 31/12/2025.
- **Title:** P2022/BMD-7437 - ILUNG 2.0.
Principal investigator: López-Ríos, Fernando.
Project No.: S2022/BMD-7437.
Funding body: Comunidad de Madrid.
Start date: 01/01/2023.
End date: 31/12/2026.
- **Title:** Terapia personalizada de nueva generación con anticuerpos inmunoestimuladores e inhibidores de puntos de control inmune en cáncer.
Principal investigator: Paz-Ares Rodríguez, Luis.
Project No.: PMPTA22/00167.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2023.
End date: 31/12/2024.
- **Title:** Fase previa de cáncer de pulmón de célula pequeña: redes biológicas y medicina personalizada.
Principal investigator: Paz-Ares Rodríguez, Luis.
Project No.: RETOS245794PAZA.
Funding body: Fundación Científica de la Asociación Española contra el Cáncer.
Start date: 15/09/2023.
End date: 23/01/2024.
- **Title:** Coestimulación 4-1BB condicionada por punto de control inmune para una inmunoterapia contra el cáncer eficaz y segura - EFFESO.
Principal investigator: Paz-Ares Rodríguez, Luis.
Project No.: CPP2022-009765.
Funding body: Ministerio de Economía y Competitividad.
Start date: 01/11/2023.
End date: 31/10/2026.
- **Title:** Ultrafast next generation sequencing: universal testing of patients with infiltrating adenocarcinomas of the lung.
Principal investigator: López-Ríos, Fernando.
Funding body: Life Technologies Corporation.
Start date: 22/06/2022.
End date: 21/06/2023.
- **Title:** Immunotherapy in lung cancer and other solid tumours.
Principal investigator: Paz-Ares Rodríguez, Luis.
Funding body: Fundación CRIS de Investigación para Vencer el Cáncer.
Start date: 20/01/2018.
End date: 19/01/2021, extended to 30/06/2023.

- **Title:** Estudio de armonización/normalización de la carga mutacional del tumor (TMB) en el cáncer de pulmón no microcítico: dos métodos equilibrados.
Principal investigator: Paz-Ares Rodríguez, Luis.
Funding body: BRISTOL-MYERS SQUIBB, S.A.
Start date: 01/01/2019.
End date: 28/02/2020, extended to 31/12/2024.
- **Title:** Investigación traslacional en tumores torácicos y digestivos (BANDYT).
Principal investigator: Paz-Ares Rodríguez, Luis.
Funding body: Funded by the PI.
Start date: 11/02/2020.
End date: 10/02/2023.
- **Title:** Discovery of biomarkers associated with benefit from first line PD-1 axis blockade in advanced non-small-cell lung cancer using digital spacial profiling.
Principal investigator: Ponce Aix, Santiago.
Funding body: Funded by the PI.
Start date: 13/04/2020.
End date: 12/04/2023.
- **Title:** Besieging small cell lung cancer.
Principal investigator: Paz-Ares Rodríguez, Luis.
Funding body: Funded by the PI.
Start date: 01/01/2021.
End date: 31/12/2023.
- **Title:** Determinación del perfil genómico, transcriptómico e inmunológico en mesotelioma pleural maligno.
Principal investigator: Paz-Ares Rodríguez, Luis.
Funding body: Funded by the PI.
Start date: 31/03/2021.
End date: 30/04/2026.
- **Title:** Identificación de biomarcadores de respuesta a inmunoterapia y nuevas dianas terapéuticas en cáncer microcítico de pulmón.
Principal investigator: Paz-Ares Rodríguez, Luis.
Funding body: Funded by the PI.
Start date: 31/03/2021.
End date: 30/04/2026.
- **Title:** CCL-1/CCR8 como mecanismo favorecedor de un ambiente inmunosupresor en adenocarcinoma de pulmón avanzado.
Principal investigator: Paz-Ares Rodríguez, Luis.
Funding body: Asociación Española de Alpinistas con Cáncer.
Start date: 10/12/2021.
End date: 09/12/2024.
- **Title:** Diagnóstico molecular en cáncer de mama luminal metastásico.
Principal investigator: Paz-Ares Rodríguez, Luis.
Funding body: Novartis Farmacéutica S.A.
Start date: 08/03/2022.
End date: 07/03/2023.

- **Title:** Precision medicine program. Study PRECISO.
Principal investigator: Ponce Aix, Santiago.
Funding body: Funded by the PI.
Start date: 09/05/2022.
End date: 08/05/2025.
- **Title:** Validación analítica del estudio de alteraciones de HER2 en el carcinoma no de célula pequeña de pulmón.
Principal investigator: López-Ríos, Fernando.
Funding body: Life Technologies Europe BV.
Start date: 01/02/2023.
End date: 31/12/2024.
- **Title:** Secuenciación masiva ultrarrápida en mujeres con cáncer de pulmón avanzado.
Principal investigator: Conde Gallego, Esther.
Funding body: Asociación para la Investigación de Cáncer de Pulmón en Mujeres.
Start date: 14/03/2023.
End date: 13/03/2024.
- **Title:** Generación de una plataforma de análisis de muestras clínicas para el estudio de tumores sólidos y el progreso de la medicina personalizada y de precisión.
Principal investigator: Paz-Ares Rodríguez, Luis.
Funding body: Funded by the PI.
Start date: 16/07/2023.
End date: 31/12/2026.

- **Title:** Factores de transcripción de la familia de AP-1 en cáncer torácico.
Principal investigator: Paz-Ares Rodríguez, Luis.
Funding body: Funded by the PI.
Start date: 10/08/2023.
End date: 09/08/2025.
- **Title:** Caracterización molecular del cáncer de pulmón asociado a fibrosis pulmonar idiopática.
Principal investigator: Paz-Ares Rodríguez, Luis.
Funding body: Funded by the PI.
Start date: 22/09/2023.
End date: 21/09/2025.

OTHER ACTIVE PROJECTS OF THE RESEARCH GROUP NOT MANAGED BY THE FUNDACIÓN PARA LA INVESTIGACIÓN BIOMÉDICA DEL HOSPITAL 12 DE OCTUBRE (FIBH120)

- **Title:** Manipulación de la replicación tumor para resensibilizar frente a inmunoterapia.
Principal investigator: Paz-Ares Rodríguez, Luis.
Project No.: PLEC2022-009241.
Funding body: Fundación Centro Nacional de Investigaciones Oncológicas Carlos III.
Start date: 2022.
End date: 2024.
- **Title:** ILUNG 2.0.
Principal investigator: Paz-Ares Rodríguez, Luis.
Project No.: P2022/BMD-7437.
Funding body: Comunidad de Madrid.
Start date: 2022.
End date: 2026.

PUBLICATIONS*

Type of Document	No. of document	Σ IF (JCR 2022)
Articles	46	1.538.515
Reviews	5	122.3
Editorials	1	7.5
Total	52	1,668.315
Letters	2	24
Total	54	1,692.315

* Publications: only "Article", "Review", "Editorial Material" and "Letter" have been selected in "Document Type" of ISI Web Of Knowledge. The breakdown of publications includes some not included in the 2022 JCR, which are therefore not taken into account in the final count shown in the table, since they do not have IF.

Articles

- Agulló Ortuño, MT; Mancebo, E; Grau, M; Sobrino, JAN; Paz Ares, L; López Martín, JA; Flández, M. Tryptophan Modulation in Cancer-Associated Cachexia Mouse Models. *Int. J. Mol. Sci.* 2023. 24. (16): 13005. Article.
- Ahn, MJ; Cho, BC; Felip, E; Korantzis, I; Ohashi, K; Majem, M; Juan Vidal, O et al. Tarlatamab for Patients with Previously Treated Small-Cell Lung Cancer. *N. Engl. J. Med.* 2023. 389. (22): p. 2063-2075. Article.
- Aix, SP; Ciuleanu, TE; Navarro, A; Cousin, S; Bonanno, L; Smit, EF; Chiappori, A et al. Combination lurbinectedin and doxorubicin versus physician's choice of chemotherapy in patients with relapsed small-cell lung cancer (ATLANTIS): a multicentre, randomised, open-label, phase 3 trial. *Lancet Respir Med.* 2023. 11. (1): p. 74-86. Article.
- Aldea, M; Marinello, A; Duruisseaux, M; Zrafi, W; Conci, N; Massa, G; Metro, G et al. RET-MAP: An International Multicenter Study on Clinicobiologic Features and Treatment Response in Patients With Lung Cancer Harboring a RET Fusion. *J. Thorac. Oncol.* 2023. 18. (5): p. 576-586. Article.
- Andrić, Z; Gálffy, G; Dols, MC; Szima, B; Stojanovic, G; Petrovic, M; Felip, E et al. Avelumab in Combination With Cetuximab and Chemotherapy as First-Line Treatment for Patients With Advanced Squamous NSCLC. *JTO Clin. Res. Rep.* 2023. 4. (2): 100461. Article.
- Arriola, E; Bernabé, R; Campelo, RG; Biscuola, M; Enguita, AB; López Ríos, F; Martínez, R et al. Cost-Effectiveness of Next-Generation Sequencing Versus Single-Gene Testing for the Molecular Diagnosis of Patients With Metastatic Non-Small-Cell Lung Cancer From the Perspective of Spanish Reference Centers. *JCO Precis Oncol.* 2023. 7. e2200546. Article.
- Bamias, A; Merseburger, A; Lorient, Y; James, N; Choy, E; Castellano, D; Lopez Rios, F et al. New prognostic model in patients with advanced urothelial carcinoma treated with second-line immune checkpoint inhibitors. *J. Immunother. Cancer.* 2023. 11. (1): e005977. Article.
- Borghaei, H; Ciuleanu, TE; Lee, JS; Pluzanski, A; Caro, RB; Gutierrez, M; Ohe, Y et al. Long-term survival with first-line nivolumab plus ipilimumab in patients with advanced non-small-cell lung cancer: a pooled analysis. *Ann. Oncol.* 2023. 34. (2): p. 173-185. Article.
- Borghaei, H; O'Byrne, KJ; Paz Ares, L; Ciuleanu, TE; Yu, X; Pluzanski, A; Nagrial, A et al. Nivolumab plus chemotherapy in first-line metastatic non-small-cell lung cancer: results of the phase III CheckMate 227 Part 2 trial. *ESMO Open.* 2023. 8. (6): 102065. Article.
- Boyero, L; Noguera Uclés, JF; Castillo Peña, A; Salinas, A; Sánchez Gastaldo, A; Alonso, M; Benedetti, JC et al. Aberrant Methylation of the Imprinted C19MC and MIR371-3 Clusters in Patients with Non-Small Cell Lung Cancer. *Cancers.* 2023. 15. (5): 1466. Article.
- Brahmer, JR; Lee, JS; Ciuleanu, TE; Bernabe Caro, R; Nishio, M; Urban, L; Audigier Valette, C et al. Five-Year Survival Outcomes With Nivolumab Plus Ipilimumab Versus Chemotherapy as First-Line Treatment for Metastatic Non-Small-Cell Lung Cancer in CheckMate 227. *J. Clin. Oncol.* 2023. 41. (6): p. 1200-1212. Article.
- Cho, BC; Lee, JS; Wu, YL; Cicin, I; Dols, MC; Ahn, MJ; Cuppens, K et al. Bintrafusp Alfa Versus Pembrolizumab in Patients With Treatment-Naive, Programmed Death-Ligand 1-High Advanced NSCLC: A Randomized, Open-Label, Phase 3 Trial. *J. Thorac. Oncol.* 2023. 18. (12): p. 1731-1742. Article.
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- Dziadziuszko, R; Peled, N; Mok, T; Peters, S; Aix, SP; Alatorre Alexander, J; Vicuna, BD et al. High-dose alectinib for RET fusion-positive non-small cell lung cancer in the Blood First Assay Screening Trial. *Wspolczesna Onkol.* 2023. 27. (4): p. 217-223. Article.
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- Garassino, MC; Gadgeel, S; Novello, S; Halmos, B; Felip, E; Speranza, G; Hui, RA et al. Associations of Tissue Tumor Mutational Burden and Mutational Status With Clinical Outcomes With Pembrolizumab Plus Chemotherapy Versus Chemotherapy For Metastatic NSCLC. *JTO Clin. Res. Rep.* 2023. 4. (1): p. 100431-100431. Article.
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- Griesinger, F; Curigliano, G; Subbiah, V; Baik, CS; Tan, DSW; Lee, DH; Misch, D et al. Pralsetinib in patients with RET fusion-positive non-small cell lung cancer: A plain language summary

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- Hernández, JJC; Arrula, VA; Alvarez, YE; Castaño, AG; de Castro, JGG; Docampo, LI; Sorrosal, JL et al. Indicators to evaluate quality of care in head and neck cancer in Spain. *Clin Transl Oncol.* 2023. Article.
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- Paz Ares, L; Champiat, S; Lai, WV; Izumi, H; Govindan, R; Boyer, M; Hummel, HD et al. Tarlatamab, a First-In-Class DLL3-Targeted Bispecific T-Cell Engager, in Recurrent Small Cell Lung Cancer: An Open-Label, Phase I Study. *J. Clin. Oncol.* 2023. 41. (16): p. 2202823-2202823. Article.
- Paz Ares, LG; Ciuleanu, TE; Cobo, M; Bennouna, J; Schenker, M; Cheng, Y; Juan Vidal, O et al. First-Line Nivolumab Plus Ipilimumab With Chemotherapy Versus Chemotherapy Alone for Metastatic NSCLC in CheckMate 9LA: 3-Year Clinical Update and Outcomes in Patients With Brain Metastases or Select Somatic Mutations. *J. Thorac. Oncol.* 2023. 18. (2): p. 204-222. Article.
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- Ponce, S; Cedrés, S; Ricordel, C; Isambert, N; Viteri, S; Herrera Juárez, M; Martínez Martí, A et al. ONCOS-102 plus pemetrexed and platinum chemotherapy in malignant pleural mesothelioma: a randomized phase 2 study investigating clinical outcomes and the tumor microenvironment. *J. Immunother. Cancer.* 2023. 11. (9): e007552. Article.
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- Rubió Casadevall, J; Cirauqui, BC; Trufero, JM; Serrahima, MP; Castaño, AG; Maseda, AC; Docampo, LI et al. TTCC-2019-02: real-world evidence of first-line cetuximab plus paclitaxel in

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- Sacher, A; LoRusso, P; Patel, MR; Miller, WH; Garralda, E; Forster, MD; Santoro, A et al. Single-Agent Divarasib (GDC-6036) in Solid Tumors with a KRAS G12C Mutation. *N. Engl. J. Med.* 2023. 389. (8): p. 710-721. Article.
 - Siringo, M; Baena, J; Bote de Cabo, H; Torres Jiménez, J; Zurera, M; Zugazagoitia, J; Paz Ares, L. Future Perspectives in the Second Line Therapeutic Setting for Non-Oncogene Addicted Non-Small-Cell Lung Cancer. *Cancers.* 2023. 15. (23): 5505. Article.
 - Weir, A; Kang, EY; Meagher, NS; Nelson, GS; Ghatage, P; Lee, CH; Riggan, MJ et al. Increased FOXJ1 protein expression is associated with improved overall survival in high-grade serous ovarian carcinoma: an Ovarian Tumor Tissue Analysis Consortium Study. *Br. J. Cancer.* 2023. 128. (1): p. 137-147. Article.

Reviews

- Aix, SP; Núñez Benjumea, FJ; Cervera Torres, S; Flores, A; Arnáiz, P; Fernández Luque, L. Data-Driven Personalized Care in Lung Cancer: Scoping Review and Clinical Recommendations on Performance Status and Activity Level of Patients With Lung Cancer Using Wearable Devices. *JCO Clin. Cancer Info.* 2023. 7. Review.
- Bilé Silva, A; Lopez Beltran, A; Blanca, A; Lopez Rios, F; Gómez, E; Cimadamore, A; Montironi, R et al. Clinical utility of checkpoint inhibitors against metastatic bladder cancer: overcoming challenges to find a way forward. *Expert Opin. Biol. Ther.* 2023. 23. (5): p. 407-418. Review.
- Hernandez, S; Conde, E; Alonso, M; Illarramendi, A; de Cabo, HB; Zugazagoitia, J; Paz Ares, L et al. A narrative review of methods

Editorials

- Conde, E; Hernandez, S; Alonso, M; Lopez Rios, F. Pan-TRK Immunohistochemistry to Optimize the Detection of NTRK Fusions: Removing the Hay When Looking for the Needle. *Mod. Pathol.* 2023. 36. (12): 100346. Editorial Material.

Letters

- Arroyo Andrés, J; Agud Dios, M; Rubio Muniz, CA; Postigo, C; Cortijo Cascajares, S; Ortiz Romero, PL. Intralesional brentuximab vedotin for the treatment of primary cutaneous T-cell lymphomas: a case series. *Int. J. Dermatol.* 2023. 63. (2): p. 57-59. Letter.

THESES DEFENDED OR SUPERVISED WITHIN THE GROUP

- **Doctoral candidate:** Javier Ramos Parada.
Thesis title: Caracterización exhaustiva del genotipo molecular e inmunofenotipo del cáncer de pulmón no microcítico.
University: Universidad Complutense de Madrid.
Date read: 22/03/2023.
Thesis director: Eva Garrido, Luis Paz-Ares
International mention: No.

- Yarza, R; Bover, M; Herrera Juarez, M; Rey Cardenas, M; Paz Ares, L; Lopez Martin, JA; Haanen, J. Efficacy of T-Cell Receptor-Based Adoptive Cell Therapy in Cutaneous Melanoma: A Meta-Analysis. *Oncologist.* 2023. 28. (6): p. 406-415. Article.
- Yu, HA; Goto, Y; Hayashi, H; Felip, E; Chih Hsin Yang, J; Reck, M; Yoh, K et al. HERTHENA-Lung01, a Phase II Trial of Patritumab Deruxtecan (HER3-DXd) in Epidermal Growth Factor Receptor-Mutated Non-Small-Cell Lung Cancer After Epidermal Growth Factor Receptor Tyrosine Kinase Inhibitor Therapy and Platinum-Based Chemotherapy. *J. Clin. Oncol.* 2023. 41. (35): p. 5363-5375. Article.
- Zhou, CC; Tang, KJ; Cho, BC; Liu, BG; Paz Ares, L; Cheng, SSN; Kitazono, S et al. Amivantamab plus Chemotherapy in NSCLC with EGFR Exon 20 Insertions. *N. Engl. J. Med.* 2023. 389. (22): p. 2039-2051. Article.

- for the identification of ALK fusions in patients with non-small cell lung carcinoma. *Transl. Lung Cancer Res.* 2023. 12. (7): p. 1549-1562. Review.
- Herrera Juárez, M; Serrano Gómez, C; Bote Cabo, H; Paz Ares, L. Targeted therapy for lung cancer: Beyond EGFR and ALK. *Cancer.* 2023. 129. (12): p. 1803-1820. Review.
 - Otano, I; Ucerro, AC; Zugazagoitia, J; Paz Ares, L. At the crossroads of immunotherapy for oncogene-addicted subsets of NSCLC. *Nat. Rev. Clin. Oncol.* 2023. 20. (3): p. 143-159. Review.
 - Rudin, CM; Reck, M; Johnson, ML; Blackhall, F; Hann, CL; Yang, JCH; Bailis, JM et al. Emerging therapies targeting the delta-like ligand 3 (DLL3) in small cell lung cancer. *J. Hematol. Oncol.* 2023. 16. (1): 66. Review.

- Paz Ares, LG. Response to the Letter to the Editor Titled "First-Line Nivolumab Plus Ipilimumab With Chemotherapy for Metastatic NSCLC: The Updated Outcomes From CheckMate 9LA". *J. Thorac. Oncol.* 2023. 18. (9): p. 102-103. Letter.

PRIZES AND AWARDS

- Healthcare Reputational Leadership Award 2023 for Dr. Luis Paz-Ares, one of the five specialists with the best reputation in Spain in Oncology according to the Healthcare Reputation Monitor.

STAYS

- Mercedes Herrera began a stay at the Princess Margaret Cancer Center - UHN (Toronto, Canada) in September 2023.

PATENTS

- **Title:** Prediction of gene amplification.
Number: EP23383180
Type: EUROPEAN Patent.
Inventors: Geoff Macintyre; Barbara Hernando; Angel Fernández Sanromán; Luis Paz-Ares Rodríguez; David Gomez Sanchez; Jon Zugazagoitia Fraile; Juan Manuel Coya Raboso.
Owners: Fundación i+12 (10 %), Fundación CNIO (90 %).
Date of application: 17/11/2023
Status: In process.
- **Title:** Genomic Sequencing Analysis.
Number: GB2311552
Type: National patent in the UNITED KINGDOM.
Inventors: Geoff Macintyre; Barbara Hernando; Angel Fernández Sanromán; Luis Paz-Ares Rodríguez; David Gomez Sanchez; Jon Zugazagoitia Fraile; Juan Manuel Coya Raboso.
Owners: Fundación i+12 (10 %), Fundación CNIO (90 %).
Date of application: 27/07/2023.
Status: In process.
- **Title:** Interleukin 11 Receptor Alpha Subunit (IL11RA) neutralizing antibodies and uses thereof.
Number: US18016373.
Type: Entry into national phases of the PCT/EP2021/069630 - UNITED STATES.
Inventors: Irene Ferrer Sánchez, Luis Paz-Ares Rodríguez, Laura Ojeda Márquez, Jorge Luis Martínez Torrecuadrada, Giovanna Roncador.
Owners: Fundación i+12 (50 %), Fundación del Sector Público Estatal Centro Nacional de Investigaciones Oncológicas Carlos III F.S.P. CNIO (50 %).
EFFNN Date: 16/01/2023.
Priority data: EP20382631 (14/07/2020).
Status: In process.
- **Title:** Interleukin 11 Receptor Alpha Subunit (IL11RA) neutralizing antibodies and uses thereof.
Number: EP4182345A1.
Type: Entry into national phases of the PCT/EP2021/069630 - EUROPEAN Patent.
Inventors: Irene Ferrer Sánchez, Luis Paz-Ares Rodríguez, Laura Ojeda Márquez, Jorge Luis Martínez Torrecuadrada, Giovanna Roncador.
Owners: Fundación i+12 (50 %), Fundación del Sector Público Estatal Centro Nacional de Investigaciones Oncológicas Carlos III F.S.P. CNIO (50 %).

- Best-in-Class 2023 Award (BiC Awards) for the best unit in oncology research.

- **EFFNN Date:** 14/02/2023.
Priority data: EP20382631 (14/07/2020).
Status: In process.
- **Title:** N-Cadherin and FGFR1 and/or FGFR4 for use in predicting the response of patients to a lung cancer treatment and method and kit based on said use.
Number: EP18836033-FR.
Type: European patent validation in FRANCE.
Inventors: Luis Paz-Ares Rodríguez, Álvaro Quintanal Villalonga, Irene Ferrer Sánchez, Sonia Molina Pinelo, Amancio Carnero Moya.
Owners: Fundación i+12 (60 %), Servicio Andaluz de Salud (20 %), Consejo Superior de Investigaciones Científicas (20 %).
Date of validation: 05/12/2023.
Priority data: P201730929 (13/07/2017).
Status: Granted.
- **Title:** N-Cadherin and FGFR1 and/or FGFR4 for use in predicting the response of patients to a lung cancer treatment and method and kit based on said use.
Number: EP18836033-GB.
Type: European patent validation in the UNITED KINGDOM.
Inventors: Luis Paz-Ares Rodríguez, Álvaro Quintanal Villalonga, Irene Ferrer Sánchez, Sonia Molina Pinelo, Amancio Carnero Moya.
Owners: Fundación i+12 (60 %), Servicio Andaluz de Salud (20 %), Consejo Superior de Investigaciones Científicas (20 %).
Date of validation: 05/12/2023.
Priority data: P201730929 (13/07/2017).
Status: Granted.
- **Title:** N-Cadherin and FGFR1 and/or FGFR4 for use in predicting the response of patients to a lung cancer treatment and method and kit based on said use.
Number: EP18836033-DE.
Type: European patent validation in GERMANY.
Inventors: Luis Paz-Ares Rodríguez, Álvaro Quintanal Villalonga, Irene Ferrer Sánchez, Sonia Molina Pinelo, Amancio Carnero Moya.
Owners: Fundación i+12 (60 %), Servicio Andaluz de Salud (20 %), Consejo Superior de Investigaciones Científicas (20 %).
Date of validation: 23/11/2023.
Priority data: P201730929 (13/07/2017).
Status: Granted.

- **Title:** N-Cadherina y FGFR1 y/o FGFR4 para uso en la predicción de la respuesta de los pacientes a un tratamiento del cáncer de pulmón y método y kit basados en dicho uso.
Number: P201730929.
Type: SPANISH patent.
Inventors: Luis Paz-Ares Rodríguez, Álvaro Quintanal Villalonga, Irene Ferrer Sánchez, Sonia Molina Pinelo, Amancio Carnero Moya.
Owners: Fundación i+12 (60 %), Servicio Andaluz de Salud (20 %), Consejo Superior de Investigaciones Científicas (20 %).
Priority Date: 13/07/2017.
Status: Granted (01/07/2019).
- **Title:** N-Cadherin and FGFR1 and/or FGFR4 for use in predicting the response of patients to a lung cancer treatment and method and kit based on said use.
Number: US11408038B2.
Type: Entry into national phases of the PCT/ES2018/070501 - UNITED STATES.
Inventors: Luis Paz-Ares Rodríguez, Álvaro Quintanal Villalonga, Irene Ferrer Sánchez, Sonia Molina Pinelo, Amancio Carnero Moya.
Owners: Fundación i+12 (60 %), Servicio Andaluz de Salud (20 %), Consejo Superior de Investigaciones Científicas (20 %).
EFFNN Date: 13/05/2020.
Priority data: P201730929 (13/07/2017).
Status: Granted (09/08/2022).
- **Title:** Method for determining the presence or absence of minimal residual disease (MRD) in a subject who has been treated for a disease.
Number: CN202080060145.4A
Type: Entry into national phases of the PCT/EP2020/073960 - CHINA.
Inventors: Santiago Barrio García, Rosa María Ayala Díaz, María Inmaculada Rapado Martínez, Eva María Garrido Martín, Luis Paz-Ares Rodríguez, María Esther Onecha de la Fuente, Joaquín Martínez López.
Owners: Fundación i+12 (80 %), Fundación del Sector Público Estatal Centro Nacional de Investigaciones Oncológicas Carlos III F.S.P. CNIO (20 %).
EFFNN Date: 15/03/2022.
Priority data: EP19382730 (27/08/2020).
Status: In process.
Graduate: ALTUM Sequencing S.L.
- **Title:** Method for determining the presence or absence of minimal residual disease (MRD) in a subject who has been treated for a disease.
Number: HK62022061259.7.
Type: Entry into national phases of the PCT/EP2020/073960 - HONG KONG.
Inventors: Santiago Barrio García, Rosa María Ayala Díaz, María Inmaculada Rapado Martínez, Eva María Garrido Martín, Luis Paz-Ares Rodríguez, María Esther Onecha de la Fuente, Joaquín Martínez López.
Owners: Fundación i+12 (80 %), Fundación del Sector Público Estatal Centro Nacional de Investigaciones Oncológicas Carlos III F.S.P. CNIO (20 %).
EFFNN Date: 27/09/2022.

- **Priority data:** EP19382730 (27/08/2019).
Status: In process.
Graduate: ALTUM Sequencing S.L.
- **Title:** Method for determining the presence or absence of minimal residual disease (MRD) in a subject who has been treated for a disease.
Number: KR1020227006463A.
Type: Entry into national phases of the PCT/EP2020/073960 - COREA DEL SUR.
Inventors: Santiago Barrio García, Rosa María Ayala Díaz, María Inmaculada Rapado Martínez, Eva María Garrido Martín, Luis Paz-Ares Rodríguez, María Esther Onecha de la Fuente, Joaquín Martínez López.
Owners: Fundación i+12 (80 %), Fundación del Sector Público Estatal Centro Nacional de Investigaciones Oncológicas Carlos III F.S.P. CNIO (20 %).
EFFNN Date: 19/04/2022.
Priority data: EP19382730 (27/08/2020).
Status: In process.
Graduate: ALTUM Sequencing S.L.
- **Title:** Method for determining the presence or absence of minimal residual disease (MRD) in a subject who has been treated for a disease.
Number: US17/638,035.
Type: Entry into national phases of the PCT/EP2020/073960 - UNITED STATES.
Inventors: Santiago Barrio García, Rosa María Ayala Díaz, María Inmaculada Rapado Martínez, Eva María Garrido Martín, Luis Paz-Ares Rodríguez, María Esther Onecha de la Fuente, Joaquín Martínez López.
Owners: Fundación i+12 (80 %), Fundación del Sector Público Estatal Centro Nacional de Investigaciones Oncológicas Carlos III F.S.P. CNIO (20 %).
EFFNN Date: 24/02/2022.
Priority data: EP19382730 (27/08/2020).
Status: In process.
Graduate: ALTUM Sequencing S.L.
- **Title:** Method for determining the presence or absence of minimal residual disease (MRD) in a subject who has been treated for a disease.
Number: EP20768519.9A.
Type: Entry into national phases of the PCT/EP2020/073960 - EUROPEAN Patent.
Inventors: Santiago Barrio García, Rosa María Ayala Díaz, María Inmaculada Rapado Martínez, Eva María Garrido Martín, Luis Paz-Ares Rodríguez, María Esther Onecha de la Fuente, Joaquín Martínez López.
Owners: Fundación i+12 (80 %), Fundación del Sector Público Estatal Centro Nacional de Investigaciones Oncológicas Carlos III F.S.P. CNIO (20 %).
EFFNN Date: 31/01/2022.
Priority data: EP19382730 (27/08/2020).
Status: In process.
Graduate: ALTUM Sequencing S.L.

- **Title:** Method for determining the presence or absence of minimal residual disease (MRD) in a subject who has been treated for a disease.
Number: JP2022507775A.
Type: Entry into national phases of the PCT/EP2020/073960 - JAPÓN.
Inventors: Santiago Barrio García, Rosa María Ayala Díaz, María Inmaculada Rapado Martínez, Eva María Garrido Martín, Luis Paz-Ares Rodríguez, María Esther Onecha de la Fuente, Joaquín Martínez López.
Owners: Fundación i+12 (80 %), Fundación del Sector Público Estatal Centro Nacional de Investigaciones Oncológicas Carlos III F.S.P. CNIO (20 %).
EFFNN Date: 14/02/2022.
Priority data: EP19382730 (27/08/2020).
Status: In process.
Graduate: ALTUM Sequencing S.L.

- **Title:** Biomarcador para el diagnóstico, pronóstico y seguimiento de cáncer colorrectal de aparición precoz.
Number: P201531891.
Type: SPANISH patent.
Inventors: José Perea García, Rogelio González Sarmiento, Daniel Rueda Fernández, Miguel Urioste Azcorra, María Arriba Domenech, Juan Luis García Hernández, Jéssica Pérez García.
Owners: Fundación i+12 (25 %), Fundación Centro Nacional de Investigaciones Oncológicas (CNIO) (25 %), Universidad de Salamanca (25 %), Fundación Instituto de Estudios de Ciencias de la Salud de Castilla y León (25 %).
Priority Date: 23/12/2015.
Status: Granted (05/04/2018).

Targeted Therapies for Precision Oncology

CENTER: Hospital Universitario 12 de Octubre (HU12O).

GROUP LEADER: Ferrer Sánchez, Irene (R3).

Cirauqui Armendáriz, Cristina - Doctoral researcher (R2).

García Borrego, Santiago - Predoctoral researcher (R1).

Hernández Navas, Iban - Predoctoral researcher (R1).

Plaza Expósito, Patricia - Superior technique.

Santos Ramos, Alba - Predoctoral researcher (R1).

ACTIVE RESEARCH PROJECTS

Type of funding	Funding body	No. of projects
Competitive	ISCIII	2
Total		2

- **Title:** Optimización de la terapia con inhibidores covalentes de KRAS-G12C en el cáncer de pulmón no microcítico (CPNM).
Principal investigator: Ferrer Sánchez, Irene.
Project No.: P119/00320.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2020.
End date: 31/12/2022; extended to 30/06/2024.

- **Title:** Ayuda adicional Miguel Servet.
Principal investigator: Ferrer Sánchez, Irene.
Project No.: CP21/00052.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2022.
End date: 31/12/2025.

OTHER ACTIVE PROJECTS OF THE RESEARCH GROUP NOT MANAGED BY THE FUNDACIÓN PARA LA INVESTIGACIÓN BIOMÉDICA DEL HOSPITAL 12 DE OCTUBRE (FIBH12O)

- **Title:** iLUNG 2.0. ONCOLOGÍA Y NANOTECNOLOGÍA TRASLACIONAL PARA LA MEDICINA PERSONALIZADA EN CÁNCER DE PULMÓN.
Principal investigator: Paz-Ares, Luis.
IG researcher participating in the project: Ferrer Sánchez, Irene and Cirauqui Armendáriz, Cristina.
Project No.: P2022/BMD-7437-CM.
Funding body: Comunidad de Madrid.
Start date: 01/01/2023.
End date: 31/12/2026.
- **Title:** Deciphering the role of NOTCH pathway in resistance against KRASG12C targeted therapy in lung cancer.
Principal investigators: Maraver Molina, Antonio and Ferrer Sánchez, Irene.
Project No.: NOTCHINGKRAS.
Funding body: L'Institut national de la santé et de la recherche médicale (INSERM).
Start date: 01/11/2023.
End date: 31/12/2027.
- **Title:** Manipulación de la replicación tumor para resensibilizar frente a inmunoterapia - Sensitization to immunotherapy through manipulation of tumor transcription.
Principal investigator: Paz-Ares, Rodríguez.
IG researcher participating in the project: Ferrer Sánchez, Irene; Cirauqui Armendáriz, Cristina; García Borrego, Santiago and Plaza Expósito, Patricia.
Project No.: PLEC2022-009241.
Funding body: Agencia Estatal de Investigación. Ministerio de Ciencia e Innovación.
Start date: 01/12/2022.
End date: 30/11/2025.

PUBLICATIONS*

Type of Document	No. of document	Σ IF (JCR 2022)
Articles	2	22.2
Total	2	22.2

Articles

- Macaya, I; Roman, M; Welch, C; Entrialgo Cadierno, R; Salmon, M; Santos, A; Feliu, I et al. Signature-driven repurposing of Midostaurin for combination with MEK1/2 and KRASG12C inhibitors in lung cancer. Nat. Commun. 2023. 14. (1): 6332. Article.

- Marrugal, A; Ferrer, I; Quintanal Villalonga, A; Ojeda, L; Pastor, MD; García Lujan, R; Carnero, A et al. Inhibition of HSP90 in Driver Oncogene-Defined Lung Adenocarcinoma Cell Lines: Key Proteins Underpinning Therapeutic Efficacy. Int. J. Mol. Sci. 2023. 24. (18): 13830. Article.

END MASTER INVESTIGATIONS DIRECTED ON THE GROUP

- **Title:** Optimización del tratamiento con inhibidores selectivos de KRASG12D.
Director: Ferrer Sánchez, Irene.
Master: Investigación en Medicina Traslacional.
University: Universidad Complutense de Madrid.

END GRADUATED INVESTIGATIONS DIRECTED ON THE GROUP

- **Student:** Jaime Franco Mansilla.
Title: Papel de IL-11 sobre el microambiente tumoral del adenocarcinoma de pulmón.
Director: Cristina Cirauqui Armendáriz and Irene Ferrer Sánchez.
Degree: Biología Sanitaria.
University: Universidad de Alcalá.

PATENTS

- **Title:** Interleukin 11 Receptor Alpha Subunit (IL11RA) neutralizing antibodies and uses thereof.
Number: US18016373.
Type: Entry into national phases of the PCT/EP2021/069630 - UNITED STATES.
Inventors: Irene Ferrer Sánchez, Luis Paz-Ares Rodríguez, Laura Ojeda Márquez, Jorge Luis Martínez Torrecuadrada, Giovanna Roncador.
Owners: Fundación i+12 (50 %), Fundación del Sector Público Estatal Centro Nacional de Investigaciones Oncológicas Carlos III F.S.P. CNIO (50 %).
EFFNN Date: 16/01/2023.
Priority data: EP20382631 (14/07/2020).
Status: In process.
- **Title:** Interleukin 11 Receptor Alpha Subunit (IL11RA) neutralizing antibodies and uses thereof.
Number: EP4182345A1.
Type: Entry into national phases of the PCT/EP2021/069630 - EUROPEAN Patent.

- Inventors:** Irene Ferrer Sánchez, Luis Paz-Ares Rodríguez, Laura Ojeda Márquez, Jorge Luis Martínez Torrecuadrada, Giovanna Roncador.
Owners: Fundación i+12 (50 %), Fundación del Sector Público Estatal Centro Nacional de Investigaciones Oncológicas Carlos III F.S.P. CNIO (50 %).
EFFNN Date: 14/02/2023.
Priority data: EP20382631 (14/07/2020).
Status: In process.
- **Title:** N-Cadherin and FGFR1 and/or FGFR4 for use in predicting the response of patients to a lung cancer treatment and method and kit based on said use.
Number: EP18836033-FR
Type: European patent validation in FRANCE.
Inventors: Luis Paz-Ares Rodríguez, Álvaro Quintanal Villalonga, Irene Ferrer Sánchez, Sonia Molina Pinelo, Amancio Carnero Moya.
Owners: Fundación i+12 (60 %), Servicio Andaluz de Salud (20 %), Consejo Superior de Investigaciones Científicas (20 %).

* Publications: only "Article", "Review", "Editorial Material" and "Letter" have been selected in "Document Type" of ISI Web Of Knowledge. The breakdown of publications includes some not included in the 2022 JCR, which are therefore not taken into account in the final count shown in the table, since they do not have IF.

Date of validation: 05/12/2023.

Priority data: P201730929 (13/07/2017).

Status: Granted.

- Title:** N-Cadherin and FGFR1 and/or FGFR4 for use in predicting the response of patients to a lung cancer treatment and method and kit based on said use.
Number: EP18836033-GB.
Type: European patent validation in the UNITED KINGDOM.
Inventors: Luis Paz-Ares Rodríguez, Álvaro Quintanal Villalonga, Irene Ferrer Sánchez, Sonia Molina Pinelo, Amancio Carnero Moya.
Owners: Fundación i+12 (60 %), Servicio Andaluz de Salud (20 %), Consejo Superior de Investigaciones Científicas (20 %).
Date of validation: 05/12/2023.
Priority data: P201730929 (13/07/2017).
Status: Granted.
- Title:** N-Cadherin and FGFR1 and/or FGFR4 for use in predicting the response of patients to a lung cancer treatment and method and kit based on said use.
Number: EP18836033-DE.
Type: European patent validation in GERMANY.
Inventors: Luis Paz-Ares Rodríguez, Álvaro Quintanal Villalonga, Irene Ferrer Sánchez, Sonia Molina Pinelo, Amancio Carnero Moya.
Owners: Fundación i+12 (60 %), Servicio Andaluz de Salud (20 %), Consejo Superior de Investigaciones Científicas (20 %).
Date of validation: 23/11/2023.
Priority data: P201730929 (13/07/2017).
Status: Granted.

- Title:** N-Cadherina y FGFR1 y/o FGFR4 para uso en la predicción de la respuesta de los pacientes a un tratamiento del cáncer de pulmón y método y kit basados en dicho uso.
Number: P201730929.
Type: SPANISH patent.
Inventors: Luis Paz-Ares Rodríguez, Álvaro Quintanal Villalonga, Irene Ferrer Sánchez, Sonia Molina Pinelo, Amancio Carnero Moya.
Owners: Fundación i+12 (60 %), Servicio Andaluz de Salud (20 %), Consejo Superior de Investigaciones Científicas (20 %).
Priority Date: 13/07/2017.
Status: Granted (01/07/2019).
- Title:** N-Cadherin and FGFR1 and/or FGFR4 for use in predicting the response of patients to a lung cancer treatment and method and kit based on said use.
Number: US11408038B2.
Type: Entry into national phases of the PCT/ES2018/070501 - UNITED STATES.
Inventors: Luis Paz-Ares Rodríguez, Álvaro Quintanal Villalonga, Irene Ferrer Sánchez, Sonia Molina Pinelo, Amancio Carnero Moya.
Owners: Fundación i+12 (60 %), Servicio Andaluz de Salud (20 %), Consejo Superior de Investigaciones Científicas (20 %).
EFFNN Date: 13/05/2020.
Priority data: P201730929 (13/07/2017).
Status: Granted (09/08/2022).

Gastrointestinal and Neuroendocrine Tumors

CENTER: Hospital Universitario 12 de Octubre (HU12O).

GROUP LEADER: García Carbonero, Rocío (R4).

Adeva Alfonso, Jorge - Clinical researcher.
Antón Pascual, Beatriz - Predoctoral researcher (R1).
Baena Moreno, María Jesús - Predoctoral researcher (R1).
Cáceres Gallardo, David - Graduate researcher.
Cámara Jurado, María - Doctoral researcher (R2).
Carretero Puche, Carlos - Predoctoral researcher (R1).
Gil Calderón, Beatriz - Support technician.
Gómez Martín, Carlos Jesús - Postdoctoral researcher (R2).
Hernández Llorens, María Almudena - Predoctoral researcher (R1).
Hidalgo Calero, Beatriz - Clinical researcher.
Jaén García, Laura - Superior technique.
La Salvia, Anna - Doctoral researcher (R2).
Lamas Paz, Arantza - Postdoctoral researcher (R2).
Lens Pardo, Alberto - Predoctoral researcher (R1).

Llamas Granda, Patricia - Support technician.
Modrego Sánchez, Andrea - Predoctoral researcher (R1).
Riesco Martínez, M.ª del Carmen - Clinical researcher.
Robles Díaz, Luis - Clinical researcher.
Rodríguez Gil, Yolanda - Postdoctoral researcher (R2).
Rolín Ferrer, Daniel - Manager.
Rubio Cuesta, Beatriz - Predoctoral researcher (R1).
Rubio Fernández, Marcos - Doctoral researcher (R2).
Rubio González, Eduardo - Clinical researcher.
Salamanca Santamaría, Francisco Javier - Graduate researcher.
Sarmentero Estrada, Jacinto - Support technician.
Soldevilla Navarro, Beatriz - Postdoctoral researcher (R3).
Teijo Quintans, Ana - Predoctoral researcher (R1).

ACTIVE RESEARCH PROJECTS

Type of funding	Funding body	No. of projects
Competitive	Fundación Científica de la Asociación Española Contra el Cáncer	1
Competitive	Fundación Española de Oncología Médica	1
Competitive	Grupo Español de Tumores Neuroendocrinos y Endocrinos (GETNE)	1
Competitive	ISCIII	3
No competitive	Various	4
Total		10

- Title:** Caracterización molecular para la selección terapéutica personalizada en el tratamiento oncológico del cáncer gástrico.
Principal investigator: Gómez Martín, Carlos Jesús.
Project No.: P18/00752.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2019.
End date: 31/12/2021; extended to 30/06/2023.
- Title:** Diagnóstico molecular avanzado de la poliposis adenomatosa tipo x: análisis de alteraciones no codificantes.
Principal investigator: Robles Díaz, Luis.
Project No.: P19/00340.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2020.
End date: 31/12/2022; extended to 30/06/2024.
- Title:** Caracterización del perfil inmune por GEOMX Digital Spatial Profiling (DSP) de las neoplasias neuroendocrinas (NENS) G3 de origen gastroenteropancreático o desconocido.
Principal investigator: Riesco Martínez, M.ª del Carmen.
Project No.: GJ2106.
Funding body: Grupo Español de Tumores Neuroendocrinos y Endocrinos (GETNE).
Start date: 09/05/2022.
End date: 08/05/2023.
- Title:** Caracterización molecular del cáncer colorrectal con inestabilidad de microsatélites (MSI-H): identificación de marcadores pronósticos y predictivos al tratamiento con inmunoterapia.
Principal investigator: Riesco Martínez, M.ª del Carmen.
Funding body: Fundación Española de Oncología Médica.
Start date: 19/05/2022.
End date: 18/05/2024.
- Title:** Análisis integral multiómico en pacientes con neoplasias neuroendocrinas (NNEs).
Principal investigator: García Carbonero, Rocío.
Project No.: PRYGN223375GARC.
Funding body: Fundación Científica de la Asociación Española Contra el Cáncer.
Start date: 01/12/2022.
End date: 30/11/2025.
- Title:** Desarrollo de una clasificación molecular independiente del origen tumoral en neoplasias neuroendocrinas con potencial uso clínico.
Principal investigator: García Carbonero, Rocío.
Project No.: P122/01835.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2023.
End date: 31/12/2025.

- **Title:** Estudios de los mecanismos implicados en respuesta a terapias en cáncer colorrectal. Identificación de marcadores pronósticos y predictivos de eficacia terapéutica.
Principal investigator: García Carbonero, Rocío.
Funding body: financiado por la PI.
Start date: 11/09/2020.
End date: 10/09/2023.
- **Title:** Caracterización del perfil inmune por GEOMX Digital Spatial Profiling (DSP) de las neoplasias neuroendocrinas (NENS) G3 de origen gastroenteropancreático o desconocido.
Principal investigator: García Carbonero, Rocío.
Funding body: financiado por la PI.
Start date: 31/03/2021.
End date: 30/04/2026.
- **Title:** Identificación de biomarcadores pronósticos y predictivos de respuesta a tratamientos de uso habitual e inmunoterapia en cáncer colorrectal con inestabilidad de microsatélites.
Principal investigator: García Carbonero, Rocío.
Funding body: financiado por la PI.
Start date: 27/04/2022.
End date: 26/04/2027.
- **Title:** Análisis molecular integral de las neoplasias neuroendocrinas (NENS). Establecimiento de modelos preclínicos de estudio.
Principal investigator: García Carbonero, Rocío.
Funding body: financiado por la PI.
Start date: 22/06/2023.
End date: 21/06/2025.

OTHER ACTIVE PROJECTS OF THE RESEARCH GROUP NOT MANAGED BY THE FUNDACIÓN PARA LA INVESTIGACIÓN BIOMÉDICA DEL HOSPITAL 12 DE OCTUBRE (FIBH12O)

- **Title:** Fenomapeo: Explorando la viabilidad de biomarcadores predictivos y farmacodinámicos de inmunoterapia en tumores sólidos.
Principal investigator: (Subproject) General Objective 4. Digestive tract (Biliary tract/Colorectal cancer) grupo 5 GO 4: Rocío García Carbonero.
Project No.: PMP22/00054.
Funding body: Instituto de Salud Carlos III (ISCIII)
Start date: 2023.
End date: 2026.

PUBLICATIONS*

Type of Document	No. of document	Σ IF (JCR 2022)
Articles	27	380.108
Reviews	6	42.8
Editorials	1	5.2
Total	34	428.108

Articles

- Altieri, B; La Salvia, A; Modica, R; Marciello, F; Mercier, O; Filosso, PL; de Latour, BR et al. Recurrence-Free Survival in Early and Locally Advanced Large Cell Neuroendocrine Carcinoma of the Lung after Complete Tumor Resection. *J. Pers. Med.* 2023. 13. (2): 330. Article.
- Capdevila, J; Hernando, J; Teule, A; Lopez, C; Garcia Carbonero, R; Benavent, M; Custodio, A et al. Durvalumab plus tremelimumab for the treatment of advanced neuroendocrine neoplasms of gastroenteropancreatic and lung origin. *Nat. Commun.* 2023. 14. (1). Article.
- Castillón, JC; Gordo, TA; Bayonas, AC; Carretero, AC; García Carbonero, R; Pulido, EG; Fonseca, PJ et al. SEOM-GETNE clinical guidelines for the diagnosis and treatment of gastroenteropancreatic and bronchial neuroendocrine neoplasms (NENs) (2022). *Clin. Transl. Oncol.* 2023. 25. (9): p. 2692-2706. Article.
- Dasari, A; Lonardi, S; Garcia Carbonero, R; Elez, E; Yoshino, T; Sobrero, A; Yao, JM et al. Fruquintinib versus placebo in patients with refractory metastatic colorectal cancer (FRESCO-2): an international, multicentre, randomised, double-blind, phase 3 study. *Lancet.* 2023. 402. (10395): p. 41-53. Article.
- de Mestier, L; Resche Rigon, M; Dromain, C; Lamarca, A; La Salvia, A; de Baker, L; Fehrenbach, U et al. Proposal of early CT morphological criteria for response of liver metastases to systemic

- treatments in gastroenteropancreatic neuroendocrine tumors: Alternatives to RECIST. *J. Neuroendocrinol.* 2023. Article.
- Fazio, N; Gervaso, L; Halfdanarson, TR; Sonbol, M; Eiring, RA; Pusceddu, S; Prinzi, N et al. COVID-19 in patients with neuroendocrine neoplasms: 2-year results of the INTENSIVE study. *Endocr.-Relat. Cancer.* 2023. 30. (6): e220395. Article.
- Fazio, N; La Salvia, A. Precision medicine in gastroenteropancreatic neuroendocrine neoplasms: Where are we in 2023? *Best Pract. Res. Clin. Endoc. Metab.* 2023. 37. (5): p. 101794-101794. Article.
- Ferolla, P; Berruti, A; Spada, F; Brizzi, MP; Ibrahim, T; Marconcini, R; Giuffrida, D et al. Efficacy and Safety of Lanreotide Autogel and Temozolomide Combination Therapy in Progressive Thoracic Neuroendocrine Tumors (Carcinoid): Results from the Phase 2 ATLANT Study. *Neuroendocrinology.* 2023. 113. (3): p. 332-342. Article.
- Garcia Carbonero, R; Astorga, BG; Tocino, RV; Toledo, DC; Pericay, C; Montes, AF; Falcó, E et al. Real-world study on microsatellite instability and mismatch repair deficiency testing patterns among patients with metastatic colorectal cancer in Spain. *Clin. Transl. Oncol.* 2023. Article.
- Gonzalez, RS; Pastro, LG; Pyatibrat, S; Arias, HDQ; Gil, YR; Booth, AL; de la Peña Navarro, I et al. Submucosal Necrotic Nodule of the Colon. *Arch. Pathol. Lab. Med.* 2023. 147. (11): p. 1315-1319. Article.
- Hernando, J; Roca Herrera, M; García Alvarez, A; Raymond, E; Ruzniewski, P; Kulke, MH; Grande, E et al. Sex differences on multikinase inhibitors toxicity in patients with advanced gastroenteropancreatic neuroendocrine tumours. *Eur J Cancer.* 2023. 188. p. 39-48. Article.
- Mayoral, IH; Santiago, AA; Sánchez Zapardiel, JM; Calero, BH; de la Hoya, M; Gómez Sanz, A; Reyes, MD et al. Unexpected Findings in Hereditary Breast and Ovarian Cancer Syndrome: Low-Level Constitutional Mosaicism in BRCA2. *Genes.* 2023. 14. (2): 502. Article.
- Huebner, A; Black, JRM; Sarno, F; Pazo, R; Juez, I; Medina, L; Garcia Carbonero, R et al. ACT-Discover: identifying karyotype heterogeneity in pancreatic cancer evolution using ctDNA. *Genome Med.* 2023. 15. (1): p. 27-27. Article.
- Javier, GC; Alberto, I; Azucena, GNE; Iván, V; Débora, M; David, P; Laura, A et al. Determinants of activity and efficacy of anti-PD1/PD-L1 therapy in patients with advanced solid tumors recruited in a clinical trials unit: a longitudinal prospective biomarker-based study. *Cancer Immunol. Immunother.* 2023. 72. (6): p. 1709-1723. Article.
- Jiménez Fonseca, P; Sastre, J; García Alfonso, P; Gómez España, MA; Salud, A; Gil, S; Rivera, F et al. Association of Circulating Tumor Cells and Tumor Molecular Profile With Clinical Outcomes in Patients With Previously Untreated Metastatic Colorectal Cancer: A Pooled Analysis of the Phase III VISNu-1 and Phase II VISNu-2 Randomized Trials. *Clin. Colorectal Canc.* 2023. 22. (2): p. 222-230. Article.
- Mitjavila, M; Jimenez Fonseca, P; Belló, P; Pubul, V; Percovich, JC; Garcia Burillo, A; Hernando, J et al. Efficacy of [¹⁷⁷Lu]Lu-DOTATATE in metastatic neuroendocrine neoplasms of different locations: data from the SEPTRALU study. *Eur. J. Nucl. Med. Mol. Imaging.* 2023. 50. (8): p. 2486-2500. Article.
- Nesti, C; Bräutigam, K; Benavent, M; Bernal, L; Boharoon, H; Botling, J; Bouroumeau, A et al. Hemicolectomy versus appendectomy for patients with appendiceal neuroendocrine tumours 1-2 cm in size: a retrospective, Europe-wide, pooled cohort study. *Lancet Oncol.* 2023. 24. (2): p. 187-194. Article.
- 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.* 2023. 15. (3): 763. Article.
- Paredes Ruiz, D; López, F; Núñez Sobrino, JA; Gómez Martín, C; Díaz Pedroche, C; Lizasoain, M. Cytomegalovirus reactivation in patients with immune-mediated gastritis. *Enferm. Infec. Microbiol. Clin.* 2023. 41. (5): p. 298-300. Article.
- Pesántez, D; ten Hoorn, S; Machado, I; García Albéniz, X; Rodríguez Salas, N; Heredia Soto, V; Viñal, D et al. Total neoadjuvant therapy with or without aflibercept in rectal cancer: 3-year results of GEMCAD-1402. *JNCI-J. Natl. Cancer Inst.* 2023. 115. (12): p. 1497-1505. Article.
- Ramadori, P; Woitok, MM; Estévez Vázquez, O; Benedé Ubieto, R; Leal Lassalle, H; Lamas Paz, A; Guo, FF et al. Lack of Cyclin E1 in hepatocytes aggravates ethanol-induced liver injury and hepatic steatosis in experimental murine model of acute and chronic alcohol-associated liver disease. *Biochim. Biophys. Acta-Mol. Basis Dis.* 2023. 1869. (4): 166646. Article.
- Rinke, A; Ambrosini, V; Dromain, C; Garcia Carbonero, R; Haji, A; Koumarianou, A; van Dijkum, EN et al. European Neuroendocrine Tumor Society (ENETS) 2023 guidance paper for colorectal neuroendocrine tumours. *J. Neuroendocrinol.* 2023. e13309. Article.
- Soldevilla, B; Lens Pardo, A; Espinosa Olarte, P; Carretero Puche, C; Molina Pinelo, S; Robles, C; Benavent, M et al. MicroRNA signature and integrative omics analyses define prognostic clusters and key pathways driving prognosis in patients with neuroendocrine neoplasms. *Mol. Oncol.* 2023. 17. (4): p. 582-597. Article.
- Toledano Fonseca, M; Gómez España, MA; Élez, E; Grávalos, C; García Alfonso, P; Rodríguez, R; Losa, F et al. A signature of circulating microRNAs predicts the response to treatment with FOLFIRI plus aflibercept in metastatic colorectal cancer patients. *Biomed. Pharmacother.* 2023. 159. 114272. Article.
- Vidal, J; Fernández Rodríguez, MC; Casadevall, D; García Alfonso, P; Páez, D; Guix, M; Alonso, V et al. Liquid Biopsy Detects Early Molecular Response and Predicts Benefit to First-Line Chemotherapy plus Cetuximab in Metastatic Colorectal Cancer: PLATFORM-B Study. *Clin. Cancer Res.* 2023. 29. (2): p. 379-388. Article.
- Weir, A; Kang, EY; Meagher, NS; Nelson, GS; Ghatage, P; Lee, CH; Riggan, MJ et al. Increased FOXJ1 protein expression is associated with improved overall survival in high-grade serous ovarian carcinoma: an Ovarian Tumor Tissue Analysis Consortium Study. *Br. J. Cancer.* 2023. 128. (1): p. 137-147. Article.
- Yoshino, T; Andre, T; Kim, TW; Yong, WP; Shiu, KK; Jensen, BV; Jensen, LH et al. Pembrolizumab in Asian patients with microsatellite-Instability-high/mismatch-repair-deficient colorectal cancer. *Cancer Sci.* 2023. 114. (3): p. 1026-1036. Article.

* Publications: only "Article", "Review", "Editorial Material" and "Letter" have been selected in "Document Type" of ISI Web Of Knowledge. The breakdown of publications includes some not included in the 2022 JCR, which are therefore not taken into account in the final count shown in the table, since they do not have IF.

Reviews

- Bellino, S; La Salvia, A; Cometa, MF; Botta, R. Cell-based medicinal products approved in the European Union: current evidence and perspectives. *Front. Pharmacol.* 2023. 14. p. 1200808-1200808. Review.
- Delcuratolo, MD; Modrego Sánchez, A; Bungaro, M; Antón Pascual, B; Teran, S; Dipace, V; Novello, S et al. Liquid Biopsy in Advanced Colorectal Cancer: Clinical Applications of Different Analytes. *J. Mol. Pathol.* 2023. 4. (3): p. 128-155. Review.
- Fanciulli, G; La Salvia, A; Di Molfetta, S; Cannavale, G; Puliani, G; Verrico, M; Campolo, F et al. Predictive Factors of Response to Streptozotocin in Neuroendocrine Pancreatic Neoplasms. *J. Clin. Med.* 2023. 12. (24): 7557. Review.
- Fanciulli, G; Modica, R; La Salvia, A; Grossrubatscher, EM; Florio, T; Ferrà, F; Veresani, A et al. Proteasome inhibitors in medullary thyroid carcinoma: time to restart with clinical trials? *Front. Endocrinol.* 2023. 14. p. 1145926-1145926. Review.
- Garcia Carbonero, R; Anton Pascual, B; Modrego, A; Riesco Martínez, MDC; Lens Pardo, A; Carretero Puche, C; Rubio Cuesta, B et al. Advances in the Treatment of Gastroenteropancreatic Neuroendocrine Carcinomas: are we moving forward? *Endocr. Rev.* 2023. 44. (4): p. 724-736. Review.
- Stumpo, S; Formelli, MG; Persano, I; Parlagreco, E; Lauricella, E; Rodriquenz, MG; Guerrero, LP et al. Extrapulmonary Neuroendocrine Carcinomas: Current Management and Future Perspectives. *J. Clin. Med.* 2023. 12. (24): 7715. Review.
- Zappi, A; Persano, I; Galvani, L; Parlagreco, E; Andrini, E; Campana, D; Brizzi, MP et al. Chemotherapy in Well Differentiated Neuroendocrine Tumors (NET) G1, G2, and G3: A Narrative Review. *J. Clin. Med.* 2023. 12. (2): 717. Review.

Editorials

- La Salvia, A; Giuffrida, D; Modica, R. Editorial: Neuroendocrine tumors: the road to precision medicine. *Front. Endocrinol.* 2023. 14. p. 1253319-1253319. Editorial Material.

END GRADUATED INVESTIGATIONS DIRECTED ON THE GROUP

- **Student:** Alicia Ortiz Guerrero.
Title: Papel de la proteína SRC en CCR KRAS mutado: Nuevas estrategias terapéuticas.
Director: Beatriz Soldevilla Navarro.
Degree: Bioquímica.
University: Universidad Autónoma de Madrid.

PRIZES AND AWARDS

- Accesit in the category of Basic, Clinical and Applied Nutrition. XXVI International Conference on Practical Nutrition / XV International Congress of the SEDCA. Madrid (Spain). March 29-31, 2022. Fernández-Trapote E, Gardel Ferrer A, Carracedo Añón J, Alaminos Torres A, Marrodán Serrano M D. Concordance between Body Mass Index and fat percentage for the diagnosis of obesity in Spanish adolescents.
- First prize for the best oral presentation of a communication to Alberto Lens Pardo in the "Basic Science" category (ENETS 2023) for his work "Predictive transcriptomic signature of response to axitinib in patients with advanced NETs included in the randomized, double-blind, placebo-controlled AXINET trial (GETNE 1107)".
- Second prize in the "Poster" category went to Beatriz Rubio Cuesta for her work "SRC as a therapeutic target to revert resistance in BRAF v600e mutated CRC", at the Lab Day CNIO 2023.

PATENTS

- **Title:** Firma pronóstica de microRNAs en neoplasias neuroendocrinas (NNEs) de origen gastroenteropancreático y pulmonar.
Number: P202131016.
Type: SPANISH patent.
- Inventors:** Rocío García Carbonero, Paula Espinosa Olarte, Carlos Carretero Puche, Beatriz Soldevilla Navarro.
Owners: Fundación i+12 (100 %).
Date of application: 28/10/2021.
Status: In process.

COORDINATORS:

Julia Carracedo Añón and Guillermo Martínez Díaz-Guerra

Respiratory Diseases
Ageing, Neuroimmunology, and Nutrition
Tissue Engineering
Bone Metabolism, Diabetes, and Nutrition
Clinical Nephrology
Critical Patient
Male's Integral Health
Pulmonary Surfactant and Respiratory Diseases
Abdominal Organ Transplant
Kidney Transplant

Most of the research groups that make up the Chronic Diseases and Transplantation Area are consolidated groups with a notable and constant scientific production over the years. They have an outstanding capacity to attract resources, have a satisfactory presence in national and international research networks and play a leading role in several of these networks and in national and international projects.

General cooperative development objectives set in the area:

- Hiring of research personnel. Participation in applications for predoctoral and postdoctoral contracts: > 8/5 years. Degree of achievement: medium.
- Recruitment of research personnel. Obtaining/success in calls for proposals: > 3/5 years. Degree of achievement: medium.
- Research projects. Participation in the application for calls for competitive funding projects requested by 2 or more groups in the area: > 6/5 years. Degree of achievement: medium.
- Research projects. Successful completion of calls for competitive funding projects requested by 2 or more groups in the area: > 4/5 years. Degree of achievement: medium.
- Infrastructure acquired. Support in the acquisition of large infrastructures of common use for the group or for the whole institute. Indicator: at least 1 equipment request/year. Degree of achievement: medium.
- Scientific area meetings held: > 2/1 year. Degree of achievement: medium.
- No. of new intra-area collaborative research lines: 3/5 years. Degree of achievement: low.
- Articles signed by 2 or more groups in the area: > 15/5 years. Degree of achievement: high.
- Articles in category Q1-Q2 signed by 2 or more groups in the area: > 6/5 years. Degree of achievement: high.
- Doctoral theses co-directed by members of different groups in the area: > 2/5 years. Degree of achievement: low.
- No. of TFG and TFM co-directed among several groups: > 4/5 years. Degree of achievement: medium.
- Patents or other transfer results: > 3/5 years. Degree of achievement: low.

List of the 5 most relevant publications of the Chronic Diseases and Transplantation Area in 2023

The following are the 5 most relevant publications in the Cancer Area selected on the basis of original articles led by researchers in the area, published in quartile 1 of their thematic category in JCR and most frequently cited:

1. Rubio Chacón, C; Mateos Rodríguez, A; Neria Serrano, F; Del Rio Gallegos, F; **Andrés Belmonte, A.** Influence of donor capnometry on renal graft evolution in uncontrolled donation after circulatory death. *Resuscitation.* 2023. 189. 109863. Article.
2. **Diaz Del Cerro, E; de Toda, IM; Félix, J;** Baca, A; **de la Fuente, M.** Components of the Glutathione Cycle as Markers of Biological Age: An Approach to Clinical Application in Aging. *Antioxidants.* 2023. 12. (8): 1529. Article.
3. de la Sota Montero, R; **Corral Blanco, M; Aguado Agudo, M; Revuelta Salgado, F; García Lujan, R; Granda Orive, JID.** Primary Tracheal Small Cell Carcinoma: A Diagnostic Challenge. *Arch. Bronconeumol.* 2023. 59. (11): p. 752-753. Article.
4. Díez Sanmartín, C; Cabezuolo, AS; **Belmonte, AA.** A new approach to predicting mortality in dialysis patients using sociodemographic features based on artificial intelligence. *Artif. Intell. Med.* 2023. 136. p. 102478-102478. Article.
5. **Caravaca Fontán, F;** Stevens, K; Padrón, M; Huerta, A; Montomoli, M; Villa, J; González, F; **Gutiérrez, E; Praga, M.** et al. Sodium-glucose cotransporter 2 inhibition in primary and secondary glomerulonephritis. *Nephrol Dial Transplant.* 2023. Article.

Respiratory Diseases

CENTER: Hospital Universitario 12 de Octubre (HU12O).

GROUP LEADER: Álvarez Martínez, Carlos José (R4).

Alonso Moralejo, Rodrigo - Doctoral researcher (R2).
Arias, Eva María - Senior Clinical Researcher.
Benavides Mañas, Pedro Daniel - Postdoctoral researcher (R2).
Corral Blanco, Marta - Predoctoral researcher (R1).
De Granda Orive, José Ignacio - Doctoral researcher (R4).
De Pablo Gafas, Alicia Julia - Senior Clinical Researcher.
Diab Cáceres, Layla - Doctoral researcher (R2).
Díaz Cambriles, María Trinidad - Senior Clinical Researcher.
Díaz Campos, Rocío Magdalena - Doctoral researcher (R3).
Díaz-Hellín Gude, Vicente - Doctoral researcher (R3).
Gámez García, Antonio Pablo - Doctoral researcher (R4).
García García, Rocío - Junior clinical researcher..

García Lujan, Ricardo - Doctoral researcher (R4).
Gómez López, María Antolina - Researcher.
Hernández Voth, Ana Rosario - Junior clinical researcher.
Hernando Sanz, Ascensión - Doctoral researcher (R3).
Marrón Fernández, Carmen - Doctoral researcher (R3).
Padilla Bernáldez, Marta - Support nurse.
Pérez González, Virginia Luz - Postdoctoral researcher (R2).
Pérez Rojo, Raquel - Senior Clinical Researcher
Quezada Loaiza, Andrés - Postdoctoral researcher (R2).
Roca Noval, Ana - Junior clinical researcher.
Sayas Catalán, Javier - Principal investigator (PI) (R4).
Villena Garrido, María Victoria - Principal investigator (PI) (R4).

ACTIVE RESEARCH PROJECTS

Type of funding	Funding body	No. of projects
Competitive	EIT Health	1
No competitive	Various	2
Total		3

- **Title:** APP-NEA.
Principal investigator: Díaz Cambriles, María Trinidad.
Funding body: EIT Health.
Start date: 01/08/2023.
End date: 31/10/2025.
- **Title:** Efectividad de la vacunación antigripal y antineumocócica para prevenir la hospitalización en personas menores de 65 años que presentan condiciones de riesgo.
Principal investigator: Álvarez Martínez, Carlos José.
Funding body: Universitat de Barcelona.
Start date: 21/10/2020.
End date: 31/12/2022; extended to 30/06/2023.

- **Title:** Evaluación de la efectividad de un programa de atención integrada a pacientes con enfermedad pulmonar obstructiva crónica (EPOC) y agudizaciones frecuentes (programa EPOC Frágil) en la disminución de ingresos hospitalarios y visitas a urgencias.
Principal investigator: Álvarez Martínez, Carlos José.
Funding body: OXIMESA, S.L.
Start date: 05/05/2021.
End date: 04/05/2024.

OTHER ACTIVE PROJECTS OF THE RESEARCH GROUP NOT MANAGED BY THE FUNDACIÓN PARA LA INVESTIGACIÓN BIOMÉDICA DEL HOSPITAL 12 DE OCTUBRE (FIBH12O)

- **Title:** Prevalencia de enfermedad de Pompe de inicio tardío en pacientes con alteración respiratoria neuromuscular.
Project No.: Estudio POMPENYOL.
Principal investigator: Hernández Voth, Ana.
- **Title:** Impacto de la autocorrección de la limitación al flujo respiratorio durante la ventilación no invasiva en la actividad física en pacientes con EPOC.
Principal investigator: Javier Sayas Catalán.
- **Title:** COHERENT - COPD The clinical outcomes, healthcare resource utilization, and related costs in patients with COPD Study.
Project No.: Código de protocolo: D5980R00040. Código de la fundación: 21/304.
Principal investigator: Álvarez Martínez, Carlos José.
Funding body: Fundación para la Investigación Biomédica Hospital 12 de Octubre y Astra-Zeneca.
- **Title:** Pathway Analytics in COPD: Improving clinical practice and COPD patients outcomes in Spain.
Project No.: PYCO Study.
Principal investigator: Álvarez Martínez, Carlos José.
- **Title:** Registro español de pacientes con apnea del sueño y somnolencia diurna. Un estudio multicéntrico del Spanish Sleep Network.
Project No.: HYPNOSAS.
Principal investigator: Roncero Lázaro, Alejandra.
Coordinator in the IG: Eva María Arias Arias.
- **Title:** Ensayo aleatorizado controlado de no inferioridad para el análisis coste-eficacia y respuesta condicionada al efecto de los dispositivos posturales Asset. en la apnea obstructiva del sueño postural.
Project No.: PAVLOV.
Principal investigator: Cano, Irene.
Coordinator in the IG: Díaz Cambriles, M.ª Trinidad.

- **Title:** Evaluación clínica de Apneal®, un dispositivo médico basado en smartphone, para el diagnóstico de la apnea del sueño: un estudio comparativo de intervención multicéntrico en individuos con indicación de polisomnografía.
Project No.: EASY.
Principal investigator: Frija-Masson, Justine (MCU-PH, Hospital Bichat AP-HP).
Coordinator in the IG: Díaz Cambriles, M.ª Trinidad.
- **Title:** Fibrosis quística del adulto: comorbilidades de una enfermedad crónica y sus factores pronósticos.
Participating IG researcher: Diab Cáceres, Layla.
- **Title:** Registro Nacional de Antibióticos Inhalados
Project No.: REPAIR
Participating IG researcher: Diab Cáceres, Layla.
- **Title:** Embarazo y fibrosis quística.
Participating IG researcher: Diab Cáceres, Layla.
- **Title:** Ensayo clínico de eficacia y seguridad de la combinación de profilaxis de duración reducida seguida de profilaxis inmunoguiada en receptores de trasplante pulmonar.
Principal entity: Fundación de Investigación Biomédica de Córdoba
Participating IG researcher: de Pablo Gafas, Alicia and Alonso Moralejo, Rodrigo.
Start date: 08/09/2019.
End date: 08/02/2023.
- **Title:** Estudio observacional, multicéntrico y comparativo de uso de ribavirina y esteroides versus terapia de soporte de una cohorte de trasplantados pulmonares con infección por virus respiratorio sincitial o metaneumovirus humano.
Principal investigator: Alonso Moralejo, Rodrigo.
Participating IG researcher: de Pablo Gafas, Alicia; Pérez, Virginia and Quezada Lozaina, Andrés.
Funding body: Granted by Fundación Neumomadrid.
Start date: 05/02/2020.
End date: 31/12/2024.

- **Title:** Viabilidad, satisfacción y experiencia de uso de la salud móvil en el manejo integral del paciente trasplantado de órgano sólido a nivel nacional.
Project No.: CÓDIGO FEF-EMMA-TOS-2023.
Participating IG researcher: Siria Pablos Bravo, farmacéutica adjunta del Servicio de Farmacia del Hospital Universitario 12 de Octubre, y colaboradora Alicia de Pablo, del Servicio de Neumología del H12O.
Funding body: promoted by the Fundación Española de Farmacia Hospitalaria (FEFH).
- **Title:** Experiencia con Isavuconazol en receptores de trasplante pulmonar con aislamiento de Aspergillus en muestras del tracto respiratorio.
Principal investigator: Sequeira Lopes da Silva, José Tiago.
Participating IG researcher: Rodrigo Alonso Moralejo, Virginia Pérez, Andrés Quezada Lozaina y Alicia Julia de Pablo Gafas.
Start date: 18/10/2018.
End date: Activo.
- **Title:** Estudio observacional de pronóstico del trasplante pulmonar en EPID según acortamientos de telómeros y pronóstico en TP.
Principal investigator: Alonso Moralejo, Rodrigo.
Funding body: Awarded a grant by the Chiesi laboratory with the 2.ª BECA IMPULSO in 2023.
Start date: 2022.
End date: Activo.

PUBLICATIONS*

Type of Document	No. of document	Σ IF (JCR 2022)
Articles	13	113,508
Editorials	3	24,6
Total	16	139,108
Letters	3	28,4
Total	19	167,508

Articles

- Bobolea, I; Guillén Vera, D; De las Cuevas Moreno, N; García Granero, D; Loli Ausejo, D; Melero Moreno, C. Molecular T2 asthma phenotypes are stable but heterogeneous: the usefulness of periostin for endotyping. *Front. Allergy.* 2023. 4. 1205115. Article.
- Botana Rial, M; Pérez Pallarés, J; Cases Viedma, E; López González, FJ; Porcel, JM; Rodríguez, M; Romero, B et al. Diagnosis and Treatment of Pleural Effusion. Recommendations of the Spanish Society of Pulmonology and Thoracic Surgery. *Update 2022. Arch. Bronconeumol.* 2023. 59. (1): p. 27-35. Article.
- Cáceres, LD; de Lucas, EZ. Cystic fibrosis: Epidemiology, clinical manifestations, diagnosis and treatment. *Med Clin (Barc).* 2023. 161. (9): p. 389-396. Article.
- Corral Blanco, M; Campos, RMD; Peláez, A; Moreno, CM. Beyond forced exhalation: impulse oscillometry as a promising tool for bronchial hyperresponsiveness evaluation. *J. Asthma.* 2023. Article.
- Cubillos Zapata, C; Martínez García, MA; Díaz García, E; García Tovar, S; Campos Rodríguez, F; Sánchez Torre, M; Nagore, E et al. Obstructive sleep apnoea is related to melanoma aggressiveness

* Publications: only "Article", "Review", "Editorial Material" and "Letter" have been selected in "Document Type" of ISI Web Of Knowledge. The breakdown of publications includes some not included in the 2022 JCR, which are therefore not taken into account in the final count shown in the table, since they do not have IF.

- through paraspeckle protein-1 upregulation. *Eur. Resp. J.* 2023. 61. (2): 2200707. Article.
- de la Sota Montero, R; Corral Blanco, M; Aguado Agudo, M; Revuelta Salgado, F; García Lujan, R; Granda Orive, JID. Primary Tracheal Small Cell Carcinoma: A Diagnostic Challenge. *Arch. Bronconeumol.* 2023. 59. (11): p. 752-753. Article.
 - Girón, RM; Carrasco Hernández, L; Peláez, A; Gómez Bonilla, A; Symkevi working, group; Layla Diab, Cáceres; Teresa Tejedor Ortiz, M.^a. Influence on sputum microbiology with CFTR modulator (tezacaftor-ivacaftor) in adult patients with cystic fibrosis: Multicenter study. *Enferm Infecc Microbiol Clin (Engl Ed).* 2023. 41. (3): p. 193-195. Article.
 - Gómez Olivas, JD; Campos Rodriguez, F; Nagore, E; Martorell, A; García Rio, F; Cubillos, C; Hernandez, L et al. 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): p. 1551-1559. Article.
 - González Cuadrado, C; Caro Espada, PJ; Chivite Lacaba, M; Utrero Rico, A; Lozano Yuste, C; Gutierrez Solis, E; Morales, E et al. Hemodialysis-Associated Immune Dysregulation in SARS-CoV-2-Infected End-Stage Renal Disease Patients. *Int. J. Mol. Sci.* 2023. 24. (2). Article.
 - Hernández, LC; Moreno, RMG; Cartagena, MNB; Peláez, A; Sole, A; Fernández, AA; Montiel, AF et al. Experience With Elexacaftor/Tezacaftor/Ivacaftor in Patients With Cystic Fibrosis and Advanced Disease. *Arch. Bronconeumol.* 2023. 59. (9): p. 556-565. Article.
 - Jiménez Ruiz, CA; Pitti Pérez, R; de Granda Orive, JI; Pastor Esplá, E; Solano Reina, S; Gorordo Unzueta, I; Mirambeaux Villalona, R et al. Prevalence, Knowledge and Perceptions of Smoking and

Reviews

- Crimi, C; Murphy, P; Patout, M; Sayas, J; Winck, JC. Lessons from COVID-19 in the management of acute respiratory failure. *Breathe.* 2023. 19. (1): 230035. Review.

Editorials

- Luna López, R; de Pablo Gafas, A; Escribano Subías, P; López Gude, MJ; Real, MI; Gámez, P. Double lung transplantation in pulmonary arterial hypertension associated with congenital heart disease. *Rev. Esp. Cardiol.* 2023. 76. (2): p. 132-134. Editorial Material.

Letters

- de Granda Orive, JI; Pascual Lledó, JF; Asensio Sánchez, S; Solano Reina, S; García Rueda, M; Martínez Muñoz, MA; Lázaro Asegurado, L et al. Do Smokers Who Only Attend the First Appointment of a Smoking Cessation Consultation Have Distinguishing Characteristics? *Arch. Bronconeumol.* 2023. 59. (10): p. 678-680. Letter.
- Pérez de Llano, L; Marina Malanda, N; Urrutia, I; Martínez Moragón, E; Gullón Blanco, JA; Díaz Campos, R; Esquerre, MM et al. Factors associated with suboptimal response to monoclonal antibodies in severe asthma. *Allergy.* 2023. 78. (8): p. 2305-2310. Letter.

- Tobacco Products and Vape Among SEPAR Members. *Open Respir Arch.* 2023. 5. (4): p. 100260-100260. Article.
- Marrugal, A; Ferrer, I; Quintanal Villalonga, A; Ojeda, L; Pastor, MD; García Lujan, R; Carnero, A et al. Inhibition of HSP90 in Driver Oncogene-Defined Lung Adenocarcinoma Cell Lines: Key Proteins Underpinning Therapeutic Efficacy. *Int. J. Mol. Sci.* 2023. 24. (18): 13830. Article.
- Rábade Castedo, C; de Granda Orive, JI; Riesco Miranda, JA; De Higes Martínez, E; Ramos Pinedo, A; Cabrera César, E; Miñana, JSC et al. Clinical Practice Guideline of Spanish Society of Pneumology and Thoracic Surgery (SEPAR) on Pharmacological Treatment of Tobacco Dependence 2023. *Arch. Bronconeumol.* 2023. 59. (10): p. 651-661. Article.
- Roldán Sevilla, A; Díaz Cambriles, T; Villena Garrido, MV; Fontenla, A; Santos Sanchez, AI; Villagraz Tecedor, L; Asensio Nogueira, J et al. Seasonal influence on sleep apnoea recorded daily by pacemakers. *Sleep Breath.* 2023. 27. (6): p. 2181-2189. Article.
- Torres Durán, M; López Campos, JL; Rubio, MC; Montero Martínez, C; Carrera, AP; Rodríguez, RA; Barrecheguren, M et al. Recommendations for the Implementation of the Self-Administration of Alpha-1 Antitrypsin. *Int. J. Chronic Obstr. Pulm. Dis.* 2023. 18. p. 1691-1700. Article.
- Zamarrón, E; Jaureguizar, A; García Sánchez, A; Díaz Cambriles, T; Alonso Fernández, A; Lores, V; Mediano, O et al. Continuous Positive Airway Pressure Effect on Albuminuria Progression in Patients with Obstructive Sleep Apnea and Diabetic Kidney Disease A Randomized Clinical Trial. *Am. J. Respir. Crit. Care Med.* 2023. 207. (6): p. 757-767. Article.

- Jiménez Ruiz, CA; de Granda Orive, JI; Rabade Castedo, C. Electronic Nicotine Delivery Systems: The New Threat. *Arch. Bronconeumol.* 2023. 59. (10): p. 623-624. Editorial Material.
- de Granda Orive, JI; Martínez García, MA. What have we learnt from Covid-19 Pandemia? Looking to the future. *Pulmonology.* 2023. 29. (2): p. 108-110. Editorial Material.

- Martínez Besteiro, E; Molina, M; Gaeta, AM; Aburto, M; Casanova, A; Bobillo, JR; Orozco, S et al. Impact of COVID-19 Infection on Patients with Preexisting Interstitial Lung Disease: A Spanish Multicentre Study. *Arch. Bronconeumol.* 2023. 59. (4): p. 273-276. Letter.

PRIZES AND AWARDS

- Young Researcher. Award for the project "Etiopathogenic mechanisms of weight loss in COPD patients" in which the researcher Layla Diab Cáceres participates.

Ageing, Neuroimmunology, and Nutrition

CENTER: Universidad Complutense de Madrid (UCM).

GROUP LEADERS: Carracedo Añón, Julia M.^a (R4) and Martínez de Toda Cabeza, Irene (R2).

Ceprián Costoso, Noemí - Predoctoral researcher (R1).
Cruces González, Julia - Researcher.
Díaz del Cerro, Estefanía - Postdoctoral researcher (R2).
Félix Escalera, Judith - Predoctoral researcher (R1).
Garrido Tarrio, Antonio - Postdoctoral researcher (R2).
González Sánchez, Mónica - Postdoctoral researcher (R3).

Guerra Pérez, Natalia - Doctoral researcher (R3).
Hunsche, Caroline - Predoctoral researcher (R1).
Kobayashi García, Hikaru - Postdoctoral researcher (R2).
Valera Arévalo, Gemma - Predoctoral researcher (R1).
Vida Rueda, María del Carmen - Researcher.

ACTIVE RESEARCH PROJECTS

Type of funding	Funding body	No. of projects
Competitive	ISCIII	1
Total		1

- **Title:** Predicting kidney disease: risk-based in the oxi-inflamm-aging parameters.
Principal investigator: Carracedo Añón, Julia M.^a.
Project No.: PI20/01321.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2021.
End date: 31/12/2023; extended to 30/06/2025.

OTHER ACTIVE PROJECTS OF THE RESEARCH GROUP NOT MANAGED BY THE FUNDACIÓN PARA LA INVESTIGACIÓN BIOMÉDICA DEL HOSPITAL 12 DE OCTUBRE (FIBH12O)

- **Title:** Efectos de la suplementación con AM3, poliaminas y flavonoides en la respuesta inmunitaria y la edad biológica en el envejecimiento humano.
Project No.:
Principal investigator: de la Fuente del Rey, Mónica.
Funding body: Artículo 83 UCM.
Start date: 26/01/2022.
End date: 26/01/2023, extended until the end of 2023.
- **Title:** Novel Testing Strategies for Endocrine Disruptors in the Context of Developmental NeuroToxicity.
Principal investigator: Tresguerres, Jesús A. F.
IG researcher participating in the project: de la Fuente, Mónica and Félix Escalera, Judith.
Project No.: ENDpoiNTs 825759.
Funding body: Comunidad Europea. H2020.
Start date: 01/01/2019.
End date: 31/12/2023.
- **Title:** Efecto del consumo de aditivos alimentarios en el microbioma intestinal humano.
Principal investigator: Requena, Teresa.
IG researcher participating in the project: Mónica de la Fuente, Judith Félix Escalera and Estefanía Díaz del Cerro.
Project No.: PID2019-106071RB-100.
Funding body: Ministerio de Ciencia e Innovación.
Start date: 01/01/2020.
End date: 31/12/2022, extended to 31/12/2023.
- **Title:** Microbioma intestinal en la evaluación de riesgos aditivos alimentarios sulfonados: modelos *in vivo*.
Principal investigator: Martínez de Toda Cabeza, Irene.
IG researcher participating in the project: Mónica de la Fuente, Mónica González Sánchez, Marcela Rosato and Judith Félix Escalera.
Project No.: PID2022-136874OA-C32.
Funding body: Agencia Estatal de Investigación.
Start date: 01/09/2023.
End date: 01/09/2026.
- **Title:** Predicción de la enfermedad renal: Cálculo de riesgo basado en los estados oxidativo e inflamatorio asociados al envejecimiento. Predicting of kidney disease: Risk-based in the oxy-inflammaging parameters.
Principal investigator: Carracedo Añón, Julia.
Project No.: PI20/01321.
Funding body: Instituto de Salud Carlos III.
Start date: 01/01/2021.
End date: 31/12/2023.
- **Title:** Alimentos para nutrición personalizada obtenidos mediante producción de bioAsset. bacterianos o por actividad bacteriana sobre productos lácteos: propiedades funcionales.
Principal investigator: Ruas Madiedo, Patricia.
IG researcher participating in the project: de la Fuente, Mónica.
Project No.: PID2021-127320B-I00.
Funding body: Ministerio de Ciencia e Innovación.
Start date: 01/09/2022.
End date: 31/08/2025.

- **Title:** Utilización de probióticos para un envejecimiento saludable y rejuvenecer la edad biológica.
Principal investigator: de la Fuente, Mónica.
Project No.: Estudio piloto.
Funding body: Artículo 83 UCM.
Start date: 2023.
End date: 2024.

PUBLICATIONS*

Type of Document	No. of document	Σ IF (JCR 2022)
Articles	11	55.624
Editorials	1	5.2
Total	12	60.824

Articles

- Baeta Corral, R; De la Fuente, M; Giménez Lloret, L. Sex-dependent worsening of NMDA-induced responses, anxiety, hypercortisolemia, and organometry of early peripheral immunoendocrine impairment in adult 3xTg-AD mice and their long-lasting ontogenic modulation by neonatal handling. *Behav. Brain Res.* 2023. 438. p. 114189-114189. Article.
- Ceprian, N; Garrido, A; De la Fuente, M. Mejoría de la inmunidad y la esperanza de vida en ratones maduros, genéticamente deficientes en la síntesis de catecolaminas, tras convivir con controles durante dos meses. *Rev Esp Geriatr Gerontol.* 2023. 58. (1): p. 15-21. Article.
- Díaz Del Cerro, E; De la Fuente, M. Positive effects of pulsed electromagnetic fields on behavior, immune function, and oxidative and inflammatory state in old mice. *Electromagn. Biol. Med.* 2023. Article.
- Díaz Del Cerro, E; de Toda, IM; Félix, J; Baca, A; de la Fuente, M. Components of the Glutathione Cycle as Markers of Biological Age: An Approach to Clinical Application in Aging. *Antioxidants.* 2023. 12. (8): 1529. Article.
- Díaz Del Cerro, E; Félix, J; De la Fuente, M. El tacto, un sentido crucial en las interacciones sociales para mejorar la homeostasis en el envejecimiento y promover una longevidad saludable. *Rev Esp Geriatr Gerontol.* 2023. 58. (3): p. 161-166. Article.
- Díaz Del Cerro, E; Félix, J; De la Fuente, M. Skin-to-Skin Contact: Crucial for Improving Behavior, Immunity, and Redox State after Short Cohabitation of Chronologically Old Mice and Prematurely Aging Mice with Adult Mice. *Int J Mol Sci.* 2023. 24. (5): 4680. Article.
- Félix, J; Garrido, A; de la Fuente, M. In Response to a Punctual Stress Male and Female Tyrosine Hydroxylase Haploinsufficient Mice Show a Deteriorated Behavior, Immunity, and Redox State. *Int J Mol Sci.* 2023. 24. (8): 7335. Article.
- Figuer, A; Alique, M; Valera, G; Serroukh, N; Ceprián, N; de Sequera, P; Morales, E et al. New mechanisms involved in the development of cardiovascular disease in chronic kidney disease. *Nefrología.* 2023. 43. (1): p. 63-80. Article.
- Martínez Alonso, E; Escobar Peso, A; Guerra Pérez, N; Roca, M; Masjuan, J; Alcázar, A. Dihydropyrimidinase-Related Protein 2 Is a New Partner in the Binding between 4E-BP2 and eIF4E Related to Neuronal Death after Cerebral Ischemia. *Int J Mol Sci.* 2023. 24. (9): 8246. Article.
- Martínez de Toda, I; González Sánchez, M; Díaz Del Cerro, E; Valera, G; Carracedo, J; Guerra Pérez, N. Sex differences in markers of oxidation and inflammation. Implications for ageing. *Mech. Ageing Dev.* 2023. 211. p. 111797-111797. Article.
- Sol, J; Obis, È; Mota Martorell, N; Pradas, I; Galo Licon, JD; Martín Garí, M; Fernández Bernal, A et al. Plasma acylcarnitines and gut-derived aromatic amino acids as sex-specific hub metabolites of the human aging metabolome. *Aging Cell.* 2023. 22. (6): e13821. Article.
- Suarez, LM; Díaz Del Cerro, E; Felix, J; Gonzalez Sanchez, M; Ceprian, N; Guerra Perez, N; Novelle, MG et al. Sex differences in neuroimmunoendocrine communication. Involvement on longevity. *Mech. Ageing Dev.* 2023. 211. p. 111798-111798. Article.
- Valera, G; Figuer, A; Caro, J; Yuste, C; Morales, E; Ceprián, N; Bodega, G et al. Plasma glyocalyx pattern: a mirror of endothelial damage in chronic kidney disease. *Clin. Kidney J.* 2023. 16. (8): p. 1278-1287. Article.

Editorials

- Álvarez Calatayud, G; de la Fuente del Rey, M; Requena Rolanía, T; Sánchez-Valverde Visus, F. La microbiota como eje del binomio salud/enfermedad. *An Microbiota Probióticos Prebióticos.* 2023. 4. (1): p. 1-2. Editorial Material.
- Garrido, A; De la Fuente, M. Could social relationships be key to reaching healthy longevity? *Aging (Albany NY).* 2023. 15. (12): p. 5238-5239. Editorial Material.

* Publications: only "Article", "Review", "Editorial Material" and "Letter" have been selected in "Document Type" of ISI Web Of Knowledge. The breakdown of publications includes some not included in the 2022 JCR, which are therefore not taken into account in the final count shown in the table, since they do not have IF.

END MASTER INVESTIGATIONS DIRECTED ON THE GROUP

- **Student:** Víctor Cabanillas García.
Title: Relevancia del desequilibrio REDOX en la alteración nutricional de los pacientes con enfermedad renal crónica.
Director: Julia Carracedo Añón.
Master: Biología Sanitaria.
University: Universidad Complutense de Madrid.
- **Student:** M.ª Verónica Romero Ferreiro.
Title: Uso de probióticos en el tratamiento de la esquizofrenia: Una revisión sistemática con meta-análisis.
Directors: Mónica de la Fuente and Estefanía Díaz del Cerro.
Master: Microbiota, Probióticos y Prebióticos.
University: Sociedad Española de Microbiota, Probióticos y Prebióticos (SEMiPyP) and Universidad Europea de Madrid.
- **Student:** Carolina Vázquez Rodríguez.
Title: Revisión sistemática de la influencia de los probióticos en la depresión y la ansiedad durante el envejecimiento.
Directors: Mónica de la Fuente and Estefanía Díaz del Cerro.
Master: Microbiota, Probióticos y Prebióticos.
University: Sociedad Española de Microbiota, Probióticos y Prebióticos (SEMiPyP) and Universidad Europea de Madrid.
- **Student:** Elena Fernández Orcajada.
Title: Algunas recomendaciones de probióticos para personas mayores desde la oficina de farmacia.
Director: Mónica de la Fuente.
Master: Microbiota, Probióticos y Prebióticos.
University: Sociedad Española de Microbiota, Probióticos y Prebióticos (SEMiPyP) and Universidad Europea de Madrid.

END GRADUATED INVESTIGATIONS DIRECTED ON THE GROUP

- **Student:** Gabriela Ortiz Díaz.
Title: Impacto de las modalidades de tratamiento sustitutivo y de la fragilidad sobre el fenotipo secretor senescente en pacientes con enfermedad renal crónica.
Director: Julia Carracedo Añón.
Degree: Biología.
University: Universidad Complutense de Madrid.
First runner-up of the award for the best TFG announced by the Colegio Oficial de Biólogos de Madrid 2023.
- **Student:** María Elena Ortiz Salinas.
Title: Efectos en la conducta y estado oxidativo cerebral de ratones viejos y prematuramente envejecidos de una corta convivencia con ratones adultos.
Director: Mónica de la Fuente and Estefanía Díaz del Cerro.
Degree: Biología.
University: Universidad Complutense de Madrid.
- **Student:** Adrián Rasero Amor.
Title: Tipificación de la microbiota intestinal en pacientes HIV+.
Director: Natalia Guerra Pérez.
Degree: Biología.
University: Universidad Complutense de Madrid.

PRIZES AND AWARDS

- Award to the best Flash Talk communication at the XLIII Congress of the Spanish Society of Genetics for the intervention entitled "Circulating cell free DNA (ccfDNA) as a biomarker of biological age in humans", presented in Valencia, Spain, June 21-23, 2023. Authors: López-López D., Díaz-Del Cerro E., Félix J., de la Fuente M., González-Sánchez M.
- Salgado Alba Award to the best poster communication for the paper entitled: "How is my mouse aging? The "Immunity clock" and "Redox clock" models to determine its biological age and longevity". 63rd Congress of the Spanish Society of Geriatrics and Gerontology. Pamplona, June 7-9, 2023. Authors: Díaz-Del Cerro E., Martínez de Toda I., Gil-Agudo F., De la Fuente M.
- Best Communication Award of the Cardiovascular Physiology Symposium to Gemma Valera, Jara Caro, María del Mar Rodríguez, David Serrano, Matilde Alique, Andrea Figuer, Víctor Cabanillas, Rafael Ramírez, Enrique Morales and Julia Carracedo. Microvesicles and Oxidative Stress as Biomarkers of Cardiovascular Damage in Chronic Kidney Disease. II Congress of Young Researchers in Physiology (Madrid). Faculty of Medicine, Department of Physiology, Complutense University of Madrid. Spanish Society of Physiological Sciences. Held on October 26-27, 2023. National Congress.
- Best Communication Award - Eposter to P. Muñoz Ramos, J. Carracedo, E. Ortega, G. Valera, M. Puerta, R. Lucena, V. Cabanillas, M. Rodríguez, R. Ramírez, P. de Sequera for the paper "Effect of different magnesium concentrations in dialysis fluid" at the 53rd National Congress of the Spanish Society of Nephrology held in Palma de Mallorca from 11 to 13 November 2023. Proceedings published in Nefrología, 43 Suppl: 1. ISSN: 0211-6995. 2023. National.
- III Edition of the UCM-Santander Incentives Program, Modality I. Incentives for Ideas and Business Start-Ups. BIOMARKAGE Project. 15.000 € Mónica de la Fuente, Irene Martínez de Toda Cabeza, Estefanía Díaz del Cerro, Judith Escalera and Mónica González Sánchez.
- First runner-up of the prize for the best TFG awarded by the Colegio Oficial de Biólogos de Madrid 2023 to Gabriela Ortiz Díaz for the work "Impact of substitutive treatment modalities and frailty on the senescent secretory phenotype in patients with chronic kidney disease". Director: Julia Carracedo, Complutense University of Madrid. Biology.

Tissue Engineering

CENTER: Hospital Universitario 12 de Octubre (HU12O).

GROUP LEADER: Serrano Hernández, Antonio (R4).

Abad Gran, Magdalena - Predoctoral researcher (R1).
Cabrera Marante, Óscar - Researcher.
Díaz Simon, Raquel - Predoctoral researcher (R1).
García Jimenez, Sandra - Predoctoral researcher (R1).
Garcinuño Serrano, Sara - Senior Researcher.
Gil Etayo, Francisco Javier - Predoctoral researcher (R1).

Jimenez Almonacid, Justino - Predoctoral researcher (R1).
Martínez Chamorro, María Elena - Postdoctoral researcher (R2).
Pleguezuelo Garrote, Daniel Enrique - Postdoctoral researcher (R2).
Serrano Blanco, Manuel - Postdoctoral researcher (R2).
Villar Ruiz, Olga Patricia - Clinical researcher.

ACTIVE RESEARCH PROJECTS

Type of funding	Funding body	No. of projects
Competitive	Fundación de Investigación Médica Mutua Madrileña	1
Competitive	ISCIII	1
Total		2

- **Title:** Improving diagnostic capacity and knowledge of pathogenesis of primary antiphospholipid syndrome through proteomics and transcriptomics.
Principal investigator: Serrano Hernández, Antonio.
Project No.: PI20/01361.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2021.
End date: 31/12/2023; extended to 30/06/2025.
- **Title:** Remodelación inmunomediada de la pared vascular y tejidos asociados como principal responsable del estado protrombótico asociado a COVID-19: síndrome autoinmune de coagulación vascular localizada.
Principal investigator: Serrano Hernández, Antonio.
Funding body: Fundación de Investigación Médica Mutua Madrileña (FMM).
Start date: 06/07/2021.
End date: 05/07/2024.

PUBLICATIONS*

Type of Document	No. of document	Σ IF (JCR 2022)
Articles	6	45.808
Total	6	45.808
Letters	1	9.1
Total	7	54.908

Articles

- Cabrera Marante, O; Garcinuño, S; Pleguezuelo, DE; Gil Etayo, FJ; Tenica, I; de Frías, ER; Zafra, D et al. Quantification of Antiphospholipid Antibodies: The Importance of Using an Appropriate Methodology for Each Clinical Profile. Int. J. Mol. Sci. 2023. 24. (24): 17373. Article.
- Chamorro, EM; Sanz, LI; Barrio, AB; Fernández, MC; Nacenta, SB. Patients With Severe Polytrauma: Management And Imaging Protocols. Radiología. 2023. 65. p. 11-20. Article.
- González Cuadrado, C; Caro Espada, PJ; Chivite Lacaba, M; Utrero Rico, A; Lozano Yuste, C; Gutierrez Solis, E; Morales, E et al. Hemodialysis-Associated Immune Dysregulation in SARS-CoV-2-Infected End-Stage Renal Disease Patients. Int J Mol Sci. 2023. 24. (2). Article.
- Lopez Nevado, M; Ortiz Martin, J; Serrano, C; Perez Saez, MA; Lopez Lorenzo, JL; Gil Etayo, FJ; Rodriguez Frias, E et al. Novel Germline TET2 Mutations in Two Unrelated Patients with Autoimmune Lymphoproliferative Syndrome-Like Phenotype and Hematologic Malignancy. J. Clin. Immunol. 2023. 43. (1): p. 165-180. Article.
- López Nevado, M; Sevilla, J; Almendro Vázquez, P; Gil Etayo, FJ; Garcinuño, S; Serrano Hernández, A; Paz Artal, E et al. Inborn Error of STAT2-Dependent IFN-I Immunity in a Patient Presented with Hemophagocytic Lymphohistiocytosis and Multisystem Inflammatory Syndrome in Children. J. Clin. Immunol. 2023. 43. (6): p. 1278-1288. Article.

* Publications: only "Article", "Review", "Editorial Material" and "Letter" have been selected in "Document Type" of ISI Web Of Knowledge. The breakdown of publications includes some not included in the 2022 JCR, which are therefore not taken into account in the final count shown in the table, since they do not have IF.

- Matuozzo, D; Talouarn, E; Marchal, A; Zhang, P; Manry, J; Seeleuthner, Y; Zhang, Y et al. Rare predicted loss-of-function variants of type I IFN immunity genes are associated with life-threatening COVID-19. *Genome Med.* 2023. 15. (1): 22. Article.
- Nacenta, SB; Sanz, LI; Lucas, RS; Depetris, MA; Chamorro, EM. Update On Acute Appendicitis: Typical And Untypical Findings. *Radiologia.* 2023. 65. p. 81-91. Article.
- Ramos Rincon, JM; Lopez Sampalo, A; Cobos Palacios, L; Ricci, M; Rubio Rivas, M; Díaz Simón, R; Martín Escalante, MD et al. Nosocomial COVID-19: A Nationwide Spanish Study. *Gerontology.* 2023. 69. (6): p. 671-683. Article.
- Zhou, ZHC; Calvo, GA; Chamorro, EM; Sanz, LI; De Lucas, RS; Nacenta, SB. Intestinal anisakiasis: CT imaging findings-a 10-year descriptive study in a single center. *Emerg. Radiol.* 2023. Article.

Editorials

- Chamorro, EM; Martínez, JMP. Urgencias"Presentation of the "Emergency Radiology Supplement". *Radiologia.* 2023. 65. p. 1-2. Editorial Material.
- Martínez Chamorro, E; Plasencia Martínez, JM. Presentation of the "Emergency Radiology Supplement". *Radiologia (Engl Ed).* 2023. 65 Suppl 1. S1-S2. Editorial Material.

Letters

- Arroyo Sánchez, D; Luczkowiak, J; Delgado, R; Cabrera Marante, O; Paz Artal, E. Immune Response Against SARS-CoV-2 Infection and Vaccination in a CD8a-Deficient Patient. *J. Clin. Immunol.* 2023. 43. (6): p. 1072-1074. Letter.

PATENTS

- **Title:** Inmunocomplejos artificiales y su uso como calibres en sistemas de detección de inmunocomplejos circulantes B2GP1-aB2GP1.
Number: P201830367.
Type: SPANISH patent.
Inventors: Antonio Serrano Hernández, Manuel Serrano Blanco, José Ángel Martínez Flores.
Owners: Fundación i+12 (100 %).
Priority Date: 12/04/2018.
Status: Granted (28/04/2020).

Bone Metabolism

CENTER: Hospital Universitario 12 de Octubre (HU12O).

GROUP LEADERS: Martínez Díaz-Guerra, Guillermo (R4) and León Sanz, Miguel (R4).

Allo Miguel, Gonzalo - Clinical researcher junior.
Calatayud Gutiérrez, María - Clinical researcher junior.
García Fernández, Elena - Clinical researcher.
Librizzi, María Soledad - Clinical researcher junior.
Maíz Jiménez, María Irene - Clinical researcher junior.

Mattei, Isabella - Clinical researcher junior.
Pérez-Olivares Martín, Laura - Clinical researcher junior.
Rodríguez Jiménez, Celestino - Clinical researcher.
Valero Zanuy, María Ángeles - Clinical researcher senior.

ACTIVE RESEARCH PROJECTS

Type of funding	Funding body	No. of projects
Competitive	Fundación Española de Investigación Ósea y del Metabolismo Mineral	1
No competitive	Various	3
Total		4

- **Title:** Efecto de la semaglutida (oral o subcutánea) sobre el remodelado óseo y la masa ósea, en pacientes con diabetes *mellitus* tipo 2.
Principal investigator: Martínez Díaz-Guerra, Guillermo.
Funding body: Fundación Española de Investigación Ósea y del Metabolismo Mineral.
Start date: 01/01/2023.
End date: 31/12/2023.
- **Title:** Impacto de la sarcopenia en pacientes con cáncer de cabeza y cuello sometidos a radioterapia.
Principal investigator: León Sanz, Miguel.
Funding body: ABBOTT LABORATORIES S.A.
Start date: 01/01/2019.
End date: 31/12/2019, extended to 31/12/2023.
- **Title:** Efectos de la inmunoterapia sobre el estado nutricional y el desarrollo de toxicidad en el paciente oncológico.
Principal investigator: León Sanz, Miguel.
Funding body: Fresenius Kabi España S.A.U.
Start date: 29/12/2020.
End date: 31/12/2021; extended to 31/12/2023.
- **Title:** Intervención nutricional en el paciente anciano con fractura de cadera.
Principal investigator: Maíz Jiménez, María Irene.
Funding body: Abbott Laboratories S.A.
Start date: 29/03/2022.
End date: 28/03/2023.

PUBLICATIONS*

Type of Document	No. of document	Σ IF (JCR 2022)
Articles	15	76.7
Total	15	76.78
Letters	1	1.9
Total	16	78.6

Articles

- Araujo Castro, M; Fano, MP; Peris, BP; Boillos, MG; Pascual Corrales, E; García Cano, AM; Ramírez, PP et al. 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.
- Araujo Castro, M; Ojeda, CM; Sanz, IG; Calatayud, M; Hanzu, F; Mora, M; Vicente, A et al. Genetic Study in Pheochromocytoma: Is It Possible to Stratify the Risk of Hereditary Pheochromocytoma? *Neuroendocrinology.* 2023. 113. (6): p. 657-666. Article.

* Publications: only "Article", "Review", "Editorial Material" and "Letter" have been selected in "Document Type" of ISI Web Of Knowledge. The breakdown of publications includes some not included in the 2022 JCR, which are therefore not taken into account in the final count shown in the table, since they do not have IF.

- Araujo Castro, M; Paredes, I; Pérez López, C; Feijoo, PG; Alvarez Escola, C; Calatayud, M; Lagares, A et al. 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): p. 250-258. Article.
- Araujo Castro, M; Sanz, IG; Ojeda, CM; Calatayud, M; Hanzu, F; Mora, M; Vicente, A et al. Differences in intraoperative and surgical outcomes between normotensive pheochromocytomas and sympathetic paragangliomas (PPGLs) and hypertensive PPGLs: results from the PHEO-RISK STUDY. *J. Endocrinol. Invest.* 2023. 46. (4): p. 805-814. Article.
- Araujo Castro, M; Sanz, IG; Ojeda, CM; Calatayud, M; Hanzu, FA; Mora, M; Delgado, AV et al. An Integrated CT and MRI Imaging Model to Differentiate between Adrenal Adenomas and Pheochromocytomas. *Cancers*. 2023. 15. (14): 3736. Article.
- Araujo Castro, M; Sanz, IG; Ojeda, CM; Hanzu, F; Mora, M; Vicente, A; Carrera, CB et al. Local recurrence and metastatic disease in pheochromocytomas and sympathetic paragangliomas. *Front. Endocrinol.* 2023. 14. 1279828. Article.
- Bischoff, SC; Ockenga, J; Eshraghian, A; Barazzoni, R; Busetto, L; Campmans Kuijpers, M; Cardinale, V et al. Practical guideline on obesity care in patients with gastrointestinal and liver diseases- Joint ESPEN/UEG guideline. *Clin. Nutr.* 2023. 42. (6): p. 987-1024. Article.
- Calsina, B; Piñeiro Yáñez, E; Martínez Montes, AM; Caleiras, E; Fernández Sanromán, A; Monteagudo, M; Torres Pérez, R et al. Genomic and immune landscape Of metastatic pheochromocytoma and paraganglioma. *Nat. Commun.* 2023. 14. (1): 1122. Article.
- Gil Ibanez, B; Tejerizo Garcia, A; Oliver, MR; Madariaga, A; Jimenez, MM; Garcia, AG; Lopez Gonzalez, G. Side effects screening and early intervention to impact in quality of life of patients with gynecological cancers (HALIS study). *Int. J. Gynecol. Cancer*. 2023. 33. (10): p. 1645-1648. Article.
- Huguete, I; Díaz Guerra, GM. Hypoparathyroidism and medium-chain Acyl-CoA dehydrogenase deficiency, an unusual association. *J. Pediatr. Endocrinol. Metab.* 2023. 36. (5): p. 505-507. Article.
- Leon Sanz, M; Linares, F; Gonzalo, M; Tapia, MJ; Maiz Jimenez, M; Aguado, MR; Lizán, L et al. Compliance with a high-protein and energy-dense oral nutritional supplement in patients with disease-related malnutrition: a randomized open-label crossover trial. *Front. Nutr.* 2023. 10. 1182445. Article.
- Marques Pamies, M; Gil, J; Valassi, E; Hernández, M; Biagetti, B; Giménez Palop, O; Martínez, S et al. Revisiting the usefulness of the short acute octreotide test to predict treatment outcomes in acromegaly. *Front. Endocrinol.* 2023. 14. 1269787. Article.
- Mellid, S; Gil, E; Letón, R; Caleiras, E; Honrado, E; Richter, S; Palacios, N et al. Co-occurrence of mutations in NF1 and other susceptibility genes in pheochromocytoma and paraganglioma. *Front. Endocrinol.* 2023. 13. p. 1070074-1070074. Article.
- Pironi, L; Jezerski, D; Sobocki, J; Lal, S; Vanuytsel, T; Theilla, M; Sasdelli, AS et al. COVID-19 infection in patients on long-term home parenteral nutrition for chronic intestinal failure. *Clin. Nutr. ESPEN*. 2023. 55. p. 212-220. Article.
- Ramirez, PP; Rojas Marcos, PM; Fano, MP; Boillos, MG; Peris, BP; Pascual Corrales, E; Cano, AMG et al. Is adrenal venous sampling always necessary to differentiate between unilateral and bilateral primary aldosteronism? Lesson from the SPAIN-ALDO register. *Endocrine*. 2023. Article.
- Rudilla, D; García, E; Ortiz Zúñiga, AM; León, MC; Nattero Chávez, L; Mingorance, A; Prado, A et al. Psychometric validation of the MIND Youth Questionnaire (MY-Q) to assess quality of life in Spanish patients with type 1 diabetes between 12 and 25 years old. *Endocrinol. Diabetes Nutr.* 2023. 70. (1): p. 4-13. Article.

Letters

- Valera, CA; Guardiola, PD; Minchot, EC; Garcia, DD; Zanuy, MDV. Perioperative nutritional management of the patient undergoing cephalic duodenopancreatectomy: A multicenter retrospective observational study in the Community of Madrid. *Endocrinol. Diabetes Nutr.* 2023. 70. (1): p. 63-65. Letter.

Clinical Nephrology

CENTER: Hospital Universitario 12 de Octubre (HU12O) and Universidad Complutense de Madrid (UCM).

GROUP LEADERS: Praga Terente, Manuel (R4) and Morales Ruiz, Enrique (R4).

Alonso Riaño, Marina - Clinical researcher.
Caravaca Fontán, Fernando - Postdoctoral researcher (R2).
Caro Espada, Paula Jara - Clinical researcher.
Cavero Escribano, Teresa - Clinical researcher.
Espino Hernández, María del Mar - Clinical researcher.
García Martín, Florencio - Clinical researcher.
Goicoechea de Jorge, Elena - Doctoral researcher (R3).

González Monte, Esther - Doctoral researcher.
Gutiérrez Martínez, Eduardo - Clinical researcher.
Lucientes Continente, Laura - Predoctoral researcher (R1).
Márquez Tirado, Bárbara - Predoctoral researcher (R1).
Mérida Herrero, Evangelina - Clinical researcher.
Sevillano Prieto, Ángel Manuel - Clinical researcher.
Yuste Lozano, Claudia - Clinical researcher.

ACTIVE RESEARCH PROJECTS

Type of funding	Funding body	No. of projects
Competitive	Fundación Madrileña de Nefrología	1
Competitive	Fundación Senefro	2
Competitive	ISCIII	2
Competitive	Ministerio de Economía y Competitividad	1
No competitive	Various	2
Total		8

- **Title:** Descifrado el papel del factor *H-Related Proteins* en las enfermedades renales relacionadas con complemento.
Principal investigator: Praga Terente, Manuel.
Project No.: PI19/01624.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2020.
End date: 31/12/2022; extended to 30/06/2024.
- **Title:** Correlación genotipo-fenotipo en la hematuria familiar.
Principal investigator: Sevillano Prieto, Ángel Manuel.
Funding body: Fundación Senefro.
Start date: 30/10/2021.
End date: 29/10/2023.
- **Title:** Estudio PUMA - Estudio piloto de uso de MiDiálisis App.
Principal investigator: Yuste Lozano, Claudia.
Funding body: Fundación Madrileña de Nefrología.
Start date: 19/04/2023.
End date: 18/04/2025.
- **Title:** Toward a complete simulation environment for complement-associated pathologies: physiology-inspired pharmacokinetics/pharmacodynamics, digital twins, and artificial intelligence-assisted digital pathology (twinkidz).
Principal investigator: Alonso Riaño, Marina.
Project No.: CPP2022-009838.
Funding body: Ministerio de Economía y Competitividad.
Start date: 01/12/2023.
End date: 30/11/2026.
- **Title:** Convenio colaboración PMP22/00119 - Red Nacional de Laboratorios de Función Renal.
Principal investigator: Morales Ruiz, Enrique.
Funding body: Instituto de Salud Carlos III (ISCIII) - Universidad de La Laguna.
Start date: 28/07/2023.
End date: 27/07/2026.
- **Title:** Estudio PUMA. Estudio piloto de uso de MiDiálisis App.
Principal investigator: Yuste Lozano, Claudia.
Funding body: Fundación Madrileña de Nefrología.
Start date: 19/04/2023.
End date: 18/04/2025.
- **Title:** Hemoplug.
Principal investigator: Yuste Lozano, Claudia.
Funding body: Fundación Investigación Biomédica Hospital 12 de Octubre.
Start date: 01/03/2022.
End date: 31/12/2023.
- **Title:** Extracción periódica de hemocultivos en los pacientes asintomáticos portadores de catéter venoso central en diálisis como medida preventiva de bacteriemias.
Principal investigator: Morales Ruiz, Enrique.
Funding body: Astrazeneca Farmacéutica Spain, S.A.
Start date: 01/01/2023.
End date: 31/12/2023.

PUBLICATIONS*

Type of Document	No. of document	Σ IF (JCR 2022)
Articles	15	80.908
Reviews	7	27.8
Editorials	2	11.4
Total	24	120.108
Letters	3	142.9
Total	27	263,008

Articles

- Alonso, F; de Francisco, ALMM; Auñón, P; García Carro, C; García, P; Gutiérrez, E; Macía, M et al. Adverse renal effects of check-point inhibitors (ICI) in cancer patients: Recommendations of the Onco-nephrology Working Group of the Spanish Society of Nephrology. *Nefrología*. 2023. 43. (5): p. 622-635. Article.
- Avila, A; Cao, MRD; Espinosa, M; Manrique, J; Morales, E. Recommendations for the individualised management of atypical hemolytic uremic syndrome in adults. *Front. Med.* 2023. 10. 1264310. Article.
- Bermejo, S; González, E; López Revuelta, K; Ibernón, M; López, D; Martín Gómez, A; García Osuna, R et al. The coexistence of diabetic retinopathy and diabetic nephropathy is associated with worse kidney outcomes. *Clin. Kidney J.* 2023. Article.
- Buxeda, A; Caravaca Fontán, F; Vígara, LA; Pérez Canga, JL; Calatayud, E; Coloma, A; Mazuecos, A et al. High exposure to tacrolimus is associated to spontaneous remission of recurrent membranous nephropathy after kidney transplantation. *Clin. Kidney J.* 2023. 16. (10): p. 1644-1655. Article.
- Caravaca Fontán, F; Caverro, T; Díaz Encarnación, M; Cabello, V; Ariceta, G; Quintana, LF; Marco, H et al. Clinical Profiles and Patterns of Kidney Disease Progression in C3 Glomerulopathy. *Kidney360*. 2023. 4. (5): p. 659-672. Article.
- Caravaca Fontan, F; Polanco, N; Villacorta, B; Buxeda, A; Coca, A; Avila, A; Martínez Gallardo, R et al. Recurrence of immune complex and complement-mediated membranoproliferative glomerulonephritis in kidney transplantation. *Nephrol Dial Transplant*. 2023. 38. (1): p. 222-235. Article.
- Caravaca Fontán, F; Stevens, K; Padrón, M; Huerta, A; Montomoli, M; Villa, J; González, F et al. Sodium-glucose cotransporter 2 inhibition in primary and secondary glomerulonephritis. *Nephrol Dial Transplant*. 2023. Article.
- Collier, W; Inker, LA; Haaland, B; Appel, GB; Badve, SV; Caravaca Fontán, F; Chalmers, J et al. Evaluation of Variation in the Performance of GFR Slope as a Surrogate End Point for Kidney Failure in Clinical Trials that Differ by Severity of CKD. *Clin. J. Am. Soc. Nephrol.* 2023. 18. (2): p. 183-192. Article.
- de Sequera, P; Pérez García, R; Vega, A; Martínez Vaquera, S; Acosta, JG; Del Valle, KP; Fernández Lucas, M et al. Trial design of the MOTHER HDx study: a multicenter, open-label, prospective, randomized study to explore the morbidity and mortality in patients dialyzed with the TheraNova HDx in comparison with online hemodiafiltration. *Clin. Kidney J.* 2023. 16. (11): p. 2254-2261. Article.
- Fernández Ruiz, M; García Ríos, E; Redondo, N; Rodríguez Goncer, I; Ruiz Merlo, T; Parra, P; Sandonis, V et al. Dynamics and Clinical Significance of Cytomegalovirus-Specific Neutralizing Antibodies in Kidney Transplant Recipients Treated with T-Cell-Depleting Agents. *J. Infect. Dis.* 2023. Article.
- Fernández Ruiz, M; Redondo, N; Parra, P; Ruiz Merlo, T; Rodríguez Goncer, I; Polanco, N; González, E et al. Comparison of intracellular cytokine staining versus an ELISA-based assay to assess CMV-specific cell-mediated immunity in high-risk kidney transplant recipients. *J. Med. Virol.* 2023. 95. (4). Article.
- Figuer, A; Alique, M; Valera, G; Serroukh, N; Ceprián, N; de Sequera, P; Morales, E et al. New mechanisms involved in the development of cardiovascular disease in chronic kidney disease. *Nefrología*. 2023. 43. (1): p. 63-80. Article.
- Frías, A; Vargas, F; Sandino, J; Berzal, R; Rivero, M; Cordero, L; Caverro, T et al. Octogenarians with chronic kidney disease in the nephrology clinic: Progressors vs. non-progressors. *Front Nephrol.* 2023. 3. p. 1114486-1114486. Article.
- González Cuadrado, C; Caro Espada, PJ; Chivite Lacaba, M; Utrero Rico, A; Lozano Yuste, C; Gutierrez Solís, E; Morales, E et al. Hemodialysis-Associated Immune Dysregulation in SARS-CoV-2-Infected End-Stage Renal Disease Patients. *Int. J. Mol. Sci.* 2023. 24. (2). Article.
- Heerspink, HJL; Inker, LA; Tighiouart, H; Collier, WH; Haaland, B; Luo, JY; Appel, GB et al. Change in Albuminuria and GFR Slope as Joint Surrogate End Points for Kidney Failure: Implications for Phase 2 Clinical Trials in CKD. *J. Am. Soc. Nephrol.* 2023. 34. (6): p. 955-968. Article.
- Huerta, A; Arjona, E; Portoles, J; Lopez Sanchez, P; Caverro, T; Fernandez Cusicanqui, J; Blasco, M et al. On the relevance of thrombomodulin variants in atypical hemolytic uremic syndrome. *Kidney Int.* 2023. 104. (4): p. 851-855. Article.
- Inker, LA; Collier, W; Greene, T; Miao, SY; Chaudhari, J; Appel, GB; Badve, SV et al. A meta-analysis of GFR slope as a surrogate endpoint for kidney failure. *Nat. Med.* 2023. 29. (7): p. 1867-1867. Article.
- Lucientes Continente, L; Márquez Tirado, B; Goicoechea de Jorge, E. The Factor H protein family: The switchers of the complement alternative pathway. *Immunol. Rev.* 2023. 313. (1): p. 25-45. Article.
- Portoles, J; Salazar, MLS; Peña, OG; Domínguez, SG; Rivera, MV; Espada, JC; García, AH et al. Opportunities to improve the management of anemia in peritoneal dialysis patients: lessons from a national study in routine clinical practice. *Clin. Kidney J.* 2023. 16. (12): p. 2493-2502. Article.
- Rodríguez Almaraz, E; Gutiérrez Solís, E; Rabadán, E; Rodríguez, P; Alonso, M; Carmona, L; de Yébenes, MJG et al. Searching for

- a prognostic index in lupus nephritis. *Eur. J. Med. Res.* 2023. 28. (1): p. 19-19. Article.
- Rojas Rivera, JE; García Carro, C; Avila, AI; Espino, M; Espinosa, M; Fernández Juárez, G; Fulladosa, X et al. Documento de consenso del Grupo de Estudio de Enfermedades Glomerulares de la Sociedad Española de Nefrología (GLOSEN) para el diagnóstico y tratamiento de la nefritis lúpica. *Nefrología*. 2023. 43. (1): p. 6-47. Article.
- Ruiz Cáceres, I; Romero, TH; Merino, IG; Zapirain, JP; Pérez Mies, B; Sánchez Conde, M; Riaño, MA et al. Post-mortem findings in Spanish patients with COVID-19; a special focus on superinfections. *Front. Med.* 2023. 10. 1151843. Article.
- Sethi, S; Beck, LH Jr; Glassock, RJ; Haas, M; De Vriese, AS; Caza, TN; Hoxha, E et al. Correspondence: Sanjeev Sethi, (sethi.sanjeev@mayo.edu); or Fernando C. Fer- venza, (). *Mayo Clin. Proc.* 2023. 98. (11): p. 1671-1684. Article.
- Sevillano, AM; Caravaca Fontán, F; García Galan, LC; Fernandez Juarez, G; Lopez Revuelta, K; Guzmán, DA; Martín Reyes, G et al. Effect of Immunosuppressive Treatments on Kidney Outcomes After Gross Hematuria-Related Acute Kidney Injury in Older Patients With IgA Nephropathy. *Kidney Int. Rep.* 2023. 8. (8): p. 1596-1604. Article.
- Silva, JT; Montoro, J; Asin, MAPJ; Fernandez Ruiz, M; Polanco, N; Gonzalez, E; Caro Teller, JM et al. A joint program of antimicrobial stewardship and hospital-acquired infection control to reduce healthcare-associated infections after kidney transplantation: The Hipomenes study. *Am. J. Transplant.* 2023. 23. (12): p. 1949-1960. Article.
- Tato, AM; Carrera, N; García Murias, M; Shabaka, A; Avila, A; Mora, MTM; Rabasco, C et al. Genetic testing in focal segmental glomerulosclerosis: to whom and when? *Clin. Kidney J.* 2023. 16. (11): p. 2011-2022. Article.
- Terrades, NR; Senin, A; Azancot, MA; Gironella, M; Toapanta, N; Bermejo, S; Martín, L et al. Role of light chain clearance in the recovery of renal function in multiple myeloma: another point of view. *Clin. Kidney J.* 2023. 16. (6): p. 1014-1021. Article.
- Valera, G; Figuer, A; Caro, J; Yuste, C; Morales, E; Ceprián, N; Bodega, G et al. Plasma glycoalyx pattern: a mirror of endothelial damage in chronic kidney disease. *Clin. Kidney J.* 2023. 16. (8): p. 1278-1287. Article.
- Wong, ED; Nester, C; Caverro, T; Karras, A; Le Quintrec, M; Lightstone, L; Eisenberger, U et al. Efficacy and Safety of Iptacopan in Patients With C3 Glomerulopathy. *Kidney Int. Rep.* 2023. 8. (12): p. 2754-2764. Article.
- Zamarrón, E; Jaureguizar, A; García Sánchez, A; Díaz Cambriles, T; Alonso Fernández, A; Lores, V; Mediano, O et al. Continuous Airway Pressure Effect on Albuminuria Progression in Patients with Obstructive Sleep Apnea and Diabetic Kidney Disease A Randomized Clinical Trial. *Am. J. Respir. Crit. Care Med.* 2023. 207. (6): p. 757-767. Article.

Reviews

- Caravaca Fontán, F; Gutiérrez, E; Sevillano, AM; Praga, M. Targeting complement in IgA nephropathy. *Clin. Kidney J.* 2023. 16. Review.
- Caravaca Fontán, F; Yandian, F; Ferverza, FC. Future landscape for the management of membranous nephropathy. *Clin. Kidney J.* 2023. 16. (8): p. 1228-1238. Review.
- Cordero, L; Aguilar Rodríguez, F; Sandino, J; Alonso, M; Gutiérrez, E. Siltuximab Monotherapy in Tafro Syndrome: A Case Report and Review of the Literature. *J. Nephrol.* 2023. 36. (4): p. 1181-1185. Review.
- Fakhouri, F; Schwotzer, N; Cabiddu, G; Barratt, J; Legardeur, H; Garovic, V; Orozco Guillen, A et al. Glomerular diseases in pregnancy: pragmatic recommendations for clinical management. *Kidney Int.* 2023. 103. (2): p. 264-281. Review.
- González, CV; García, IH; Fernández Frieria, L; Ruiz Hurtado, G; Morales, E; Solís, J; Galindo, A. Cardiovascular and renal health: Preeclampsia as a risk marker. *Nefrología*. 2023. 43. (3): p. 269-280. Review.
- Hernandez, S; Conde, E; Alonso, M; Illarramendi, A; de Cabo, HB; Zugazagoitia, J; Paz Ares, L et al. A narrative review of methods for the identification of ALK fusions in patients with non-small cell lung carcinoma. *Transl. Lung Cancer Res.* 2023. 12. (7): p. 1549-1562. Review.
- Pascual, J; Mazuecos, A; Sánchez Antolín, G; Solé, A; Ventura Aguiar, P; Crespo, M; Farrero, M et al. Best practices during COVID-19 pandemic in solid organ transplant programs in Spain. *Transplant. Rev.* 2023. 37. (1): p. 100749-100749. Review.
- Rojas Rivera, JE; García Carro, C; Avila, AI; Espino, M; Espinosa, M; Fernández Juárez, G; Fulladosa, X et al. Diagnosis and treatment of lupus nephritis: a summary of the Consensus Document of the Spanish Group for the Study of Glomerular Diseases (GLOSEN). *Clin. Kidney J.* 2023. 16. (9): p. 1384-1402. Review.
- Sethi, S; Beck, LH Jr; Glassock, RJ; Haas, M; De Vriese, AS; Caza, TN; Hoxha, E et al. Mayo Clinic consensus report on membranous nephropathy: proposal for a novel classification. *Kidney Int.* 2023. 104. (6): p. 1092-1102. Review.

Editorials

- Caravaca Fontán, F; Ibarra, L; Rodríguez Peralto, JL; Gutiérrez, E. A rare skin lesion in a kidney transplant recipient. *Am. J. Transplant.* 2023. 23. (3): p. 447-449. Editorial Material.
- Gutiérrez, E; Trujillo, H; Aubert, L; Sandino, J; Auñón, P; Caverro, T; Morales, E et al. Why should genetic testing be incorporated into routine clinical practice in nephrology? The utility of specialized clinics. An emerging need. *Nefrología*. 2023. 43. (2): p. 161-166. Editorial Material.

* Publications: only "Article", "Review", "Editorial Material" and "Letter" have been selected in "Document Type" of ISI Web Of Knowledge. The breakdown of publications includes some not included in the 2022 JCR, which are therefore not taken into account in the final count shown in the table, since they do not have IF.

Letters

- Berzal, R; Agredano, B; Gil, M; Galindo, M; Morales, E. mTOR inhibitors in a patient with lupus nephritis; why not? Nefrología. 2023. 43. p. 100-102. Letter.
- Caravaca Fontán, F; Yandian, F; Ferverza, FC. Hydroxychloroquine Dose and Risk of Systemic Lupus Erythematosus Flares. JAMA-J. Am. Med. Assoc. 2023. 329. (8): p. 685-686. Letter.
- García, MDSD; López, LG; Fernández, PC; Segura, MA; Martínez Calero, A; Riaño, MA; Sánchez Fructuoso, A. Fibrillary glomerulonephritis simulating glomerular basal antimembrane antibody disease with associated thrombotic microangiopathy and ANCAp. Nefrología. 2023. 43. (2): p. 255-257. Letter.
- Gutiérrez, E; Caravaca Fontán, F; Sevillano, A. Is the NeflgArd trial a paradigm shift in the treatment of IgA nephropathy? Kidney Int. 2023. 103. (5): p. 994-994. Letter.
- Santos Alonso, C; Rivas, B; Vega Cabrera, C; Arenzana, CB; Gregorio, LY; Riaño, MA; Fernández, EG et al. Congenital porto-systemic shunt: An uncommon cause of membranoproliferative glomerulonephritis. Nefrología. 2023. 43. p. 118-120. Letter.
- Shabaka, A; Roviroso Bigot, S; Márquez, CG; Alonso Riaño, M; Fernández Juárez, G. Acute kidney failure and nephrotic syndrome secondary to COVID-19-associated focal segmental glomerulosclerosis. Nefrología (Engl Ed). 2023. 42. (6): p. 727-729. Letter.
- Villacorta, J; Ortego, S; Moreno, E; Saiz, A; Alonso, M; Fernandez Lucas, M; Diaz Crespo, F. Membranous glomerulonephritis with masked deposits. Nefrología. 2023. 43. (5): p. 653-654. Letter.

END GRADUATED INVESTIGATIONS DIRECTED ON THE GROUP

- **Student:** Yali Chen Wang.
Title: Síndrome de Hellp antes y después de las 32 semanas de gestación.
Director: Enrique Morales Ruiz and María Galindo Izquierdo.
Degree: Medicina.
Universidad: Universidad Complutense de Madrid.

Critical Patient

CENTER: Hospital Universitario 12 de Octubre (HU12O).

GROUP LEADERS: Martín Delgado, M.^a Cruz (R3) and Catalán González, María de las Mercedes (R3).

Barea Mendoza, Jesús Abelardo - Predoctoral researcher (R1).
Chacón Alves, Silvia - Clinical researcher (R1).
Chico Fernández, Mario - Doctoral researcher (R3).
Corres Peiretti, María Angélica - Clinical researcher (R1).
Delgado Téllez de Cepeda, Ana María - Clinical researcher (R1).
Dominguez Aguado, Helena - Clinical researcher (R1).
Flordelís Lasierra, José Luis - Doctoral researcher (R2).
Grau Carmona, Teodoro - Postdoctoral researcher (R2).
Gutiérrez Gutiérrez, Judit - Junior clinical researcher..1).

Lázaro Martín, Noelia Isabel - Researcher.
Marcos Morales, Adrián - Junior clinical researcher..1).
Pérez Vela, José Luis - Postdoctoral researcher (R2).
Quílez Trasobares, Nerea - Junior clinical researcher..1).
Renes Carreño, Emilio - Postdoctoral researcher (R3).
Sáez de la Fuente, Ignacio - Clinical researcher.
Sánchez-Izquierdo Riera, José Ángel - Doctoral researcher (R3).
Temprano Vázquez, Susana - Clinical researcher.

OTHER ACTIVE PROJECTS OF THE RESEARCH GROUP NOT MANAGED BY THE FUNDACIÓN PARA LA INVESTIGACIÓN BIOMÉDICA DEL HOSPITAL 12 DE OCTUBRE (FIBH12O)

- **Title:** Aplicación de técnicas de evaluación de daño corporal e impacto social y personal en el suicidio.
Principal investigator: Gutiérrez Gutiérrez, Judit.
Funding body: MAPHRE 2023. Ayudas a la investigación Ignacio H. Larramendi.
Start date: 2023.
End date: 2023.

EUROPEAN PROJECT APPLICATIONS 2023

- **Call reference:** DIGITAL-2023-CLOUD-AI-04
Project title: A Federated Infrastructure for ICU Data across Europe.
Acronym: INDICATE.
Number: 101167778.
Coordinator: No.
Coordinating Centre: Erasmus Universitair Medisch Centrum Rotterdam NI.
Researcher coordinating the project: M.^a Cruz Martín Delgado.
Granted: Yes.

PUBLICATIONS*

Type of Document	No. of document	Σ IF (JCR 2022)
Articles	19	251.962
Reviews	7	26.5
Editorials	2	8.5
Total	28	286.962
Letters	3	49.9
Total	31	336.862

* Publications: only "Article", "Review", "Editorial Material" and "Letter" have been selected in "Document Type" of ISI Web Of Knowledge. The breakdown of publications includes some not included in the 2022 JCR, which are therefore not taken into account in the final count shown in the table, since they do not have IF.

Articles

- de Gonzalo Calvo, D; Molinero, M; Benítez, ID; Perez Pons, M; García Mateo, N; Ortega, A; Postigo, T et al. A blood microRNA classifier for the prediction of ICU mortality in COVID-19 patients: a multicenter validation study. *Respir Res.* 2023. 24. (1): p. 159-159. Article.
- Barea Mendoza, JA; Chico Fernández, M; Serviá Goixart, L; Quintana Díaz, M; García Sáez, I; Ballesteros Sanz, MA; Iglesias Santiago, A et al. Associated Risk Factors and Impact in Clinical Outcomes of Multiorgan Failure in Patients with TBI. *Neurocrit. Care.* 2023. 39. (2): p. 411-418. Article.
- Gutiérrez, JG; González, MDC; González, RM; San Barón, M; Mendoza, JAB; Vich, CGE; Fernández, MC et al. Challenges in intensive medicine: Diversity, equity and inclusion. Gender statement of the Spanish Society of Intensive and Critical Medicine and Coronary Units (SEMICYUC). *Med. Intensiv.* 2023. 47. (7): p. 402-405. Article.
- Fernández, MV; Fuentes, CG; Moya, FDD; Morales, AM; Hervás, HF; Mendoza, JAB; Reche, CM et al. Could machine learning algorithms help us in predicting massive hemorrhage at the prehospital level? *Med. Intensiv.* 2023. 47. (12): p. 681-690. Article.
- Kloss, P; Lindholz, M; Milnik, A; Azoulay, E; Cecconi, M; Citerio, G; De Corte, T et al. Early mobilisation in critically ill COVID-19 patients: a subanalysis of the ESICM-initiated UNITE-COVID observational study. *Ann Intensive Care.* 2023. 13. (1): p. 112-112. Article.
- Bermejo Martín, JF; García Mateo, N; Motos, A; Resino, S; Tamayo, L; Ryan Murua, P; Bustamante Munguira, E et al. Effect of viral storm in patients admitted to intensive care units with severe COVID-19 in Spain: a multicentre, prospective, cohort study. *Lancet Microbe.* 2023. 4. (6): e431-e441. Article.
- Riera, J; Barbeta, E; Tormos, A; Mellado Artigas, R; Ceccato, A; Motos, A; Fernandez Barat, L et al. Effects of intubation timing in patients with COVID-19 throughout the four waves of the pandemic: a matched analysis. *Eur Respir J.* 2023. 61. (3): 2201426. Article.
- Barrero Martín, S; Chicote Carasa, Y; García Fuentes, C; Barea Mendoza, J; Chico Fernández, M. Electric scooter accidents and injuries. *Emergencias.* 2023. 35. (2): p. 150-153. Article.
- De la Fuente, IS; de la Fuente, JS; Alves, SC; Collado, ZM; de Aledo, ALG; Badía, IM; Fernández, MG et al. Epidemiology, Associated Factors, and Outcomes of Intensive Care Unit-Acquired Infections Caused by Multidrug-Resistant Organism in Critically Ill Patients An Observational, Retrospective Study. *Infect. Dis. Clin. Pract.* 2023. 31. (3): e1252. Article.
- Singer, P; Blaser, AR; Berger, MM; Calder, PC; Casaer, M; Hiesmayr, M; Mayer, K et al. ESPEN practical and partially revised guideline: Clinical nutrition in the intensive care unit. *Clin. Nutr.* 2023. 42. (9): p. 1671-1689. Article.
- González Fernández, M; Quilez Trasobares, N; Barea Mendoza, JA; Molina Collado, Z; Arias Verdu, D; Barrueco Francioni, J; Seller Pérez, G et al. Evaluation of the registry DIALYREG for the assessment of continuous renal replacement techniques in the critically ill patient. *Sci Rep.* 2023. 13. (1): 6479. Article.
- Barea Mendoza, JA; Llompou, JA; Pérez Bárcena, J; Quintana Díaz, M; Serviá Goixart, L; Guerrero López, F; González Robledo, J et al. External validation of the Glasgow Coma Scale-Pupils in patients with severe head injury. *Emergencias.* 2023. 35. (1): p. 39-43. Article.
- Lopez Delgado, JC; Servia Goixart, L; Grau Carmona, T; Bordeje Laguna, L; Portugal Rodriguez, E; Lorenzo Cardenas, C; Vera Artazcoz, P et al. Factors associated with the need of parenteral nutrition in critically ill patients after the initiation of enteral nutrition therapy. *Front. Nutr.* 2023. 10. 1250305. Article.
- Alvarez Lerma, F; Catalán González, M; Alvarez, J; Sánchez García, M; Palomar Martínez, M; Fernández Moreno, I; Garnacho Montero, J et al. Impact of the 'Zero Resistance' program on acquisition of multidrug-resistant bacteria in patients admitted to Intensive Care Units in Spain. A prospective, intervention, multimodal, multicenter study. *Med. Intensiv.* 2023. 47. (4): p. 193-202. Article.
- Thibault, R; Bear, DE; Fischer, A; Montejo González, JC; Hiesmayr, M; Tamási, P; Uyar, M et al. Implementation of the ESPEN guideline on clinical nutrition in the intensive care unit (ICU): It is time to move forward! A position paper from the 'nutrition in the ICU' ESPEN special interest group. *Clin. Nutr. ESPEN.* 2023. 57. p. 318-330. Article.
- González, J; de Batlle, J; Benítez, ID; Torres, G; Santistevé, S; Targa, ADS; Gort Paniello, C et al. Key Factors Associated With Pulmonary Sequelae in the Follow-Up of Critically Ill COVID-19 Patients. *Arch. Bronconeumol.* 2023. 59. (4): p. 205-215. Article.
- Lobo Valbuena, B; Barrachina, LG; Almaraz, RA; Mendoza, JAB; García, IB; Caro, MF; Calvo, LLD et al. Mentoring Programme: Guiding your first steps towards scientific excellence. *Med. Intensiv.* 2023. 47. (5): p. 289-292. Article.
- Lopez Delgado, JC; Grau Carmona, T; Mor Marco, E; Bordeje Laguna, ML; Portugal Rodriguez, E; Lorenzo Cardenas, C; Vera Artazcoz, P et al. Parenteral Nutrition: Current Use, Complications, and Nutrition Delivery in Critically Ill Patients. *Nutrients.* 2023. 15. (21): 4665. Article.
- Chamorro, EM; Sanz, LI; Barrio, AB; Fernández, MC; Nacenta, SB. Patients With Severe Polytrauma: Management And Imaging Protocols. *Radiologia.* 2023. 65. p. 11-20. Article.
- Galli, F; Bindo, F; Motos, A; Fernández Barat, L; Barbeta, E; Gabarrús, A et al. Procalcitonin and C-reactive protein to rule out early bacterial coinfection in COVID-19 critically ill patients. *Intensive Care Med.* 2023. 49. (8): p. 934-945. Article.
- García Torrejon, MC; Heras de la Calle, G; Martín Delgado, MC; Franco Garrobo, N; Gordo Vidal, F; Varillas Delgado, D; Caballero Martínez, F et al. Spirituality in Critical Care: An Observational Study of the Perceptions of Professionals, Patients and Families, in Spain and Latin America. *J RELIG HEALTH.* 2023. 62. (4): p. 2391-2411. Article.
- Pham, T; Heunks, L; Bellani, G; Madotto, F; Aragao, I; Beduneau, G; Goligher, EC et al. Weaning from mechanical ventilation in intensive care units across 50 countries (WEAN SAFE): a multicentre, prospective, observational cohort study. *Lancet Respir Med.* 2023. 11. (5): p. 465-476. Article.

Reviews

- Bouza, E; Martín, M; Alés, JE; Aragonés, N; Barragán, B; de la Cámara, R; Del Pozo, JL et al. Impact of the COVID-19 pandemic on the diagnosis and treatment of onco-hematologic patients: a discussion paper. *Rev Esp Quimioter.* 2023. 36. (1): p. 1-25. Review.
- Davies, TW; Kelly, E; van Gassel, RJJ; van de Poll, MCG; Gunst, J; Casaer, MP; Christopher, KB et al. A systematic review and meta-analysis of the clinimetric properties of the core outcome measurement instruments for clinical effectiveness trials of nutritional and metabolic interventions in critical illness (CONCISE). *Crit. Care.* 2023. 27. (1): 450. Review.

- Del Romero, J; Moreno Guillén, S; Rodríguez Artalejo, FJ; Ruiz Galiana, J; Cantón, R; De Lucas Ramos, P; García Botella, A et al. Sexually transmitted infections in Spain: Current status. *Rev Esp Quimioter.* 2023. 36. (5): p. 444-465. Review.
- Martín Sánchez, FJ; Martínez Sellés, M; Molero García, JM; Moreno Guillén, S; Rodríguez Artalejo, FJ; Ruiz Galiana, J; Cantón, R et al. Insights for COVID-19 in 2023. *Rev Esp Quimioter.* 2023. 36. (2): p. 114-124. Review.
- Martínez Sellés, M; Martín Sánchez, FJ; Moreno Guillén, S; Rodríguez Artalejo, FJ; Ruiz Galiana, J; Cantón, R; De Lucas Ramos, P et al. Advantages and disadvantages of maintaining the mandatory use of masks in health centers and nursing homes in Spain. How and when is it justified to maintain it? *Rev Esp Quimioter.* 2023. 36. (5): p. 466-469. Review.
- Molero García, JM; Moreno Guillén, S; Rodríguez Artalejo, FJ; Ruiz Galiana, J; Cantón, R; De Lucas Ramos, P; García Botella, A et al. Status of Herpes Zoster and Herpes Zoster Vaccines in 2023: A position paper. *Rev Esp Quimioter.* 2023. 36. (3): p. 223-235. Review.
- Moreno Guillén, S; Rodríguez Artalejo, FJ; Ruiz Galiana, J; Cantón, R; De Lucas Ramos, P; García Botella, A; García Lledó, A et al. Tuberculosis in Spain: An opinion paper. *Rev Esp Quimioter.* 2023. 36. (6): p. 562-583. Review.

Editorials

- Fernández, MV; Hervás, HF; Morales, AM. Aortic pseudoaneurism after penetrating chest trauma. *Med. Intensiv.* 2023. 47. (6): p. 363-364. Editorial Material.
- Fernández Hervás, H; Fuentes, CG; Barea Mendoza, JA; Tosio, PG; Manuel, AC; Chico Fernández, M. Association between intentional and unintentional injury and the average income in a patient's area of residence. *Emergencias.* 2023. 35. (6): p. 471-471. Editorial Material.

Letters

- González, J; Benítez, ID; Motos, A; Torres, A; Barbé, F; CIBERESUCICOVID, Group; Maria Cruz Martín, Delgado. Driving pressure and adjunctive therapies in pulmonary sequelae of COVID-19 patients under invasive ventilation. *Intensive Care Med.* 2023. 49. (2): p. 244-247. Letter.
- Sabater, JO; Llop, HS; Chicote, LM; Renquel, EA; Garrido Arroquia, AV; Fernández, MC; Sánchez Romero, M et al. Estimate of overdiagnosis of urinary tract infections in the emergency department. *Emergencias.* 2023. 35. (3): p. 236-237. Letter.
- Trasobares, NQ; Carasa, YC; Mendoza, JAB; Fuentes, CG; Fernández, MC; Nacenta, SB. Seat-belt injuries: clinical presentation and need for surgery. *Emergencias.* 2023. 35. (4): p. 315-317. Letter.

THESES DEFENDED OR SUPERVISED WITHIN THE GROUP

- **Doctoral candidate:** Rosa María Catalán Ibars.
Thesis title: Acciones de mejora en la seguridad durante el traslado intrahospitalario del paciente crítico.
University: Universidad de Vic - Universidad Central de Cataluña.
Date read: 12/12/2023.
Thesis director: María Cruz Martín Delgado.
International mention: No.
- **Doctoral candidate:** Gabriel Heras La Calle.
Thesis title: La Humanización de las Unidades de Cuidados Intensivos: de la utopía a la realidad a través de la investigación colaborativa multicéntrica.
University: Universidad Francisco de Vitoria.
Date read: 12/05/2023.
Thesis director: María Cruz Martín Delgado.
International mention: No.

Male's Integral Health

CENTER: Hospital Universitario 12 de Octubre (HU12O).

GROUP LEADER: García Gómez, Borja - Clinical researcher.

Alonso Isa, Manuel - Junior clinical researcher..

Cabezali Barbancho, Daniel - Postdoctoral researcher (R2).

Gómez Fraile, Andrés - Doctoral researcher (R3).

Medina Polo, José - Postdoctoral researcher (R2).

PUBLICATIONS*

Type of Document	No. of document	Σ IF (JCR 2022)
Articles	10	27.2
Editorials	1	4.8
Total	11	32

Articles

- Alonso Isa, M; Garcia Gomez, B; Gonzalez Ginel, I; Garcia Encina, C; Caro Gonzalez, MD; Medina Polo, J; Garcia Rojo, E et al. Conservative Non-surgical Options for Erectile Dysfunction. *Curr Urol Rep.* 2023. 24. (2): p. 75-104. Article.
- Bozzini, G; Berti, L; Maltagliati, M; Besana, U; Micali, S; Roche, JB; Romero Otero, J et al. Thulium: YAG vs continuous-wave thulium fiber laser enucleation of the prostate: do potential advantages of thulium fiber lasers translate into relevant clinical differences? *World J. Urol.* 2023. 41. (1): p. 143-150. Article.
- Ceniza Bordallo, G; Fraile, AG; Martín Casas, P; López Villanueva, I. Validation of the Spanish version of the Pain Catastrophizing Scale for Children (PCS-C). *An. Pediatr.* 2023. 99. (5): p. 295-303. Article.
- Ceniza Bordallo, G; Fraile, AG; Martín Casas, P; López Villanueva, I. Cross-cultural adaptation and psychometric properties of Spanish Child Pain Anxiety Symptoms Scale. *An. Pediatr.* 2023. 99. (1): p. 14-25. Article.
- de la Blanca, RSP; Medina Polo, J; González Padilla, D; Cano Galán, MM; Arrébola Pajares, A; Hernández Arroyo, M; Rodríguez Antolín, A. Evaluation of Quality of Life and Self-reported Complications in Patients With Clean Intermittent Catheterization. *J. Wound Ostomy Cont. Nurs.* 2023. 50. (5): p. 400-405. Article.
- de la Torre, P; Pérez Lorenzo, MJ; Alcázar Garrido, A; Collado, J; Martínez López, M; Forcén, L; Masero Casasola, AR et al. Perinatal mesenchymal stromal cells of the human decidua restore continence in rats with stress urinary incontinence induced by simulated birth trauma and regulate senescence of fibroblasts from women with stress urinary incontinence. *Front. Cell. Dev. Biol.* 2023. 10. p. 1033080-1033080. Article.
- Ibarra, FP; Gómez, BG; Marco, SL; Paños, AMS. Study UNICO: Perception of Urologists and Andrologists, in Spain, about the Use of Sildenafil Oral Suspension in Patients with Erectile Dysfunction. *Arch. Esp. Urol.* 2023. 76. (2): p. 139-144. Article.
- Medina Polo, J; Arrébola Pajares, A; Corrales Riveros, JG; Alidjanov, JF; Lorenzo Gómez, MF; Tapia, AH; Martínez Berganza, ML et al. Validation of the Spanish Acute Cystitis Symptoms Score (ACSS) in native Spanish-speaking women of Europe and Latin America. *Neurourol. Urodyn.* 2023. 42. (1): p. 263-281. Article.
- Sánchez, AG; Sedano, JVR; Carrera, MEM; Teller, JMC; Fraile, AG; Muñoz, MDD. Otoplasty in patients with helix valgus: quality of life and satisfaction. *Ann. Pediatr. Surg.* 2023. 19. (1): 32. Article.
- Santos Pérez de la Blanca, R; Medina Polo, J; Peña Vallejo, H; Juste Álvarez, S; Pamplona Casamayor, M; Duarte Ojeda, JM; Miranda Utrera, N et al. Ureteral Stenosis and Fistula after Kidney Transplantation. *Urol.Int.* 2023. 107. (2): p. 1-8. Article.
- Schneidewind, L; Kiss, B; Stangl, FP; Tandogdu, Z; Wagenlehner, FME; Johansen, TEB; Köves, B et al. Practice Patterns in Fournier's Gangrene in Europe and Implications for a Prospective Registry Study. *Antibiotics-Basel.* 2023. 12. (2): 197. Article.
- Stangl, FP; Schneidewind, L; Kiss, B; Kranz, J; Wagenlehner, FM; Johansen, TEB; Köves, B et al. Non-Antibiotic Prophylaxis for Recurrent UTIs in Neurogenic Lower Urinary Tract Dysfunction (NAPRUN): Study Protocol for a Prospective, Longitudinal Multi-Arm Observational Study. *Methods Protoc.* 2023. 6. (3): 52. Article.

Editorials

- Cai, TMS; Alidjanov, J; Palagin, I; Medina Polo, J; Nickel, JC; Wagenlehner, FME. Chronic prostatitis/chronic pelvic pain syndrome (CP/CPPS): look to the future. *Prostate Cancer Prostatic Dis.* 2023. Editorial Material.

* Publications: only "Article", "Review", "Editorial Material" and "Letter" have been selected in "Document Type" of ISI Web Of Knowledge. The breakdown of publications includes some not included in the 2022 JCR, which are therefore not taken into account in the final count shown in the table, since they do not have IF.

END GRADUATED INVESTIGATIONS DIRECTED ON THE GROUP

- **Student:** Antonio Arquero Sánchez, Mercedes Serrano Cabanillas and Lucía Villar Calero.
Title: Comparative analysis of short-term functional outcomes between Holmium and Thulium lasers in prostatic enucleation.
Director: Borja García Gómez.
Degree: Medicina.
University: San Pablo CEU.

PRIZES AND AWARDS

- During 2023, Borja García Gómez was awarded the "Award of Excellence 2023" by the European Society for Sexual Medicine.

Pulmonary Surfactant and Respiratory Diseases

CENTER: Universidad Complutense de Madrid (UCM).

GROUP LEADER: Pérez Gil, Jesús (R4).

Alonso Eugenio, Alejandro - Predoctoral researcher (R1).
Aranda Serrano, Elena - Researcher.
Arroyo Rodríguez, Raquel - Researcher.
Autilio, Chiara - Predoctoral researcher (R1).
Blanco Rivero, Amaya - Postdoctoral researcher (R2).
Cañadas Benito, Olga - Doctoral researcher (R3).
Castillo Sánchez, José Carlos - Researcher.
Collada Marugán, Ainhoa - Predoctoral researcher (R1).
Cruz Rodríguez, Antonio - Doctoral researcher (R3).
Echaide Torreguitar, Mercedes - Doctoral researcher (R3).

García Álvarez, Begoña - Doctoral researcher (R3).
García Mouton, Cristina - Predoctoral researcher (R1).
García Ortega, Lucía - Doctoral researcher (R3).
Hidalgo Román, Alberto - Researcher.
Isasi Campillo, Miriam - Predoctoral researcher (R1).
Losada Oliva, Paula - Predoctoral researcher (R1).
Martínez Calle, Marta - Researcher.
Morán Lalangui, Michelle - Predoctoral researcher (R1).
Olmeda Lozano, Bárbara - Doctoral researcher (R3).

OTHER ACTIVE PROJECTS OF THE RESEARCH GROUP NOT MANAGED BY THE FUNDACIÓN PARA LA INVESTIGACIÓN BIOMÉDICA DEL HOSPITAL 12 DE OCTUBRE (FIBH12O)

- **Title:** Biotecnología y biofísica de membranas para desarrollar terapias inteligentes inhaladas basadas en surfactante pulmonar.
Principal investigator: Jesús Pérez Gil.
Project No.: PID2021-124932OB-100.
Funding body: Agencia Estatal de Investigación. Ministerio de Ciencia e Innovación.
Start date: 2022.
End date: 2025.

EUROPEAN PROJECT APPLICATIONS 2023

- **Call Identifier:** HORIZON-MSCA-2023-DN-01.
Project title: LUNG-specific nucleic acid delivery: A doctoral training programme for developing next GENERation genetic MEDicines.
Acronym: LUNG-GENEMED.
Coordinator: No.
Coordinating Centre: Politecnico di Milano (Italia).
IG researcher participating in the project: Jesús Pérez Gil.
Granted: No.

PUBLICATIONS*

Type of Document	No. of document	Σ IF (JCR 2022)
Articles	4	87.1
Reviews	1	8.9
Editorials	1	4.9
Total	6	100.9

Articles

- Cruz Rodríguez A, García Álvarez B, Olmeda Lozano B, 2023. El surfactante pulmonar, un sistema lipoproteico clave para la mecánica respiratoria. SEBBM. 2023. 215: p. 17-21. Article.
- Feo Lucas, L; Godío, C; de la Escalera, MM; Alvarez Ladrón, N; Villarrubia, LH; Vega Pérez, A; González Cintado, L et al. Airway allergy causes alveolar macrophage death, profound alveolar disorganization and surfactant dysfunction. Front. Immunol. 2023. 14. 1125984. Article.

* Publications: only "Article", "Review", "Editorial Material" and "Letter" have been selected in "Document Type" of ISI Web Of Knowledge. The breakdown of publications includes some not included in the 2022 JCR, which are therefore not taken into account in the final count shown in the table, since they do not have IF.

- Garcia Mouton, C; Echaide, M; Serrano, LA; Orellana, G; Salomone, F; Ricci, F; Pioselli, B et al. Beyond the Interface: Improved Pulmonary Surfactant-Assisted Drug Delivery through Surface-Associated Structures. Pharmaceutics. 2023. 15. (1): 256. Article.
- Mishra, R; Hannebelle, M; Patil, VP; Dubois, A; Garcia Mouton, C; Kirsch, GM; Jan, M et al. Mechanopathology of biofilm-like Mycobacterium tuberculosis cords. Cell. 2023. 186. (23): p. 5135-5135. Article.
- Xu, Y; Parra Ortiz, E; Wan, F; Cañadas, O; Garcia Alvarez, B; Thakur, A; Franzzyk, H et al. Insights into the mechanisms of interaction between inhalable lipid-polymer hybrid nanoparticles and pulmonary surfactant. J. Colloid Interface Sci. 2023. 633. p. 511-525. Article.

Reviews

- Isasi Campillo, M; Losada Oliva, P; Pérez Gil, J; Olmeda, B; García Ortega, L. Pulmonary surfactant-derived antiviral actions at the respiratory surface. Curr. Opin. Colloid Interface Sci. 2023. 66. 101711. Review.

Editorials

- Pérez Gil, J. Call for Papers: "Alveolar biology, pulmonary surfactant, and beyond": a tribute to Dr. John Allen Clements on his 100th birthday. Am. J. Physiol.-Lung Cell. Mol. Physiol. 2023. 325. (2): p. 244-245. Editorial Material.
- Pérez Gil J, 2023. Interacciones lípido-proteína y proteína-lípido: contextos e interfaces que definen funciones críticas. SEBBM. 2023. 215: p. 6-7. Editorial Material.

END GRADUATED INVESTIGATIONS DIRECTED ON THE GROUP

- **Student:** María Martínez Orosa.
Title: Modelos de membrana como sistemas de compartimentación para el estudio de la evolución prebiótica.
Director: Ainhoa Collada and Antonio Cruz Rodríguez.
Degree: Biología.
University: Universidad Complutense de Madrid.
- **Student:** Natalia Robles Anda.
Title: Efecto de nanovarillas de oro en la estructura de películas de surfactante pulmonar. Posibles alteraciones de su comportamiento interfacial.
Director: Antonio Cruz Rodríguez and Jesús Pérez Gil.
Degree: Bioquímica.
University: Universidad Complutense de Madrid.
- **Student:** Jouma Katati Bote.
Title: Estudio de interacciones proteína-proteína y cinéticas de adsorción en el surfactante pulmonar mediante microbalanza de cristal de cuarzo.
Director: Antonio Cruz Rodríguez and Jesús Pérez Gil.
Degree: Bioquímica.
University: Universidad Complutense de Madrid.

STAYS

- During this period, Ainhoa Collada Marugán has made a stay at the ETH Zurich (Switzerland) during the month of November 2023.

Abdominal Organ Transplant

CENTER: Hospital Universitario 12 de Octubre (HU12O).

GROUP LEADERS: Loinaz Seguro, Carmelo (R4) and Justo Alonso, Iago (R2).

Calvo Pulido, Jorge - Doctoral researcher (R2).

Cambra Molero, Félix - Doctoral researcher (R2).

Caso Maestro, Óscar - Doctoral researcher (R2).

Cortes Guerrero, Manuel - Clinical researcher.

García Gutiérrez, Adolfo Francisco - Doctoral researcher (R2).

García-Sesma Pérez-Fuentes, Álvaro - Doctoral researcher (R2).

Guerrero Díez, María - Researcher.

Kadaoui Boudih, Salah-Din - Clinical researcher.

Manrique Municio, Alejandro - Doctoral researcher (R2).

Marcacuzco Quinto, Alberto Alejandro - Doctoral researcher (R2).

Ruiz de las Heras, Jesús - Doctoral researcher (R2).

Torcal Abian, Fernando - Clinical researcher.

ACTIVE RESEARCH PROJECTS

Type of funding	Funding body	No. of projects
Competitive	Sociedad Madrileña de Trasplantes	1
No competitive	Chiesi España, S.A.U.	1
Total		2

• **Title:** Análisis morfológico de la viabilidad del injerto de pared abdominal en relación con la técnica de extracción.

Principal investigator: Justo Alonso, Iago.

Funding body: Sociedad Madrileña de Trasplantes.

Start date: 24/05/2021.

End date: 23/05/2023.

• **Title:** Valor predictivo de la fragilidad y la composición corporal sobre la supervivencia en candidatos a trasplante hepático.

Principal investigator: Loinaz Seguro, Carmelo.

Funding body: Chiesi España, S.A.U.

Start date: 27/12/2023.

End date: 26/12/2024.

PUBLICATIONS*

Type of Document	No. of document	Σ IF (JCR 2022)
Articles	9	30.4
Editorials	2	3.8
Total	11	34.2
Letters	3	6
Total	14	40.2

Articles

- Alonso, IJ; Murillo, LA; Quinto, AM; Maestro, OC; Conde, PR; Fernandez, CF; Romero, CJ. Cephalic duodenopancreatectomy in octogenarium patients with pancreatic tumors. *Cir. Espan.* 2023. 101. (9): p. 599-608. Article.

- Fernandez Ruiz, M; Almendro Vazquez, P; Redondo, N; Ruiz Merlo, T; Abella, S; Somoza, A; Lopez Medrano, F et al. Cell-mediated and Neutralizing Antibody Responses to the SARS-CoV-2 Omicron BA.4/BA.5-adapted Bivalent Vaccine Booster in Kidney and Liver Transplant Recipients. *Transplant. Direct.* 2023. 9. (10): e1536. Article.

- García Moreno, V; Justo Alonso, I; Fernandez, C; Rivas Duarte, C; Aranda Romero, B; Loinaz Seguro, C; Jimenez Romero, C et al. "Long-term follow-up of liver transplantation in incidental intrahepatic cholangiocarcinoma and mixed hepatocellular-

cholangiocarcinoma". *Cir Esp (Engl Ed).* 2023. 101. (9): p. 624-631. Article.

- Gomez Mariano, G; Perez Luz, S; Saz, SRD; Matamala, N; Hernandez SanMiguel, E; Fernandez Prieto, M; Gil Martin, S et al. Acid Sphingomyelinase Deficiency Type B Patient-Derived Liver Organoids Reveals Altered Lysosomal Gene Expression and Lipid Homeostasis. *Int. J. Mol. Sci.* 2023. 24. (16): 12645. Article.

- Jimenez Romero, C; Justo Alonso, I; del Pozo Elso, P; Marcacuzco Quinto, A; Martín Arroba, C; Manrique Municio, A; Calvo Pulido, J et al. Post-transplant biliary complications using liver grafts from deceased donors older than 70 years: Retrospective case-control study. *World J. Gastrointest. Surg.* 2023. 15. (8): p. 1615-1628. Article.

- Jiménez Romero, C; Marcacuzco, A; Caso, O; Lechuga, I; Manrique, A; García Sesma, A; Calvo, J et al. Pyogenic liver abscesses in liver transplant recipients versus non-transplant population. Outcome and risk factors of patient survival. *Clin. Transplant.* 2023. 37. (6). Article.

- Justo, I; Marcacuzco, A; Caso, O; Manrique, A; García Sesma, A; Calvo, J; Fernández, C et al. Modified Chevrel technique for abdominal closure in critically ill patients with abdominal hypertension and limited options for closure. *Hernia.* 2023. 27. (3): p. 677-685. Article.

- Justo, I; Marcacuzco, A; Caso, O; Manrique, A; García Sesma, A; García, A; Rivas, C et al. Risk factors of massive blood transfusion in liver transplantation: consequences and a new index for prediction including the donor. *Cir. Espan.* 2023. 101. (10): p. 684-692. Article.

Editorials

- Fernández, CF; Alonso, IJ; de Cima, A; Quinto, AM; Romero, CJ. Sump syndrome as a late complication of side-to-side hepaticojejunostomy due to biliary iatrogenesis. *Cir. Espan.* 2023. 101. (11): p. 808-811. Editorial Material.

Letters

- García Picazo, A; Vega Novillo, V; Gallardo Gallego, R; Loinaz Seguro, C; Justo Alonso, I. Bile duct schwannoma, an uncommon cause of bile duct tumor, diagnostic and therapeutic management. *Rev. Esp. Enferm. Dig.* 2023. 115. (10): p. 587-587. Article.

- Noël, SF; Picazo, AG; de Prado, JG; Torrón, BO; Casas, DJ; Castillo, CG; Maestro, OC et al. Capsule endoscopy diagnosis of gastrointestinal melanoma. *Rev. Esp. Enferm. Dig.* 2023. 115. (12): p. 750-751. Letter.

- Justo, I; Vega, V; Marcacuzco, A; Caso, O; García Conde, M; Manrique, A; Calvo, J et al. Risk factors indicating the need for surgical therapy in patients with pyogenic liver abscesses. *Langenbecks Arch. Surg.* 2023. 408. (1): 97. Article.

- Pérez Luz, S; Lalchandani, J; Matamala, N; Barrero, MJ; Gil Martín, S; Ramos Del Saz, S; Varona, S et al. 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.

- Rodríguez Tajés, S; García Eliz, M; Marcos, AC; Varela, IC; Ros, AC; Loinaz, C; Bravo, MAG et al. The role of HBIG in real life for patients undergoing liver transplantation due to HDV-related cirrhosis. *Liver Int.* 2023. 44. (2): p. 279-285. Article.

- Picazo, AG; Novillo, VV; Martín, RG; López, AV; Alonso, IJ. High-grade dysplasia in the cystic duct after cholecystectomy. *Cir. Espan.* 2023. 101. (11): p. 805-808. Editorial Material.

- Picazo, AG; Díaz, FJP; Valiente, EA; Fajardo, DN; Alonso, IJ; Molero, FC. Gastric pneumatosis, an uncommon complication of a lung transplant, prognosis, diagnostic and treatment management. *Rev. Esp. Enferm. Dig.* 2023. 115. (9): p. 537-538. Letter.

END GRADUATED INVESTIGATIONS DIRECTED ON THE GROUP

• **Students:** Emma Conty Lafita and María Gadea Quintero.

Title: COVID en trasplantados hepáticos.

Director: Alberto Alejandro Marcacuzco Quinto.

Degree: Medicina.

University: Universidad Complutense de Madrid.

• **Students:** Patricia García Blanch and Claudia Coscolluela Ordógh.

Title: Complicaciones de la quimioembolización hepática (QETA) en los pacientes con carcinoma hepatocelular.

Director: Alberto Alejandro Marcacuzco Quinto.

Degree: Medicina.

University: Universidad Complutense de Madrid.

• **Student:** Patricia Gómez Dávila.

Title: Trasplante hepático con donantes mayores de 80 años. Análisis de supervivencia, complicaciones y resultados a largo plazo.

Director: Óscar Caso Maestro.

Degree: Medicina.

University: Universidad Complutense de Madrid.

• **Alumnos:** Rocío Chaves and Ernesto Martín.

Title: Experiencia del Hospital 12 de Octubre en trasplante de fascia no vascularizada.

Directors: Iago Justo Alonso and Óscar Caso Maestro.

Degree: Medicina.

University: Universidad Complutense de Madrid.

• **Alumna:** Marina del Valme López Orellana.

Title: Análisis de la resección vascular en cáncer de cabeza de páncreas.

Director: Iago Justo Alonso.

Degree: Medicina.

University: Universidad Complutense de Madrid.

• **Alumna:** María Eugenia Martínez-Catena Gajate.

Title: Papel de la duodenopancreatectomía cefálica en los pacientes de edad avanzada: análisis retrospectivo.

Director: Iago Justo Alonso.

Degree: Medicina.

University: Universidad Complutense de Madrid.

PRIZES AND AWARDS

• Second prize for the best non-robotic video communication for the paper "New technique for abdominal wall graft retrieval" for D. Navarro, C. Jiménez, V. Vega, A. Marcacuzco, O. Caso, J. Calvo, A. Manrique, A. García-Sesma, C. Loinaz, Iago Justo. Presented at the 45th European Hernia Society (EHS) Annual Meeting, held in Sitges (Barcelona) from May 3 to 5, 2023.

• Prize for the best communication for the work "Analysis of renal function in liver transplant patients on monotherapy with mycophenolate" for A. Marcacuzco, I. Justo, A. Berzal, A. Manrique, J. Calvo, F. Cambra, A. García-Sesma, C. Loinaz, C. Jiménez. Presented at the X Congreso de la Sociedad Madrileña de Trasplante, held in Madrid, November 22-24, 2023.

* Publications: only "Article", "Review", "Editorial Material" and "Letter" have been selected in "Document Type" of ISI Web Of Knowledge. The breakdown of publications includes some not included in the 2022 JCR, which are therefore not taken into account in the final count shown in the table, since they do not have IF.

Kidney Transplant

CENTER: Hospital Universitario 12 de Octubre (HU12O).

GROUP LEADER: Andrés Belmonte, Amado (R4).

Auñón Rubio, María Pilar - Junior clinical researcher.
Bello Mimblera, Tomás - Support technician.
Cebrián Espejo, M.ª Paz - Support nurse.
Delgado Arranz, María Isabel - Support technician.
Díez Sanmartín, Covadonga - Predoctoral researcher (R1).
García Santiago, Ana - Predoctoral researcher (R1).
Gutiérrez Solís, Elena - Junior clinical researcher.
Hernández Vallejo, Gonzalo - Principal investigator. (PI) (R4).
Hernández Vicente, Ana María - Junior clinical researcher.

López-Pintor Muñoz, Rosa María - Principal investigator. (PI) (R4).
Mercado Valdivia, Verónica Ruth - Predoctoral researcher (R1).
Molina Gómez, María - Predoctoral researcher (R1).
Nuño Santana, Enriqueta Isabel - Support nurse.
Polanco Fernández, Natalia Inmaculada - Junior clinical researcher.
Sarasa Cabezuolo, Antonio - Doctoral researcher (R3).
Sierra Rodríguez, José Luis - Principal investigator. (PI) (R4).
Vázquez Guntín, Sofía - Support nurse.
Vereda Rodríguez, Soledad - Support nurse.

ACTIVE RESEARCH PROJECTS

Type of funding	Funding body	No. of projects
No competitive	GlaxoSmithKline, S.A.	1
Total		1

- **Title:** Influencia de la correlación clínico-histológica en el pronóstico de la nefritis lúpica.
Principal investigator: Gutiérrez Solís, Elena.
Funding body: GlaxoSmithKline, S.A.
Start date: 01/01/2023.
End date: 31/12/2024.

OTHER ACTIVE PROJECTS OF THE RESEARCH GROUP NOT MANAGED BY THE FUNDACIÓN PARA LA INVESTIGACIÓN BIOMÉDICA DEL HOSPITAL 12 DE OCTUBRE (FIBH12O)

- **Title:** Repositories Operated with Grammars: Navigation, Personalization and Intelligence Aspects (REGRANAPIA).
Principal investigators: María de las Mercedes Gómez Albarrán y Antonio Sarasa Cabezuolo.
Project No.: PID2021-123048NB-I00.
Funding body: Ministerio de Ciencia e Innovación. Agencia Estatal de Investigación
Start date: 2022.
End date: 2024.

PUBLICATIONS*

Type of Document	No. of document	Σ IF (JCR 2022)
Articles	13	75.508
Editorials	1	.6
Total	14	78.108
Letters	1	6.5
Total	15	84.608

* Publications: only "Article", "Review", "Editorial Material" and "Letter" have been selected in "Document Type" of ISI Web Of Knowledge. The breakdown of publications includes some not included in the 2022 JCR, which are therefore not taken into account in the final count shown in the table, since they do not have IF.

Articles

- Alonso, F; de Francisco, ALMM; Auñón, P; García Carro, C; García, P; Gutiérrez, E; Macía, M et al. Adverse renal effects of check-point inhibitors (ICI) in cancer patients: Recommendations of the Onco-nephrology Working Group of the Spanish Society of Nephrology. *Nefrología*. 2023. 43. (5): p. 622-635. Article.
- Bruminhent, J; López Medrano, F; Pogatchnik, BP; Nascimento, E; Namsiripongpun, W; Yingchoncharoen, T; Ngodngamthaweesuk, M et al. Lung abscess and empyema in a heart transplant recipient from Thailand. *Transpl. Infect. Dis.* 2023. 25. (1): e13984. Article.
- Caravaca Fontan, F; Polanco, N; Villacorta, B; Buxeda, A; Coca, A; Avila, A; Martinez Gallardo, R et al. Recurrence of immune complex and complement-mediated membranoproliferative glomerulonephritis in kidney transplantation. *Nephrol Dial Transplant*. 2023. 38. (1): p. 222-235. Article.
- Díez Sanmartín, C; Cabezuolo, AS; Belmonte, AA. A new approach to predicting mortality in dialysis patients using sociodemographic features based on artificial intelligence. *Artif. Intell. Med.* 2023. 136. p. 102478-102478. Article.
- Faraldo Cabana, A; Sánchez Fructuoso, A; Pérez Flores, I; Beneit Montesinos, JV; Muñoz Jiménez, D; Jiménez, BP; Arredondo, SA et al. Development of an Information Guideline for Kidney Transplant Recipients in a Clinical Trial: Protocol for a Modified Delphi Method. *JMIR RES. Protoc.* 2023. 12. e46961. Article.
- Fernandez Ruiz, M; Almendro Vazquez, P; Redondo, N; Ruiz Merlo, T; Abella, S; Somoza, A; Lopez Medrano, F et al. Cell-mediated and Neutralizing Antibody Responses to the SARS-CoV-2 Omicron BA.4/BA.5-adapted Bivalent Vaccine Booster in Kidney and Liver Transplant Recipients. *Transplant. Direct.* 2023. 9. (10): e1536. Article.
- Fernández Ruiz, M; García Ríos, E; Redondo, N; Rodríguez Goncer, I; Ruiz Merlo, T; Parra, P; Sandonis, V et al. Dynamics and Clinical Significance of Cytomegalovirus-Specific Neutralizing Antibodies in Kidney Transplant Recipients Treated with T-Cell-Depleting Agents. *J. Infect. Dis.* 2023. Article.
- Fernández Ruiz, M; Moreno, BS; Almeda, JS; Rodríguez Goncer, I; Ruiz Merlo, T; Redondo, N; López Medrano, F et al. Previous use of statins does not improve the outcome of bloodstream infection after kidney transplantation. *Transpl. Infect. Dis.* 2023. 25. (5). Article.
- Fernández Ruiz, M; Redondo, N; Parra, P; Ruiz Merlo, T; Rodríguez Goncer, I; Polanco, N; González, E et al. Comparison of intracellular cytokine staining versus an ELISA-based assay to assess CMV-specific cell-mediated immunity in high-risk kidney transplant recipients. *J. Med. Virol.* 2023. 95. (4). Article.
- Forqué, L; Fernández Ruiz, M; Albert, E; Giménez, E; Monzó, C; Chaves, J; Redondo, N et al. Dynamics of Human Anelloviruses in Plasma and Clinical Outcomes Following Kidney Transplantation. *Transplantation*. 2023. 107. (2): p. 511-520. Article.
- González Cuadrado, C; Caro Espada, PJ; Chivite Lacaba, M; Utrero Rico, A; Lozano Yuste, C; Gutierrez Solis, E; Morales, E et al. Hemodialysis-Associated Immune Dysregulation in SARS-CoV-2-Infected End-Stage Renal Disease Patients. *Int. J. Mol. Sci.* 2023. 24. (2). Article.
- Rodríguez Almaraz, E; Gutiérrez Solís, E; Rabadán, E; Rodríguez, P; Alonso, M; Carmona, L; de Yébenes, MJG et al. Searching for a prognostic index in lupus nephritis. *Eur. J. Med. Res.* 2023. 28. (1): p. 19-19. Article.
- Rubio Chacón, C; Mateos Rodríguez, A; Neria Serrano, F; Del Rio Gallegos, F; Andrés Belmonte, A. Influence of donor capnometry on renal graft evolution in uncontrolled donation after circulatory death. *Resuscitation*. 2023. 189. 109863. Article.
- Silva, JT; Montoro, J; Asin, MAPJ; Fernandez Ruiz, M; Polanco, N; Gonzalez, E; Caro Teller, JM et al. A joint program of antimicrobial stewardship and hospital-acquired infection control to reduce healthcare-associated infections after kidney transplantation: The Hipomenes study. *Am. J. Transplant*. 2023. 23. (12): p. 1949-1960. Article.

Editorials

- Gutiérrez, E; Trujillo, H; Aubert, L; Sandino, J; Auñón, P; Cavero, T; Morales, E et al. Why should genetic testing be incorporated into routine clinical practice in nephrology? The utility of specialized clinics. An emerging need. *Nefrología*. 2023. 43. (2): p. 161-166. Editorial Material.

Letters

- Rubio Chacón, C; Mateos Rodríguez, A; Neria Serrano, F; Rio Gallegos, FD; Andres Belmonte, A. Reply to pre hospital interventions and organ donation in out of hospital cardiac arrest. *Resuscitation*. 2023. 193. 110030. Letter.

END GRADUATED INVESTIGATIONS DIRECTED ON THE GROUP

- **Student:** María Caridad Burgos Galán (DG-ADE) and Guzmán Fernández Ocaña (DG-ADE).
Title: Aplicación web para la predicción y recomendación de tratamiento para el cáncer de vejiga.
Director: Antonio Sarasa Cabezuelo and Víctor Manuel Carrero López.
Degree: doble grado Derecho - Administración y Dirección de Empresas.
University: Universidad Complutense de Madrid.
- **Student:** Jorge Díaz Giannini (DG-ADE), David Domínguez Zorita (DG-ADE), Alejandro Milla Ramírez (DG-ADE) and Óscar Froiz Rodríguez (DG-ADE).
Title: Calculadoras de riesgo en pacientes oncológicos.
Director: Antonio Sarasa Cabezuelo and Javier Cambronero.
Degree: doble grado Derecho - Administración y Dirección de Empresas.
University: Universidad Complutense de Madrid.
- **Student:** Rodrigo Castañón Martínez (GII).
Title: Desarrollo de un sistema de ayuda a la gestión de pacientes de un médico.
Director: Antonio Sarasa Cabezuelo.
Degree: Ingeniería Informática.
University: Universidad Complutense de Madrid.
- **Student:** Sandra Ramos Ramos (DG-ADE) and Iván Ledesma Casado (DG-ADE).
Title: Desarrollo de un sistema de recomendación de menús de comidas para dietas.
Director: Antonio Sarasa Cabezuelo.
Degree: doble grado Derecho - Administración y Dirección de Empresas.
University: Universidad Complutense de Madrid.
- **Student:** Roberto Torres Prensa (GII).
Title: Evolución y diagnóstico del cancer de próstata con algoritmos e inteligencia artificial.
Director: Antonio Sarasa Cabezuelo and Víctor Manuel Carrero López.
Degree: Ingeniería Informática.
University: Universidad Complutense de Madrid.
- **Student:** Arancha Ferrín Araus (GII).
Title: Gestión integral de una consulta de Urología y lista de espera quirúrgica.
Director: Antonio Sarasa Cabezuelo and Javier Cambronero.
Degree: Ingeniería Informática.
University: Universidad Complutense de Madrid.
- **Student:** Alejandro Plázer Arnaz (GDV), Daniel García-Villarrubia López-Menchero (GDV).
Title: Juegos *on line* para mejorar la adquisición de competencias en Patología Médica Bucal en alumnos de grado de Odontología.
Director: Antonio Sarasa Cabezuelo and Rosa María López-Pintor Muñoz.
Degree: Desarrollo de Videojuegos.
University: Universidad Complutense de Madrid.

COORDINATOR:

Miguel Ángel Martín Casanueva

Physical Exercise and Pediatric Cancer
Rare, Mitochondrial, and Neuromuscular Diseases
ALS Research Group
Mitochondrial Membranes Laboratory
Regulation of Cellular Homeostasis

The Area of Rare and Genetically Based Diseases is made up of three groups with a more clinical-basic profile and with extensive experience in the field of the Hospital Universitario 12 de Octubre, focused on some genetically based rare diseases such as mitochondrial disorders, neurometabolic diseases, ALS, heme and iron metabolism disorders (porphyrias, rare anemias and hemochromatosis), and iron metabolism disorders (porphyrias, rare anemias and hemochromatosis), and by two other groups with a more basic orientation, of academic trajectory, which with different biological approaches (LMM-UCM biophysics and RHC-CBM cell biology) have as a large part of their activity the study of mitochondrial dysfunction.

Cooperative development objectives set in the area:

- No. of new intra-area collaborative research lines: 1/5 years. Degree of achievement: low.
- No. of projects requested by several research groups: 2/5 years. Degree of achievement: low.
- No. of publications signed by members of two or more groups in the area: 1/year. Degree of achievement: high.
- No. of publications signed with other i+12 areas: 2/year. Degree of achievement: high.
- No. of area meetings held: 2/year. Degree of achievement: medium.
- No. of TFG and TFM co-directed among several groups: 2/5 years. Degree of achievement: low.
- No. of collaborative science dissemination events: 1/year. Degree of achievement: high.
- No. of meetings with patient associations: 1/year. Degree of achievement: high.
- No. of participations in congresses by various groups: 2/5 years. Degree of achievement: medium.
- No. of groups newly incorporated to the area: 1/5 years. Degree of achievement: high.

List of the 5 most relevant publications of the Rare and Genetically Based Diseases Area during 2023

The following are the 5 most relevant publications of the Area of Rare and Genetically Based Diseases selected on the basis of original articles led by researchers of the Area, published in quartile 1 of their thematic category in JCR and most frequently cited:

1. **Fiuzza Luces, C;** Valenzuela, PL; **Galvez, BG;** Ramirez, M; Lopez Soto, A; Simpson, RJ; Lucia, A. The effect of physical exercise on anticancer immunity. *Nat. Rev. Immunol.* 2023. Article.
2. González, DV; Makowski, M; Lillo, MP; Cao Garcia, FJ; Melo, MN; **Almendro Vedia, VG; López Montero, I.** Rotation of the c-Ring Promotes the Curvature Sorting of Monomeric ATP Synthases. *Adv. Sci.* 2023. 10. (31): 2301606. Article.
3. González, D; Jara, J; **Almendro Vedia, VG;** Orgaz, B; **López Montero, I.** Expansion microscopy applied to mono- and dual-species biofilms. *npj Biofilms Microbomes.* 2023. 9. (1): 92. Article.
4. **Amate García, G;** Ballesta Martínez, MJ; **Serrano Lorenzo, P;** **Garrido Moraga, R;** **González Quintana, A;** **Blázquez, A;** **Rubio, JC;** **García-Consuegra, I;** **Arenas, J;** **Ugalde, C;** **Morán, M;** Guillén-Navarro, E; et **Martín, MA.** A Novel Mutation Associated with Neonatal Lethal Cardiomyopathy Leads to an Alternative Transcript Expression in the X-Linked Complex I NDUFB11 Gene. *Int. J. Mol. Sci.* 2023. 24. (2): 1743. Article.
5. **de la Torre, MF;** **Fiuzza Luces, C;** **Laine Menéndez, S;** **Delmiro, A;** **Arenas, J;** **Martín, MA;** **Lucia, A et Moran, MJ.** Pathophysiology of Cerebellar Degeneration in Mitochondrial Disorders: Insights from the Harlequin Mouse. *Int. J. Mol. Sci.* 2023. 24. (13): 10973. Article.

Physical Exercise and Pediatric Cancer

CENTER: Hospital Universitario 12 de Octubre (HU12O) and Universidad Complutense de Madrid (UCM).

GROUP LEADER: Fiuza Luces, Carmen (R3).

Caro Barri, Ana Teresa - Graduate researcher.
Garrido Rodríguez, Eva - Predoctoral researcher (R1).
González Gálvez, Beatriz - Doctoral researcher (R3).

Higes Núñez, Félix - Graduate researcher.
Pérez Alonso, Vanesa - Senior Clinical Researcher
Yagüe Peñuelas, Rodrigo - Predoctoral researcher (R1).

ACTIVE RESEARCH PROJECTS

Type of funding	Funding body	No. of projects
Competitive	ISCIII	1
No competitive	Various	1
Total		2

- Title:** Ejercicio físico y asesoramiento en salud para adolescentes con cáncer. Una visión integradora.
Principal investigator: Fiuza Luces, Carmen.
Project No.: PI20/00645.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2021.
End date: 31/12/2023; extended to 30/06/2025.
- Title:** Ejercicio físico durante el tratamiento contra el cáncer en adolescentes.
Principal investigator: Fiuza Luces, Carmen.
Funding body: Fundación Aladina.
Start date: 22/09/2020.
End date: 21/09/2023; extended to 30/09/2024.

OTHER ACTIVE PROJECTS OF THE RESEARCH GROUP NOT MANAGED BY THE FUNDACIÓN PARA LA INVESTIGACIÓN BIOMÉDICA DEL HOSPITAL 12 DE OCTUBRE (FIBH12O)

- Title:** Exercise and lifestyle intervention for patients with adolescent cancer: a randomised controlled trial.
Principal investigators: Alejandro Lucía and Carmen Fiuza Luces.
Project No.: #IIG_FULL_2021_007.
Funding body: World Cancer Research Fund International.
Start date: April 2022.
End date: April 2026.

PUBLICATIONS*

Type of Document	No. of document	Σ IF (JCR 2022)
Articles	5	113.9
Reviews	1	39.3
Editorials	1	5.5
Total	7	158.7

Articles

- Centeno Malfaz, F; Moráis López, A; Caro Barri, A; Peña Quintana, L; Gil Villanueva, N; Redecillas Ferreiro, S; Marcos Alonso, S et al. Nutrition in congenital heart disease: Consensus document. *An. Pediatr.* 2023. 98. (5): p. 373-383. Article.
- de la Torre, MF; Fiuza Luces, C; Laine Menéndez, S; Delmiro, A; Arenas, J; Martin, MA; Lucia, A et al. Pathophysiology of Cerebellar Degeneration in Mitochondrial Disorders: Insights from the Harlequin Mouse. *Int. J. Mol. Sci.* 2023. 24. (13): 10973. Article.
- Fiuza Luces, C; Valenzuela, PL; Galvez, BG; Ramirez, M; Lopez Soto, A; Simpson, RJ; Lucia, A. The effect of physical exercise on anticancer immunity. *Nat. Rev. Immunol.* 2023. Article.
- García Morin, M; Bardón Cancho, EJ; Beléndez, C; Dulín, E; Blanco Soto, P; Puertas López, C; Prieto Medina, M et al. Madrid Newborn Sickle Cell Disease Cohort: clinical outcomes, stroke prevention and survival. *Ann. Hematol.* 2023. Article.
- Matey Rodríguez, C; Lopez Ortiz, S; Penin Grandes, S; Pinto Fraga, J; Valenzuela, PL; Pico, M; Fiuza Luces, C et al. Validation and Determination of Physical Activity Intensity GT3X+ Cut-Points in Children and Adolescents with Physical Disabilities: Preliminary Results in a Cerebral Palsy Population. *Children-Basel.* 2023. 10. (3): 475. Article.

Reviews

- Valenzuela, PL; Ruilope, LM; Santos Lozano, A; Wilhelm, M; Kränkel, N; Fiuza Luces, C; Lucia, A. Exercise benefits in cardiovascular diseases: from mechanisms to clinical implementation. *Eur Heart J.* 2023. 44. (21): p. 1874-1889. Review.

Editorials

- Valenzuela, PL; Santos Lozano, A; Fiuza Luces, C; Lucia, A. What time of the day should I exercise? *J. Physiol.-London.* 2023. Editorial Material.

Letters

- Soto, AM; de la Torre, LA; Fernández, MF; Linde, DH; Vázquez, BT; Barri, AC. Interventional catheterization in pediatric patients after Fontan procedure. *REC-Interv. Cardiol.* 2023. 6. (1). Letter.

END MASTER INVESTIGATIONS DIRECTED ON THE GROUP

- Student:** Miguel Caballero Monteiro and Rodrigo Yagüe Peñuelas.
Title: Condición física y calidad de vida en adolescentes con cáncer: estudio piloto con programa de entrenamiento físico.
Director: Carmen Fiuza Luces.
Master: Actividad Física y Salud.
University: Universidad Europea de Madrid.

* Publications: only "Article", "Review", "Editorial Material" and "Letter" have been selected in "Document Type" of ISI Web Of Knowledge. The breakdown of publications includes some not included in the 2022 JCR, which are therefore not taken into account in the final count shown in the table, since they do not have IF.

Rare, Mitochondrial, and Neuromuscular Diseases

CENTER: Hospital Universitario 12 de Octubre (HU12O).

GROUP LEADER: Martín Casanueva, Miguel Ángel (R4).

Amate García, Guillermo - Predoctoral researcher (R1).
Arenas Barbero, Joaquín - Principal investigator (PI).
Bellusci, Marcello - Predoctoral researcher (R1).
Blázquez Encinar, Alberto - Predoctoral researcher (R1).
Canlas Pangilinan, Ericka Joy - Support technician.
Carballo Piris, Ana María - Support technician.
Cotrina Vinagre, Francisco Javier - Predoctoral researcher (R1).
Del Hoyo Gordillo, María del Pilar - Support technician.
Delmiro Magdalena, Aitor - Technical manager.
Domínguez González, Cristina - Doctoral researcher (R3).
Fernández de la Torre, Miguel - Predoctoral researcher (R1).
Fernández García, Borja - Graduate researcher.
García-Silva, María Teresa - Senior researcher.
García-Consuegra Galiana, Inés - Technical Manager.
Garrido Moraga, Rocío - Support technician.
González Quintana, Adrián - Postdoctoral researcher (R2).

Illescas García, María - Predoctoral researcher (R1).
Iniesta del Río, Paula María - Support technician.
Jiménez García, Sara - Support technician.
Laine Menéndez, Sara - Predoctoral researcher (R1).
López Calcerrada, Sandra - Predoctoral researcher (R1).
Martín Hernández, Elena - Senior Clinical Researcher
Martínez Azorín, Francisco - Principal investigator (PI) (R4).
Morales Conejo, Montserrat - Principal investigator. (PI).
Morán Bermejo, María Jesús - Principal investigator. (PI) (R4).
Navarro Riquelme, María - Graduate researcher.
Peñas Pita da Veiga, Ana - Predoctoral researcher (R1).
Quijada Fraile, María del Pilar - Doctoral researcher (R2).
Rubio Muñoz, Juan Carlos - Doctoral researcher (R3).
Serrano Lorenzo, Pablo - Postdoctoral researcher (R2).
Ugalde Bilbao, Cristina - Principal investigator. (PI) (R4).

ACTIVE RESEARCH PROJECTS

Type of funding	Funding body	No. of projects
Competitive	Comunidad de Madrid	1
Competitive	ISCIII	6
Competitive	University of Miami	1
No competitive	Various	4
Total		12

- **Title:** The biosynthetic pathway of mitochondrial respirasomes.
Principal investigator: Ugalde Bilbao, Cristina.
Funding body: University of Miami.
Start date: 01/02/2017.
End date: 31/05/2018; extended to 30/06/2023.
- **Title:** Correlación clínico-genómica, y estudio celular de patomecanismos y cribado farmacológico en pacientes con enfermedades mitocondriales OXPHOS.
Principal investigator: Martín Casanueva, Miguel Ángel.
Project No.: PI18/01374.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2019.
End date: 31/12/2021, extended to 30/06/2023.
- **Title:** I+D soluciones interdisciplinares con control de edición génica al déficit bioenergético OXPHOS - P2018/BAA-4403 - SINOXPHOS-CM.
Principal investigator: Ugalde Bilbao, Cristina.
Project No.: P2018/BAA-4403.
Funding body: Comunidad de Madrid.
Start date: 01/01/2019.
End date: 31/12/2022; extended to 30/04/2023.
- **Title:** Desarrollo de nuevas herramientas para el diagnóstico y tratamiento de las enfermedades mitocondriales OXPHOS.
Principal investigator: Ugalde Bilbao, Cristina.
Project No.: PI20/00057.
Funding body: Instituto de Salud Carlos III (ISCIII).

- **Title:** Identificación de nuevos genes causantes de enfermedades raras en pacientes pediátricos, identificación de dianas farmacológicas, y descubrimiento de fármacos, los pasos para una medicina personalizada.
Principal investigator: Martínez Azorín, Francisco.
Project No.: PI20/00150.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2021.
End date: 31/12/2023; extended to 30/06/2025.
- **Title:** Nuevas intervenciones terapéuticas adyuvantes para enfermedades mitocondriales.
Principal investigator: M.ª Jesús Morán Bermejo.
Project No.: PI20/00147.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2021.
End date: 31/12/2023; extended to 30/06/2025.
- **Title:** Enfermedades raras mitocondriales: estrategia de análisis funcional de nuevas variantes genéticas y papel fisiopatológico de genes OXPHOS multifuncionales.
Principal investigator: Martín Casanueva, Miguel Ángel.
Project No.: PI21/00381.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2022.
End date: 31/12/2024.

- **Title:** Estudio de historia natural en miopatías de origen mitocondrial
Principal investigator: Domínguez González, Cristina
Project No.: PI22/01587.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2023.
End date: 31/12/2025.
- **Title:** Identificación de la causa genético-molecular en pacientes con fenotipos, clínicos, bioquímicos y moleculares de enfermedad mitocondrial del sistema de fosforilación oxidativa (OXPHOS).
Principal investigator: Martín Casanueva, Miguel Ángel.
Funding body: Asociación de Enfermedades de Patologías Mitocondriales.
Start date: 29/11/2016.
End date: 28/11/2019, extended to 31/12/2023.
- **Title:** Registro de enfermedades genéticas y de baja prevalencia (GENRARE).
Principal investigator: Bellusci, Marcello.
Funding body: Asociación de Enfermedades de Patologías Mitocondriales.
Start date: 03/04/2019.
End date: 02/04/2021; extended to 31/12/2023.

- **Title:** MITODIET: Nutrición personalizada en trastornos neurológicos relacionados con desregulación del metabolismo energético mitocondrial. Nuevas aplicaciones de la dieta cetogénica.
Principal investigator: Bellusci, Marcello.
Funding body: Nutricia Advanced Medical Nutrition.
Start date: 01/06/2020.
End date: 01/10/2022; extended to 31/10/2023.
- **Title:** Actualización del registro de las enfermedades del ciclo de la urea en España.
Principal investigator: Martín Hernández, Elena.
Funding body: Eurocept International B. V.
Start date: 08/11/2023.
End date: 07/11/2024.

OTHER ACTIVE PROJECTS OF THE RESEARCH GROUP NOT MANAGED BY THE FUNDACIÓN PARA LA INVESTIGACIÓN BIOMÉDICA DEL HOSPITAL 12 DE OCTUBRE (FIBH12O)

- **Title:** Identificación de proteínas mitocondriales clave en los procesos de inflamación e infección bacteriana mediante tecnología CRISPR-Cas9: nuevas opciones terapéuticas para la sepsis.
Principal investigator: Antonio Orduña Domingo.
Researcher/olaborador: Miguel Ángel Martín Casanueva.
Project No.: GRS 2201/A/2020.
Funding body: Junta de Castilla y León. Consejería de Sanidad.
Start date: 01/07/2021.
End date: 30/06/2023.
- **Title:** Enfermedades mitocondriales asociadas al mecanismo de importación y plegamiento oxidativo de proteínas en el espacio intermembrana de la mitocondria. Mecanismos moleculares y desarrollo de nuevas estrategias terapéuticas (EMPLOXPRO).
Principal investigator: Patricia Ferreira Neila.
Collaborating researcher of the ERMN group: María Morán Bermejo.
Project No.: LMP27_21.
Funding body: Gobierno de Aragón. I+D+i projects in priority and multidisciplinary lines, call for proposals 2021-2023.
Start date: 01/01/2022.
End date: 31/12/2023.
- **Title:** Mitochondrial Biogenesis in Health and Disease.
Principal investigator: Cristina Ugalde Bilbao.
Project No.: 5R35GM118141-08.
Funding body: NIH-NIGMS - National Institute of General Medical Sciences.
Start date: 01/06/2021.
End date: 31/05/2026.
- **Title:** Development of new analytic tools and pathways to accelerate diagnosis and facilitate diagnostic monitoring of rare diseases.
Principal investigator: Rafael Artuch, H. Sant Joan de Deu (Barcelona). We have been participating as a Spanish partner group since CIBER of Rare Diseases (CIBERER).
Project No.: AC22/00049.
Funding body: European Joint Programme on Rare Disease (EJP-RD), gestionado por acciones complementarias del ISCIII.
Start date: 01/01/2021.
End date: 31/12/2025.

PUBLICATIONS*

Type of Document	No. of document	Σ IF (JCR 2022)
Articles	28	155.916
Reviews	2	14.3
Total	30	170.216
Letters	1	5.1
Total	31	175.316

Articles

- Amate García, G; Ballesta Martínez, MJ; Serrano Lorenzo, P; Garrido Moraga, R; González Quintana, A; Blázquez, A; Rubio, JC et al. A Novel Mutation Associated with Neonatal Lethal Cardiomyopathy Leads to an Alternative Transcript Expression in the X-Linked Complex I NDUFB11 Gene. *Int. J. Mol. Sci.* 2023. 24. (2): 1743. Article.
- Aye, CC; Hammond, DE; Rodríguez Cuenca, S; Doherty, MK; Whitfield, PD; Phelan, MM; Yang, CJ et al. CBL/CAP Is Essential for Mitochondria Respiration Complex I Assembly and Bioenergetics Efficiency in Muscle Cells. *Int. J. Mol. Sci.* 2023. 24. (4): 3399. Article.
- Baden, P; Perez, MJ; Raji, H; Bertoli, F; Kalb, S; Illescas, M; Spanos, F et al. Glucocerebrosidase is imported into mitochondria and preserves complex I integrity and energy metabolism. *Nat. Commun.* 2023. 14. (1). Article.
- Bermejo Guerrero, L; de la Hoz, CPDF; Guerrero Molina, MP; Martín Jiménez, P; Blázquez, A; Serrano Lorenzo, P; Lora, D et al. Serum GDF-15 Levels Accurately Differentiate Patients with Primary Mitochondrial Myopathy, Manifesting with Exercise Intolerance and Fatigue, from Patients with Chronic Fatigue Syndrome. *J. Clin. Med.* 2023. 12. (6): 2435. Article.
- Bermejo Guerrero, L; Fernández de la Hoz, CPD; González Quereda, L; Segarra Casas, A; Nedkova, V; Gallano, P; Martín Jiménez, P et al. Distal myopathy due to digenic inheritance of TIA1 and SQSTM1 variants in two unrelated Spanish patients. *Neuromusc. Disord.* 2023. 33. (12): p. 983-987. Article.
- Bernal Tirapo, J; Bayo Jiménez, MT; Yuste García, P; Cordova, I; Peñas, A; García Borda, FJ; Quintela, C et al. Evaluation of Mitochondrial Function in Blood Samples Shows Distinct Patterns in Subjects with Thyroid Carcinoma from Those with Hyperplasia. *Int. J. Mol. Sci.* 2023. 24. (7): 6453. Article.
- Cerrada, V; García Consuegra, I; Arenas, J; Gallardo, ME. Creation of an iPSC-Based Skeletal Muscle Model of McArdle Disease Harboring the Mutation c.2392T>G; C (p.Trp798Arg) in the PYGM Gene. *Biomedicines.* 2023. 11. (9): 2434. Article.
- de Bruyn, A; Montagnese, F; Holm Yildiz, S; Poulsen, NS; Stojkovic, T; Behin, A; Palmio, J et al. Anoctamin-5 related muscle disease: clinical and genetic findings in a large European cohort. *Brain.* 2023. 146. (9): p. 3800-3815. Article.
- de la Hoz, CPD; Lupo, V; Bermejo Guerrero, L; Martín Jiménez, P; Hernández Laín, A; Olive, M; Gallardo, E et al. Distal hereditary motor neuropathy as a new phenotype associated with variants in BAG3. *J. Neurol.* 2023. 271. (2): p. 986-994. Article.
- de la Torre, MF; Fiuza Lucas, C; Laine Menéndez, S; Delmiro, A; Arenas, J; Martín, MA; Lucia, A et al. Pathophysiology of Cerebellar Degeneration in Mitochondrial Disorders: Insights from the Harlequin Mouse. *Int. J. Mol. Sci.* 2023. 24. (13): 10973. Article.
- Errazquin, R; Carrasco, E; Del Marro, S; Suñol, A; Peral, J; Ortiz, J; Rubio, JC et al. Early Diagnosis of Oral Cancer and Lesions in Fanconi Anemia Patients: A Prospective and Longitudinal Study Using Saliva and Plasma. *Cancers.* 2023. 15. (6): 1871. Article.
- Esteller, D; Schiava, M; Villar Quiles, RN; Dibowski, B; Venturelli, N; Laforet, P; Alonso Pérez, J et al. Analysis of muscle magnetic resonance imaging of a large cohort of patient with VCP-mediated disease reveals characteristic features useful for diagnosis. *J. Neurol.* 2023. 270. (12): p. 5849-5865. Article.
- Gobelli, D; Serrano Lorenzo, P; Esteban Amo, MJ; Serna, J; Perez Garcia, M; Orduña, A; Jourdain, AA et al. The mitochondrial succinate dehydrogenase complex controls the STAT3-IL-10 pathway in inflammatory macrophages. *iScience.* 2023. 26. (8): 107473. Article.
- González Moreno, L; Santamaría Cano, A; Paradela, A; Martínez Chantar, ML; Martín, MA; Pérez Carreras, M; García Picazo, A et al. Exogenous aralar/slc25a12 can replace citrin/slc25a13 as malate aspartate shuttle component in liver. *Molec. Genet. Metab. Rep.* 2023. 35. 100967. Article.
- González Quintana, A; Garrido Moraga, R; Palencia Pérez, SI; Hernández Martín, A; Sánchez Munárriz, J; Lezana Rosales, JM; Quesada Espinosa, JF et al. Integration of Phenotype Term Prioritization and Gene Expression Analysis Reveals a Novel Variant in the PERP Gene Associated with Autosomal Recessive Erythrokeratoderma. *Genes.* 2023. 14. (7): 1494. Article.
- Guerrero Molina, MP; Bernabeu Sanz, A; Ramos González, A; Morales Conejo, M; Delmiro, A; Domínguez González, C; Arenas, J et al. Magnetic resonance spectroscopy in MELAS syndrome: correlation with CSF and plasma metabolite levels and change after glutamine supplementation. *Neuroradiology.* 2023. 66. (3): p. 389-398. Article.
- Guerrero Molina, MP; Morales Conejo, M; Delmiro, A; Morán, M; Domínguez González, C; Arranz Canales, E; Ramos González, A et al. High-dose oral glutamine supplementation reduces elevated glutamate levels in cerebrospinal fluid in patients with mitochondrial encephalomyopathy, lactic acidosis and stroke-like episodes syndrome. *Eur. J. Neurol.* 2023. 30. (2): p. 538-547. Article.
- Justel, M; Jou, C; Sariego Jamarco, A; Juliá Palacios, NA; Ortez, C; Poch, ML; Hedrera Fernandez, A et al. Expanding the phenotypic spectrum of TRAPPC11-related muscular dystrophy: 25 Roma individuals carrying a founder variant. *J. Med. Genet.* 2023. 60. (10): p. 965-973. Article.

* Publications: only "Article", "Review", "Editorial Material" and "Letter" have been selected in "Document Type" of ISI Web Of Knowledge. The breakdown of publications includes some not included in the 2022 JCR, which are therefore not taken into account in the final count shown in the table, since they do not have IF.

- López, D; Roldán, G; Fernández Rueda, JL; Bostelmann, G; Carmona, R; Aquino, V; Perez Florido, J et al. A crowdsourcing database for the copy-number variation of the Spanish population. *Hum. Genomics.* 2023. 17. (1): 20. Article.
- Mayoral, IH; Santiago, AA; Sánchez Zapardiel, JM; Calero, BH; de la Hoya, M; Gómez Sanz, A; Reyes, MD et al. Unexpected Findings in Hereditary Breast and Ovarian Cancer Syndrome: Low-Level Constitutional Mosaicism in BRCA2. *Genes.* 2023. 14. (2): 502. Article.
- Muñoz García, MI; Guerrero Molina, MP; de Fuentemayor Fernández de la Hoz, CP; Bermejo Guerrero, L; Artech López, A; Hernández Laín, A; Martín, MA et al. Delayed Diagnosis of Congenital Myasthenic Syndromes Erroneously Interpreted as Mitochondrial Myopathies. *J. Clin. Med.* 2023. 12. (9): 3308. Article.
- Poveda, J; González Lafuente, L; Vázquez Sánchez, S; Mercado García, E; Rodríguez Sánchez, E; García Consuegra, I; Sanz, AB et al. Targeting the TWEAK-Fn14 pathway prevents dysfunction in cardiac calcium handling after acute kidney injury. *J. Pathol.* 2023. 261. (4): p. 427-441. Article.
- Rodríguez García, ME; Cotrina Vinagre, FJ; Sánchez Calvin, MT; de Aragón, AM; de Las Heras, RS; Dinman, JD; de Vries, BBA et al. A novel de novo variant in CASK causes a severe neurodevelopmental disorder that masks the phenotype of a novel de novo variant in EEF2. *J. Hum. Genet.* 2023. 68. (8): p. 543-550. Article.
- Rosado Bartolomé, A; Domínguez González, C. Tarjeta de emergencias médicas para la enfermedad de Steinert: una necesidad desatendida. *Rev. Neurología.* 2023. 76. (1): p. 15-19. Article.
- Serrano Gonzalo, I; de Frutos, LL; Lahoz Gil, C; Delgado Mateos, F; Fernández Galán, M; Morales Conejo, M; Calle Gordo, M et al. Real life data: follow-up assessment on Spanish Gaucher disease patients treated with eliglustat. TRAZELGA project. *Orphanet J. Rare Dis.* 2023. 18. (1): 390. Article.
- Serrano Lorenzo, P; Gobelli, D; Garrido Moraga, R; Esteban Amo, MJ; López, JR; Orduña, A; de la Fuente, MA et al. Development of a novel in vitro model to study the modulatory role of the respiratory complex I in macrophage effector functions. *PLoS One.* 2023. 18. (9): e0291442. Article.
- Sonne, A; Peverelli, L; Hernandez Lain, A; Dominguez Gonzalez, C; Andersen, JL; Milone, M; Beggs, AH et al. Myosin post-translational modifications and function in the presence of myopathy-linked truncating MYH2 mutations. *Am. J. Physiol.-Cell Physiol.* 2023. 324. (3): p. 769-776. Article.
- Wehl, CC; Topf, A; Bengoechea, R; Duff, J; Charlton, R; Garcia, SK; Dominguez Gonzalez, C et al. Loss of function variants in DNAJB4 cause a myopathy with early respiratory failure. *Acta Neuropathol.* 2023. 145. (1): p. 127-143. Article.

Reviews

- Münch, J; Prasuhn, J; Laugwitz, L; Fung, CW; Chung, BHY; Bellusci, M; Mayatepek, E et al. Neuroimaging in Primary Coenzyme-Q₁₀-Deficiency Disorders. *Antioxidants.* 2023. 12. (3): 718. Review.

Letters

- Guerrero Molina, MP; Domínguez González, C; de la Aleja, JG. Reply: High-dose oral glutamine can reduce cerebrospinal fluid glutamate in mitochondrial encephalomyopathy, lactic acidosis, and stroke-like episodes without a beneficial clinical or cerebral tissue effect. *Eur. J. Neurol.* 2023. 30. (4): p. 1158-1159. Letter.

THESES DEFENDED OR SUPERVISED WITHIN THE GROUP

- **Doctoral candidate:** María Illescas García.
Thesis title: Functional involvement of actin-binding gelsolin in mitochondrial OXPHOS dysfunction.
University: Universidad Autónoma de Madrid.
Date read: 18/09/2023.
Thesis director: Cristina Ugalde Bilbao.
International mention: No.
- **Doctoral candidate:** Francisco Javier Cotrina Vinagre
Thesis title: Medicina personalizada de enfermedades raras: del diagnóstico genético al fármaco.
University: Universidad Autónoma de Madrid.
Date read: 03/11/2023.
Thesis director: Cristina Francisco Martínez Azorín.
International mention: No.

END MASTER INVESTIGATIONS DIRECTED ON THE GROUP

- Student:** Alba Moreno Jerez.
Title: Functionlisation of a new protein involved in the regulation of the mitochondrial OXPHOS system: C20RF76.
Director: Cristina Ugalde Bilbao.
Master: Investigación en Medicina Traslacional.
University: Universidad Complutense de Madrid.
- Student:** Paula San Román Ruiz.
Title: Functionlisation of a new protein involved in the regulation of the mitochondrial OXPHOS system: KBP.
Director: Cristina Ugalde Bilbao.
Master: Investigación en Medicina Traslacional.
University: Universidad Complutense de Madrid.

END GRADUATED INVESTIGATIONS DIRECTED ON THE GROUP

- Student:** Fernando Santiago Hontoria.
Title: Análisis Enzimático, Respirométrico y Estructural del Sistema OXPHOS en Fibroblastos de Piel de un Paciente con Variantes Bialélicas en el Gen SDHA (Subunidad A de la Succinato Deshidrogenasa).
Director: Pablo Serrano Lorenzo.
Degree: Biotecnología.
University: Universidad Politécnica de Madrid.

ALS Research Group

CENTER: Hospital Universitario 12 de Octubre (HU12O).

GROUP LEADERS: García Redondo, Alberto (R4) and Esteban Pérez, Jesús (senior clinical investigator).

Borrego Hernández, Daniel - Predoctoral researcher (R1).
Cordero Vázquez, Pilar - Manager.

Expósito Blázquez, Laura - Predoctoral researcher (R1).
Lucas Gómez, Begoña - Support nurse.

ACTIVE RESEARCH PROJECTS

Type of funding	Funding body	No. of projects
Competitive	Fundación Luzón	1
Competitive	ISCIII	1
No competitive	Various	2
Total		4

- Title:** Epigenética en el espectro ELA-DFT: comprensión de la variabilidad fenotípica y nuevos avances en medicina personalizada (I).
Principal investigator: García Redondo, Alberto.
Project No.: PI21/00286.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2022.
End date: 31/12/2024.
- Title:** Medicina personalizada para la ELA mediante el uso de novedosos sistemas sintéticos de edición - SYNCAS. Personalized medicine for als by using novel synthetic editing systems - SYNCAS.
Principal investigator: García Redondo, Alberto.
Funding body: Fundación Luzón.
Start date: 23/12/2023.
End date: 22/12/2026.

- Title:** Biomarcadores para la ELA: metabolismo de ARN.
Principal investigator: García Redondo, Alberto.
Funding body: Asociación Española de Esclerosis Lateral Amiotrófica.
Start date: 21/03/2022.
End date: 20/03/2024.
- Title:** Búsqueda de biomarcadores plasmáticos para el diagnóstico, pronóstico y de respuesta al tratamiento en la esclerosis lateral amiotrófica.
Principal investigator: García Redondo, Alberto.
Funding body: Fundación Centro de Investigación de Enfermedades Neurológicas.
Start date: 28/03/2022.
End date: 27/03/2023; extended to 31/12/2023.

PUBLICATIONS*

Type of Document	No. of document	Σ IF (JCR 2022)
Articles	4	22.408
Total	4	22.408

Articles

- Davidson, JM; Wu, SSL; Rayner, SL; Cheng, F; Duncan, K; Russo, C; Newbery, M et al. The E3 Ubiquitin Ligase SCF Cyclin F Promotes Sequestosome-1/p62 Insolubility and Foci Formation and is Dysregulated in ALS and FTD Pathogenesis. Mol. Neurobiol.2023. 60. (9): p. 5034-5054. Article.
- de la Hoz, CPD; Lupo, V; Bermejo Guerrero, L; Martín Jiménez, P; Hernández Laín, A; Olive, M; Gallardo, E et al. Distal hereditary motor neuropathy as a new phenotype associated with variants in BAG3. J. Neurol.2023. 271. (2): p. 986-994. Article.
- Porras, G; Ruiz, S; Maestro, I; Borrego Hernández, D; Redondo, AG; Martínez, A; Martín Requero, A. Functional Characterization of a Familial ALS-Associated Missense TBK1 (p-Arg573Gly) Mutation in Patient-Derived Lymphoblasts. Int. J. Mol. Sci.2023. 24. (3): 2847. Article.
- Vázquez Costa, JF; Borrego Hernández, D; Paradas, C; Gómez Caravaca, MT; Rojas Garcia, R; Varona, L; Povedano, M et al. Characterizing SOD1 mutations in Spain. The impact of genotype, age, and sex in the natural history of the disease. Eur. J. Neurol.2023. 30. (4): p. 861-871. Article.

* Publications: only "Article", "Review", "Editorial Material" and "Letter" have been selected in "Document Type" of ISI Web Of Knowledge. The breakdown of publications includes some not included in the 2022 JCR, which are therefore not taken into account in the final count shown in the table, since they do not have IF.

Mitochondrial Membranes Laboratory

CENTER: Universidad Complutense de Madrid (UCM).

GROUP LEADER: López Montero, Iván (R4).

Almendro Vedia, Víctor Galileo - Doctoral researcher (R3).
Carrillo Godoy, Nuria - Predoctoral researcher (R1).
González Cava, Daniel - Predoctoral researcher (R1).
Makowski, Marcin - Predoctoral researcher (R1).
Mateos Gil, Pablo - Doctoral researcher (R3).

Muñoz Úbeda, Mónica - Doctoral researcher (R3).
Natale, Paolo - Doctoral researcher (R3).
Peñalva, Daniel Alejandro - Postdoctoral researcher (R2).
Sacristán Fernández, Miguel Ángel - Predoctoral researcher (R1).
Valdivieso González, David - Predoctoral researcher (R1).

OTHER ACTIVE PROJECTS OF THE RESEARCH GROUP NOT MANAGED BY THE FUNDACIÓN PARA LA INVESTIGACIÓN BIOMÉDICA DEL HOSPITAL 12 DE OCTUBRE (FIBH12O)

- Title:** Soluciones interdisciplinarias con control de edición génica al déficit bioenergético OXPHOS. SINOXPHOS-CM.
Principal investigator: Iván López Montero (coordinator).
Project No.: S2018/BAA-4403.
Funding body: Comunidad de Madrid - Programa Tecnologías.
Start date: 01/01/2019.
End date: 30/04/2023.
- Title:** Do liquid crystal-like phases of proteins organize membrane compartments?
Principal investigator: Iván López Montero.
Project No.: ERC-SyG-951146.
Funding body: European Research Council.
Start date: 01/09/2021.
End date: 31/08/2027.
- Title:** The impact of cardiolipin remodelling on its interaction with ATP synthase: a combined study using coarse-grained molecular dynamics simulations and in vitro experiments.
Principal investigator: Iván López Montero.
Project No.: FEI-EU-20-06.
Funding body: Universidad Complutense de Madrid.
Start date: 01/10/2020.
End date: 30/09/2023.
- Title:** Autoensamblaje disipativo de rotores transmembrana.
Principal investigator: Iván López Montero.
Project No.: PID2021-125024NB-C22.
Funding body: Agencia Estatal de Investigación. Ministerio de Ciencia e Innovación.
Start date: 01/09/2022.
End date: 31/08/2025.

PUBLICATIONS*

Type of Document	No. of document	Σ IF (JCR 2022)
Articles	8	65.2
Total	8	65.2

Articles

- García Molina, G; Natale, P; Coito, AM; Cava, DG; A Pereira I, C; López Montero, I; Vélez, M et al. Electro-enzymatic ATP regeneration coupled to biocatalytic phosphorylation reactions. *Bioelectrochemistry*. 2023. 152. p. 108432-108432. Article.
- González, D; Jara, J; Almendro Vedia, VG; Orgaz, B; López Montero, I. Expansion microscopy applied to mono- and dual-species biofilms. *npj Biofilms Microbomes*. 2023. 9. (1): 92. Article.
- González, DV; Makowski, M; Lillo, MP; Cao García, FJ; Melo, MN; Almendro Vedia, VG; López Montero, I. Rotation of the c-Ring Promotes the Curvature Sorting of Monomeric ATP Synthases. *Adv. Sci*. 2023. 10. (31): 2301606. Article.
- Makowski, M; Almendro Vedia, VG; Domingues, MM; Franco, OL; López Montero, I; Melo, MN; Santos, NC. Activity modulation of the Escherichia coli F₁o ATP synthase by a designed antimicrobial peptide via cardiolipin sequestering. *iScience*. 2023. 26. (7): 107004. Article.
- Martín Roca, J; Bianco, V; Alarcon, F; Monnappa, AK; Natale, P; Monroy, F; Orgaz, B et al. Rheology of Pseudomonas fluorescens biofilms: From experiments to predictive DPD mesoscopic modeling. *J. Chem. Phys.* 2023. 158. (7): 074902. Article.
- Patino Alonso, J; Cabrera González, J; Merino, J; Nieto Ortiz, G; Lasala, F; Katati, J; da Cruz, CHB et al. C₆₀-based Multivalent Glycoporphyrins Inhibit SARS-CoV-2 Specific Interaction with the DC-SIGN Transmembrane Receptor. *Small*. 2023. Article.
- Ray, C; Avellanal Zaballa, E; Muñoz Ubeda, M; Colligan, J; Moreno, F; Muller, G; López Montero, I et al. Dissimilar-at-boron N-BODIPYs: from light-harvesting multichromophoric arrays to CPL-bright chiral-at-boron BODIPYs. *Org. Chem. Front.* 2023. 10. (23): p. 5834-5842. Article.
- Serrano Buitrago, S; Muñoz Ubeda, M; Almendro Vedia, VG; Sánchez Camacho, J; Maroto, BL; Moreno, F; Bañuelos, J et al. Polar ammoniostyryls easily converting a clickable lipophilic BODIPY in an advanced plasma membrane probe. *J. Mat. Chem. B*. 2023. 11. (10): p. 2108-2114. Article.

* Publications: only "Article", "Review", "Editorial Material" and "Letter" have been selected in "Document Type" of ISI Web Of Knowledge. The breakdown of publications includes some not included in the 2022 JCR, which are therefore not taken into account in the final count shown in the table, since they do not have IF.

END GRADUATED INVESTIGATIONS DIRECTED ON THE GROUP

- Student:** Lucía González Denez.
Title: Interacción de lípidos con proteínas de membrana mediante simulaciones de dinámica molecular.
Director: Iván López Montero and Marcin Makowski.
Degree: Química.
University: Universidad Complutense de Madrid.

Porphyria, Haemochromatosis and Anemia

CENTER: Hospital Universitario 12 de Octubre (HU12O).

GROUP LEADERS: Méndez Alba, Manuel (R4) and Morán Jiménez, M.ª José (R4).

ACTIVE RESEARCH PROJECTS

Type of funding	Funding body	No. of projects
Competitive	Various	1
Total		1

- **Title:** Evaluación de la administración de un quelante de hierro conjugado con una nanopartícula en ratones hemocromatósicos */ prueba de concepto.

Principal investigator: Morán Jiménez, María Josefa.

Funding body: Fundación Eugenio Rodríguez Pascual.

Start date: 19/12/2022.

End date: 18/12/2024.

PUBLICATIONS*

Type of Document	No. of document	Σ IF (JCR 2022)
Articles	1	6.208
Total	1	6.208

Articles

- Sánchez Jaut, S; Pérez Benavente, S; Abad, P; Méndez Cuadro, D; Puyet, A; Diez, A; Galicia Poblet, G et al. Protein Susceptibility to Peroxidation by 4-Hydroxynonenal in Hereditary Hemochromatosis. *Int. J. Mol. Sci.* 2023. 24. (3): 2922. Article.

* Publications: only "Article", "Review", "Editorial Material" and "Letter" have been selected in "Document Type" of ISI Web Of Knowledge. The breakdown of publications includes some not included in the 2022 JCR, which are therefore not taken into account in the final count shown in the table, since they do not have IF.

COORDINATOR:

Carmen Rosa Pallás Alonso.

Clinical Practice Appropriateness and Patient Safety

Research in Complex Patients and Health System

Research in Health Services and Results

Digital Health

Maternal and Child Health

The Area of Epidemiology and Evaluation of Technologies, Health Services and Information Systems of the Instituto de Investigación Hospital 12 de Octubre is made up of five research groups. Three of the groups integrated in the area belong to the Hospital Universitario 12 de Octubre and the other two are groups made up of researchers from Primary Care teams.

The Area's mission is to develop research activities of a multidisciplinary nature that have an impact on clinical practice and health policies.

Its objective is research on the efficacy and efficiency of health processes and interventions on the health status of individuals and populations. The intention and purpose are purely epistemological. Activities range from population-based studies to clinical research studies on effectiveness of therapeutic and diagnostic interventions, health service delivery and outcome evaluation, with special emphasis on prognostic research, information systems and patient-oriented research.

The Area is key within the R&D&I of a health and scientific field of excellence, as it provides basic and fundamental instruments in translational research and establishes the link between basic research and patient care.

Cooperative development objectives set in the area:

- Number of new intra-area collaborative research lines: 1/5 years. Degree of achievement: low.
- Number of projects requested by various research groups: 2/5 years. Degree of achievement: low.
- Number of publications signed by two or more groups in the area: 1/year. Degree of achievement: high.
- Number of publications signed with other i+12 areas: 2/year. Degree of achievement: high.
- Number of area meetings held: 2/year. Degree of achievement: low.
- Number of collaborative science dissemination events: 1/year. Degree of achievement: high.
- Number of meetings with patient associations: 1/year. Degree of achievement: high.

List of the 5 most relevant publications of the Epidemiology and Technology Assessment, Health Services and Information Systems Area during 2023

The 5 most relevant publications of the Epidemiology and Technology Assessment, Health Services and Information Systems Area, selected on the basis of original articles and reviews led by researchers in the area, published in quartile 1 and 2 of their thematic category in JCR and most frequently cited, are listed below:

1. **Ureta Velasco, N;** Keller, K; **Escuder Vieco, D;** Fontecha, J; Calvo, MV; Megino Tello, J; Serrano, JCE; **Ferreiro, CR;** **García-Lara, NR;** **et Pallás-Alonso, CR.** Human Milk Composition and Nutritional Status of Omnivore Human Milk Donors Compared with Vegetarian/Vegan Lactating Mothers. *Nutrients.* 2023. 15. (8): 1855. Article.
2. **Pérez Rivas, FJ;** Rico Blázquez, M; López, C; Domínguez Fernández, S; Cobos Serrano, JL; Bazán, MJA. 'Learning by doing', a model for improving the promotion of healthy lifestyles by student nurses. *BMC Nurs.* 2023. 22. (1): 236. Article.
3. Martín González, A; Morrás de la Torre, B; **Bergon Sendin, E;** Jesús Pérez López, A; Ferrando Sánchez, A; **Pallás Alonso, CR;** **Moral Pumarega, MT.** Feasibility of three-dimensional nasal imaging and printing in producing customized nasal masks for non-invasive ventilation in extremely low birth weight infant: A pilot study. *Int. J. Bioprinting.* 2023. 9. (1): p. 627-627. Article.
4. **Pérez Rivas, FJ;** Jiménez González, J; Cabeza, MB; Cortes, SB; Díaz Plaza, MD; Domínguez Bidagor, J; García, D; Puente, JG; et **Gómez Gascón, T.** Design and Content Validation using Expert Opinions of an Instrument Assessing the Lifestyle of Adults: The 'PONTE A 100' Questionnaire. *Healthcare.* 2023. 11. (14): 2038. Article.
5. **Lora, D;** García Reyne, A; Lalueza, A; de la Calle, GM; Ruíz Ruigómez, M; Calderón, EJ; **Menéndez Orenga, M.** Characteristics of clinical trials of influenza and respiratory syncytial virus registered in ClinicalTrials.gov between 2014 and 2021. *Front. Public Health.* 2023. 11. 1171975. Article.

Clinical Practice Appropriateness and Patient Safety

CENTER: Hospital Universitario 12 de Octubre (HU12O).

GROUP LEADER: Varela Rodríguez, Carolina (R3).

Díaz Tasende, José Benjamín - Clinical researcher.

Tejido Sánchez, Ángel - Postdoctoral researcher (R2).

ACTIVE RESEARCH PROJECTS

Type of funding	Funding body	No. of projects
Competitive	Fundació Clínic per a la Recerca Biomèdica	1
No competitive	Various	1
Total		2

- Title:** Ensayo clínico controlado y aleatorizado en el que se compara la colonoscopia y la prueba inmunoquímica de detección de sangre oculta en heces en el cribado del cáncer colorrectal. Estudio COLONPREV.
Principal investigator: Díaz Tasende, José.
Project No.: ECAEC211612CAST.
Funding body: Fundació Clínic per a la Recerca Biomèdica.
Start date: 01/11/2021.
End date: 31/10/2026.
- Title:** Proyecto ICHOM DMAE. Medición de resultados en salud y detección de las mejores prácticas mediante *benchmarking* en la cohorte de pacientes con degeneración macular asociada a la edad (DMAE) atendidos en el Hospital Universitario 12 de Octubre.
Principal investigator: Varela Rodríguez, Carolina.
Funding body: Novartis Farmacéutica S.A.
Start date: 01/05/2020.
End date: 01/06/2023.

PUBLICATIONS*

Type of Document	No. of document	Σ IF (JCR 2022)
Articles	5	23.1
Editorials	1	5.2
Total	6	28.3
Editorials	2	6.5
Total	8	34.8

Articles

- Bernal Sobrino, JL; Arias Horcajadas, F; Varela Rodríguez, C; Losada Pérez, C; Blanco Echevarría, A; Xsdel Yerro Alvarez, MJ; Martín Mayor, M et al. A 3-Year Retrospective Study of the Impact of Integrating an Addiction Liaison Team into an Outpatient Alcoholism Treatment Programme. *Alcohol Alcohol.* 2023. 58. (5): p. 515-522. Article.
- Lanas, Á; Balaguer, F; Sánchez Luengo, M; Hijos Mallada, G; Hernández Mesa, G; Piñero, M; Castillo, J et al. Fecal occult blood and calprotectin testing to prioritize primary care patients for colonoscopy referral: The advantage study. *United European Gastroenterol J.* 2023. 11. (7): p. 692-699. Article.
- Momblan, D; Garcia, AZG; Busquets, D; Juzgado, D; Lledó, JG; Ferrero, E; Tejedor Tejada, J et al. Endoscopic Vacuum Therapy for Upper Gastrointestinal Leaks and Perforations: Analysis From a Multicenter Spanish Registry. *Am. J. Gastroenterol.* 2023. 118. (10): p. 1797-1806. Article.
- Santos Pérez de la Blanca, R; Medina Polo, J; Peña Vallejo, H; Juste Álvarez, S; Pamplona Casamayor, M; Duarte Ojeda, JM; Miranda Utrera, N et al. Ureteral Stenosis and Fistula after Kidney Transplantation. *Urol.Int.* 2023. 107. (2): p. 1-8. Article.
- Zapata, AIP; Rodríguez, CV; Arroba, CMA; Ballesteros, MD; Fernández, MBD; Grau, NA; Herrero, EF et al. Advanced Lipoproteins and Lipidomic Profile in Plasma Determined by Nuclear Magnetic Resonance Before and After Bariatric Surgery. *Obes Surg.* 2023. 33. (12): p. 3981-3987. Article.

* Publications: only "Article", "Review", "Editorial Material" and "Letter" have been selected in "Document Type" of ISI Web Of Knowledge. The breakdown of publications includes some not included in the 2022 JCR, which are therefore not taken into account in the final count shown in the table, since they do not have IF.

Editorials

- Varela Rodríguez, C; Rosillo Ramírez, N; Rubio Valladolid, G; Ruiz López, P. Editorial: Real world evidence, outcome research and healthcare management improvement through real world data (RWD). *Front. Public Health.* 2023. 10. p. 1064580-1064580. Editorial Material.

Letters

- Fernández Gordón Sánchez, FM.ª; Cudero Quintana, L; Algara San Nicolás, M; Álvarez Nava Torrego, T; Marín Gabriel, JC; Cabrera González, M; Díaz Tasende, JB et al. Hepatic subcapsular hematoma post-endoscopic retrograde cholangiopancreatography requiring embolization. *Rev. Esp. Enferm. Dig.* 2023. 115. (9): p. 523-523. Letter.
- Torrego, MAN; Tasende, JD; Campos, AP; Carreras, MP. EUS-FNA of pancreatic cystic lesions: Should the endoscopic ultrasonographer learn to process the sample in the room? *Endosc. Ultrasound.* 2023. 12. (2): p. 309-310. Letter.

Research in Complex Patients and Health System

CENTER: Atención Primaria (AP).

GROUP LEADER: Alberquilla Menéndez-Asenjo, Ángel (R4).

Añino Alba, Almudena - Graduate researcher.

Del Pino Casado, Benito - Predoctoral researcher (R1).

Fernández Esteban, Inmaculada - Graduate researcher.

Fernández Moreno, Aurora - Postdoctoral researcher (R2).

Guerrero Hierro, Alonso - Support technician.

Martín Gordo, Olga - Clinical researcher.

Martín Moreno, Vicente - Clinical researcher.

Menéndez Orenga, Miguel - Researcher.

Piñero Acín, María José - Clinical researcher.

Pozuelo González, Carolina - Graduate researcher.

Sánchez Prida, Natalia - Clinical researcher.

Siguín Gómez, Raquel - Graduate researcher.

OTHER ACTIVE PROJECTS OF THE RESEARCH GROUP NOT MANAGED BY THE FUNDACIÓN PARA LA INVESTIGACIÓN BIOMÉDICA DEL HOSPITAL 12 DE OCTUBRE (FIBH12O)

- **Title:** Elaboración y validación de un cuestionario para la detección de jugadores problemáticos en atención primaria.
Principal investigator: Ángel Alberquilla Menéndez-Asenjo.
Project No.: N.º CEIm H12O: 21/071.
Funding body: Without financing.
Start date: March 2021.
End date: April 2024.

- **Title:** Estudio de la variabilidad de las hospitalizaciones evitables por ACSC (*Ambulatory Care Sensitive Conditions*) por zonas básicas de salud y análisis de sus factores condicionantes en la Comunidad de Madrid.
Principal investigator: Ángel Alberquilla Menéndez-Asenjo.
Project No.: N.º CEIm H12O: 22/163.
Funding body: Without financing.
Start date: April 2022.
End date: April 2025.

PUBLICATIONS*

Type of Document	No. of document	Σ IF (JCR 2022)
Articles	1	5.2
Total	1	5.2

Articles

- Lora, D; García Reyne, A; Lalueza, A; de la Calle, GM; Ruíz Ruigómez, M; Calderón, EJ; Menéndez Orenga, M. Characteristics of clinical trials of influenza and respiratory syncytial virus registered in ClinicalTrials.gov between 2014 and 2021. *Front. Public Health.* 2023. 11. 1171975. Article.
- Martín Gorgojo, A; Menéndez Orenga, M; Comunión Artieda, A; Martín Pozas, R; Montero Rivas, P; Bru Gorraiz, FJ. SARS-CoV-2 infection in patients with or at risk for venereal infections: Incidence and associated factors in a sexual health clinic. *Actas Dermo-Sifilogr.* 2023. 114. (7): p. 580-586. Article.

* Publications: only "Article", "Review", "Editorial Material" and "Letter" have been selected in "Document Type" of ISI Web Of Knowledge. The breakdown of publications includes some not included in the 2022 JCR, which are therefore not taken into account in the final count shown in the table, since they do not have IF.

Research in Health Services and Results

CENTER: Atención Primaria (AP).

GROUP LEADER: Gómez Gascón, Tomás (R3).

Beltejar Rodríguez, Margarita - Clinical researcher.

Díez Arjona, Susana - Clinical researcher.

Domínguez Bidagor, Julia - Predoctoral researcher (R1).

Gutiérrez Sánchez, María Isabel - Clinical researcher.

Pérez Rivas, Francisco Javier - Doctoral researcher (R3).

Tapias Merino, Ester - Doctoral researcher (R3).

Vargas-Machuca Cabañero, Concepción - Clinical researcher.

OTHER ACTIVE PROJECTS OF THE RESEARCH GROUP NOT MANAGED BY THE FUNDACIÓN PARA LA INVESTIGACIÓN BIOMÉDICA DEL HOSPITAL 12 DE OCTUBRE (FIBH12O)

- **Title:** Riesgo cardiovascular en personas mayores de 55 años y rendimiento cognitivo a los 5 años: un modelo de estimación basado en población española (NEDICES 2).
Principal investigator: Ester Tapias Merino.
Project No.: PI18/00522.
Funding body: Instituto de Salud Carlos III.
Start date: January 2019.
End date: 30 June 2023.
- **Title:** Cancerless (prevención y detección precoz del cáncer entre la población sin hogar en Europa: coadaptación e implementación del modelo de navegador de salud).
Principal investigator of the SERMAS: Tomás Gómez Gascón.
Project No.: European Horizon 2020 project, n.º: 965351.
Funding body: European Commission.
Start date: 01/06/2021.
End date: 01/06/2024.

- **Title:** iProcure Security.
Principal investigator of the SERMAS: Tomás Gómez Gascón.
Project No.: European Pre-commercial Public Procurement Project, n.º: 101022061.
Funding body: European Commission.
Start date: 01/09/2021.
End date: 31/08/2024.

PUBLICATIONS*

Type of Document	No. of document	Σ IF (JCR 2022)
Articles	5	24.5
Total	5	24.5

Articles

- Barrio Cortes, J; López Rodríguez, JA; Gómez Gascón, T; Rayo Gómez, A; del Cura González, I; Domínguez Berjón, F; Esteban Vasallo, D et al. Prevalence and comorbidities of Sjogren's syndrome patients in the Community of Madrid: A population-based cross-sectional study. *Joint Bone Spine.* 2023. 90. (4): 105544. Article.
- García, D; Bazán, MJA; Pérez Rivas, FJ. Correlation between Health and eHealth Literacy and a Healthy Lifestyle: A Cross-Sectional Study of Spanish Primary Healthcare Patients. *Healthcare.* 2023. 11. (22): 2980. Article.
- Lozano Hernández, CM; Medina García, R; de Hoyos Alonso, MC; Garrido Barral, A; Minué Lorenzo, C; Sanz Cuesta, T; Serrano, J et al. Improvement in Quality of Life With the Use of a Technological System Among Patients With Chronic Disease Followed Up in Primary Care (TeNDER Project): Protocol for a Randomized Controlled Trial. *JMIR RES. Protoc.* 2023. 12. e47331. Article.
- Marques Vieira, CMA; Domingues, TD; Tholl, AD; Nitschke, RG; Pérez Rivas, FJ; Ajejas Bazán, MJ; Roquette Viana, MC. Attitudes and Behaviors towards Vaccination in Portuguese Nursing Students. *Vaccines.* 2023. 11. (4): 847. Article.
- Pérez Rivas, FJ; Jiménez González, J; Cabeza, MB; Cortes, SB; Díaz Plaza, MD; Domínguez Bidagor, J; García, D et al. Design and Content Validation using Expert Opinions of an Instrument Assessing the Lifestyle of Adults: The 'PONTE A 100' Questionnaire. *Healthcare.* 2023. 11. (14): 2038. Article.

* Publications: only "Article", "Review", "Editorial Material" and "Letter" have been selected in "Document Type" of ISI Web Of Knowledge. The breakdown of publications includes some not included in the 2022 JCR, which are therefore not taken into account in the final count shown in the table, since they do not have IF.

- Pérez Rivas, FJ; Rico Blázquez, M; López, C; Domínguez Fernández, S; Cobos Serrano, JL; Bazán, MJA. 'Learning by doing', a model for improving the promotion of healthy lifestyles by student nurses. BMC Nurs.2023. 22. (1): 236. Article.

Reviews

- Manzanet, JMP; Fico, G; Merino Barbancho, B; Hernández, L; Vera Muñoz, C; Seara, G; Torrego, M et al. Feasibility study of a clinical decision support system for polymedicated patients in primary care. Healthc. Technol. Lett.2023. 10. (3): p. 62-72. Review.

Digital Health

CENTER: Hospital Universitario 12 de Octubre (HU12O).

GROUP LEADERS: Serrano Balazote, Pablo (R3) and Cruz Bermúdez, Juan Luis (R3).

- | | |
|--|---|
| Bernal Sobrino, José Luis - Doctoral researcher (R3). | López Jiménez, Elena Ana - Senior Clinical Researcher.3). |
| Blanco Martínez, Alvar Javier - Predoctoral researcher (R1). | Lora Pablos, David - Postdoctoral researcher (R2). |
| Calvo Boyero, Fernando - Predoctoral researcher (R1). | Martín-Arriscado Arroba, Cristina - Graduate researcher. |
| Cancelas Navia, Pilar - Technical Manager. | Menéndez Orenga, Miguel - Postdoctoral researcher (R2). |
| Couto Seller, Luis -Graduate researcher. | Mínguez Muñoz, Paula - Graduate researcher. |
| Cruz Rojo, Jaime - Junior clinical researcher. | Quirós González, Víctor - Predoctoral researcher (R1). |
| García Barrio, Noelia - Graduate researcher. | Roig Domínguez, Gustavo -Graduate researcher. |
| Hernández Sánchez, Julia - Graduate researcher. | Rubio Mayo, Paula - Predoctoral researcher (R1). |
| Hidalgo Mayoral, Irene - Junior clinical researcher. | Tato Gómez, Alberto -Graduate researcher. |
| Horcajo Espín, María Isabel - Junior clinical researcher. | Terriza Torres, Ana Isabel - Junior clinical researcher. |
| Jiménez Cerezo, M.ª Jesús - Junior clinical researcher. | Vidal Colino, Irene - Graduate researcher. |
| Llorente Muñoz, Irene - Graduate researcher. | |

ACTIVE RESEARCH PROJECTS

Type of funding	Funding body	No. of projects
Competitive	Comunidad de Madrid	1
Competitive	ISCIII	2
No competitive	Various	3
Total		6

- **Title:** Proyecto de compra pública de innovación infobanco (arquitectura de datos de salud para el aprendizaje) - INFOBANCO - INTEGRA-CAM - CAM.
Principal investigator: Cruz Bermúdez, Juan Luis.
Funding body: Comunidad de Madrid.
Start date: 03/12/2021.
End date: 31/12/2023.
- **Title:** Adaptative design clinical trials in viral diseases outbreaks emergencies.
Principal investigator: Lora Pablos, David.
Project No.: PI21/01815.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2022.
End date: 31/12/2024.
- **Title:** Integrative genomic, digital imaging and clinical information towards precision oncology optimization - INGENIO.
Principal investigator: Cruz Bermúdez, Juan Luis.
Project No.: PMP21/00171.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2022.
End date: 31/12/2025.
- **Title:** Adopción de la solución NAVIFY (*tumor board*), soporte en la toma de decisiones clínicas.
Principal investigator: Serrano Balazote, Pablo.
Funding body: Roche Diagnostics, S.L.U.
Start date: 17/02/2020.
End date: 16/02/2021; extended to 30/04/2024.
- **Title:** Desarrollo e implementación de estrategias para el registro de los determinantes sociales del cáncer en la historia clínica electrónica y estudio de la validez de los datos almacenados para usos secundarios.
Principal investigator: Bernal Sobrino, José Luis.
Project No.: Merck Sharp Dohme España, S.A.
Funding body: 01/02/2023.
Start date: 31/01/2026.
End date:
- **Title:** El primer estudio de asociación de genoma completo (GWAS) con enfermedad coronaria poblacional a 10 años en más de 100.000 participantes para personalizar la prevención cardiovascular en España.
Principal investigator: Lora Pablos, David.
Project No.: PMP22/00033.
Funding body: Fundación Instituto Hospital del Mar de Investigaciones Médicas.
Start date: 19/04/2023.
End date: 31/12/2025.

OTHER ACTIVE PROJECTS OF THE RESEARCH GROUP NOT MANAGED BY THE FUNDACIÓN PARA LA INVESTIGACIÓN BIOMÉDICA DEL HOSPITAL 12 DE OCTUBRE (FIBH12O)

- **Title:** BioStatSpot: Difusión y promoción del Máster en Bioestadística.
Principal investigator: María Jesús López Herrero.
Project No.: Proyecto INNOVA-Docencia UCM (n.º 450, Ciencia e Ingeniería).
Funding body: Universidad Complutense de Madrid.
Start date: September 2023.
End date: July 2024.
- **Title:** El primer estudio de asociación de genoma completo (GWAS) con enfermedad coronaria poblacional a 10 años en más de 100000 participantes para personalizar la prevención cardiovascular en España.
Principal investigator: Jaume Marrugat de la Iglesia.
Project No.: PMP22/00033.
Funding body: Instituto de Salud Carlos III.
Start date: January 2023.
End date: December 2025.

PUBLICATIONS*

Type of Document	No. of document	Σ IF (JCR 2022)
Articles	36	197.3
Editorials	1	5.9
Total	37	203.2
Letters	6	132.4
Total	43	335.5

Articles

- Alfonso, F; Fernández Pérez, C; del Prado, N; García Guimaraes, M; Bernal, JL; Bastante, T; del Val, D et al. Primary Percutaneous Coronary Intervention in Patients With Spontaneous Coronary Artery Dissection vs Coronary Artery Disease. *JACC-Cardiovasc. Interv.* 2023. 16. (15): p. 1860-1869. Article.
- Alonso Lloret, F; Mendoza Soto, A; Gil Domínguez, S; Fontecha Merino, VM; Romero Ferreiro, C. Perioperative stress and anxiety in parents of children operated on for congenital heart disease. *Enferm. Intensiv.* 2023. 34. (4): p. 205-217. Article.
- Ammour, N; Griffon, N; Djadi Prat, J; Chatellier, G; Lewi, M; Todorovic, M; de la Cámara, AG et al. TransFAIR study: a European multicentre experimental comparison of EHR2EDC technology to the usual manual method for eCRF data collection. *BMJ Health Care Inform.* 2023. 30. (1): e100602. Article.
- Barrionuevo Sánchez, MI; Ariza Solé, A; Prado, ND; García, M; Sánchez Salado, JC; Lorente, V; Alegre, O et al. Impact of shock aetiology and hospital characteristics on the clinical profile, management and prognosis of patients with non ACS-related cardiogenic shock. *Hell. J. Cardiol.* 2023. 69. p. 16-23. Article.
- Barrionuevo Sánchez, MI; Viana Tejedor, A; Ariza Solé, A; del Prado, N; Rosillo, N; Sánchez Salado, JC; Lorente, V et al. Impact of annual volume of cases and intensive cardiac care unit availability on mortality of patients with acute myocardial infarction-related cardiogenic shock treated at revascularization capable centres. *Eur. Heart J.-Acute Cardiovasc. Care.* 2023. 12. (7): p. 422-429. Article.
- Benito León, J; Ghosh, R; Lapeña Motilva, J; Martín Arriscado, C; Bermejo Pareja, F. Association between cumulative smoking exposure and cognitive decline in non-demented older adults: NEDICES study. *Sci Rep.* 2023. 13. (1): 5754. Article.
- Bermejo Guerrero, L; de la Hoz, CPDF; Guerrero Molina, MP; Martín Jiménez, P; Blázquez, A; Serrano Lorenzo, P; Lora, D et al. Serum GDF-15 Levels Accurately Differentiate Patients with Primary Mitochondrial Myopathy, Manifesting with Exercise Intolerance and Fatigue, from Patients with Chronic Fatigue Syndrome. *J. Clin. Med.* 2023. 12. (6): 2435. Article.
- Bernal Sobrino, JL; Arias Horcajadas, F; Varela Rodríguez, C; Losada Pérez, C; Blanco Echevarría, A; Xsdel Yerro Alvarez, MJ; Martín Mayor, M et al. A 3-Year Retrospective Study of the Impact of Integrating an Addiction Liaison Team into an Outpatient Alcoholism Treatment Programme. *Alcohol Alcohol.* 2023. 58. (5): p. 515-522. Article.
- Butta, NV; Arias Salgado, EG; Manzano, EM; Acuña, P; Román, MTA; Buño Soto, A; Ramos, JCR et al. 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.
- Carril Ajuria, L; Colomba, E; Romero Ferreiro, C; Cerbone, L; Ratta, R; Barthelemy, P; Vindry, C et al. Frontline immune checkpoint inhibitor-based combination therapy in metastatic renal cell carcinoma patients with poor performance status. *Eur. J. Cancer.* 2023. 180. p. 21-29. Article.
- Esteban Fernández, A; Anguita Sánchez, M; Bonilla Palomas, JL; Anguita Gámez, M; García, M; Bernal, JL; Prado, ND et al. Characteristics and in-hospital mortality of elderly patients with heart failure in Spanish hospitals. *J. Geriatr. Cardiol.* 2023. 20. (4): p. 247-255. Article.

- Esteban Fernández, A; Anguita Sánchez, M; Bonilla Palomas, JL; Anguita Gámez, M; Rosillo, N; del Prado, N; Bernal, JL et al. One-year readmissions for circulatory diseases and in-hospital mortality after an index episode of heart failure in elderly patients. A nationwide data from public hospitals in Spain between 2016 and 2018. *Clin. Res. Cardiol.* 2023. 112. (8): p. 1119-1128. Article.
- Esteban Villarrubia, J; Ferreiro, CR; Carril Ajuria, L; Carretero González, A; Iacovelli, R; Albiges, L; Castellano, D et al. Meta-analysis of perioperative immunotherapy in renal cell carcinoma: Available, but the jury is still out. *Urol. Oncol.-Semin. Orig. Investig.* 2023. 41. (9). Article.
- Estrada Lorenzo, JM; Arroba, CMA; Lopez, C. Bibliometric analysis of original articles of journal ENFERMERÍA INTENSIVA in the period 2001-2020. *Enferm. Intensiv.* 2023. 34. (2): p. 100-108. Article.
- Ferri, P; Romero Garcia, N; Badenes, R; Lora Pablos, D; Morales, TG; de la Cámara, AG; García Gómez, JM et al. Extremely missing numerical data in Electronic Health Records for machine learning can be managed through simple imputation methods considering informative missingness: A comparative of solutions in a COVID-19 mortality case study. *Comput. Meth. Programs Biomed.* 2023. 242. 107803. Article.
- Frid, S; Duran, XP; Cucó, GB; Pedrera Jiménez, M; Serrano Balazote, P; Carrero, AM; Lozano Rubí, R. An Ontology-Based Approach for Consolidating Patient Data Standardized With European Norm/International Organization for Standardization 13606 (EN/ISO 13606) Into Joint Observational Medical Outcomes Partnership (OMOP) Repositories: Description of a Methodology. *JMIR Med. Inf.* 2023. 11. Article.
- Galiana, A; Ruiz, S; Alen, JF; Grande, AG; Panero, I; Vega, D; García Perez, D et al. Effects of cranioplasty in cerebral blood perfusion using quantification with 99m-Tc HMPAO SPECT-CT. *J Neuroimaging.* 2023. 33. (1): p. 174-183. Article.
- Galleani, C; Diéguez, MC; Cabanillas, B; Martín Arriscado Arroba, C; Enríquez Matas, A; Crespo, JF. Sunflower (*Helianthus annuus*) Seed Allergy. *J Investig Allergol Clin Immunol.* 2023. p. 0-0. Article.
- Gauffin, O; Brand, JS; Vidlin, SH; Sartori, D; Asikainen, S; Català, M; Chalabi, E et al. Supporting Pharmacovigilance Signal Validation and Prioritization with Analyses of Routinely Collected Health Data: Lessons Learned from an EHDEN Network Study. *Drug Saf.* 2023. 46. (12): p. 1335-1352. Article.
- Jiménez, T; Pollán, M; Domínguez Castillo, A; Lucas, P; Sierra, MA; Castelló, A; de Larrea Baz, NF et al. Mammographic density in the environs of multiple industrial sources. *Sci. Total Environ.* 2023. 876. 162768. Article.
- Jimenez Romero, C; Justo Alonso, I; del Pozo Elso, P; Marcacuzco Quinto, A; Martín Arroba, C; Manrique Municio, A; Calvo Pulido, J et al. Post-transplant biliary complications using liver grafts from deceased donors older than 70 years: Retrospective case-control study. *World J. Gastrointest. Surg.* 2023. 15. (8): p. 1615-1628. Article.
- López Azor, JC; Delgado, JF; Vélez, J; Rodríguez, R; Solís, J; del Oro, M; Ortega, C et al. Differences in clinical outcomes, health care resource utilization and costs in heart failure patients according to left ventricular ejection fraction. *Rev. Esp. Cardiol.* 2023. 76. (11): p. 862-871. Article.
- Lora, D. Applied biostatistics in clinical trials for 15-year-old pupils. *Teach. Stat.* 2023. 46. (1): p. 1-7. Article.
- Lora, D; García Reyne, A; Lalueza, A; de la Calle, GM; Ruíz Ruigómez, M; Calderón, EJ; Menéndez Orenge, M. Characteristics of clinical trials of influenza and respiratory syncytial virus registered in ClinicalTrials.gov between 2014 and 2021. *Front. Public Health.* 2023. 11. 1171975. Article.
- Mcinerney, A; García Márquez, M; Tirado Conte, G; Bernal, J; Fernández Pérez, C; Jiménez Quevedo, P; Gonzalo, N et al. In-hospital outcomes following percutaneous versus surgical intervention in the treatment of aortic stenosis and concomitant coronary artery disease. *Rev. Esp. Cardiol.* 2023. 76. (8): p. 600-608. Article.
- Oliver Perez, MR; Padilla Iserte, P; Arencibia Sanchez, O; Martín Arriscado, C; Muruzabal, JC; Díaz Feijóo, B; Cabrera, S et al. Lymphovascular Space Invasion in Early-Stage Endometrial Cancer (LySEC): Patterns of Recurrence and Predictors. A Multicentre Retrospective Cohort Study of the Spain Gynecologic Oncology Group. *Cancers.* 2023. 15. (9): 2612. Article.
- Piris Borregas, S; Bellón Vaquerizo, B; Muñoz López, O; Cuadrado Obregón, N; Melchor Muñoz, P; Niño Díaz, L; González Mora, FJ et al. Parents who spent more hours in intensive care units with their low birthweight newborn infant did not achieve autonomous care faster. *Acta Paediatr.* 2023. 112. (10): p. 2104-2112. Article.
- Quirós González, V; Bernal, JL; Haro Pérez, AM; Maderuelo Fernández, JA; Santos Jiménez, MT; García Barrio, N; Pavón Muñoz, AL et al. Validez y utilidad del RAE-CMBD en el estudio de los pacientes hospitalizados con gripe. *Rev. Esp. Quim.* 2023. 36. (2): p. 160-168. Article.
- Quirós González, V; Rubio, R; Pulido, F; Rial Crestelo, D; Martín Jurado, C; Hernández Ros, MA; Jiménez, EAL et al. Healthcare Outcomes In Patients With Hiv Infection At A Tertiary Hospital During The COVID-19 Pandemic. *Enferm. Infecc. Microbiol. Clin.* 2023. 41. (3): p. 149-154. Article.
- Rivera Díaz, R; Pozo, T; Alfageme, F; Ley, BD; Osorio, GF; Chico, R; Vilarrasa, E et al. The Effectiveness of Guselkumab in Patients With Hidradenitis Suppurativa Under Clinical Practice Conditions: A Spanish Multicentre Retrospective Study. *Actas Dermosifiliogr.* 2023. 114. (9): p. 755-762. Article.
- Rodríguez Jimenez, R; García Fernández, L; Baón Pérez, B; Ansedo Cascudo, JC; Arroba, CMA; Sendra Gutierrez, JM; Romero Ferreiro, V et al. Hospital admissions due to suicide attempts during the COVID-19 pandemic, a 3-year longitudinal study. *Psychiatry Res.* 2023. 327. 115346. Article.
- Romero Ferreiro, V; García Gutierrez, A; Torio, I; Mari Beffa, P; Rodríguez Gomez, P; Perianez, JA; Moreno, EM et al. Cognitive versus emotional modulation within a Stroop paradigm in patients with schizophrenia. *BJPsych Open.* 2023. 9. (1): e19. Article.
- Rubio, G; Rodríguez, LE; Sion, A; Vidal, LR; Blanco, MJ; Zamora Bayon, A; Caba Moreno, M et al. How, when, and to what degree do people with alcohol dependence recover their psychological

* Publications: only "Article", "Review", "Editorial Material" and "Letter" have been selected in "Document Type" of ISI Web Of Knowledge. The breakdown of publications includes some not included in the 2022 JCR, which are therefore not taken into account in the final count shown in the table, since they do not have IF.

wellbeing and quality of life? The Madrid Recovery Project. *Front. Psychiatry*. 2023. 14. 1130078. Article.

- San Juan, R; Origuen, J; Campion, K; Fernández Ruiz, M; Diaz Pollan, B; Callejas Diaz, A; Candela, G et al. Evaluation of the effectiveness and safety of oral vancomycin versus placebo in the prevention of recurrence of Clostridioides difficile infection in patients under systemic antibiotic therapy: a phase III, randomised, double-blind clinical trial. *BMJ OPEN*. 2023. 13. (9): e072121. Article.
- Tan, BWL; Tan, BWQ; Tan, ALM; Schriver, ER; Gutiérrez Sacristán, A; Das, P; Yuan, W et al. Long-term kidney function recovery and mortality after COVID-19-associated acute kidney injury: An international multi-centre observational cohort study. *EClinicalMedicine*. 2023. 55. p. 101724-101724. Article.
- Ureta Velasco, N; Keller, K; Escuder Vieco, D; Fontecha, J; Calvo, MV; Megino Tello, J; Serrano, JCE et al. Human Milk Composition and Nutritional Status of Omnivore Human Milk Donors Compared with Vegetarian/Vegan Lactating Mothers. *Nutrients*. 2023. 15. (8): 1855. Article.
- Vicent, L; Rosillo, N; Moreno, G; Salguero Bodes, R; Goñi, C; Bernal, JL; Seara, G et al. Sex differences in patterns of referral and resource utilization in the cardiology clinic: an outpatient analysis. *Front. Cardiovasc. Med*. 2023. 10. 1202960. Article.
- Vicent, L; Sanz, DMD; Rosillo, N; Penalzoza Martinez, E; Moreno, G; Bernal, JL; Elola, J et al. Sex differences in temporal trends in main and secondary pulmonary embolism diagnosis and

Editorials

- Esteban Fernández, A; Anguita Sánchez, M; Anguita Gámez, M; Rosillo, N; del Prado, N; Bernal, JL. 30-day readmissions for circulatory system diseases in patients over 75 years with heart failure in Spain (2016-2018). *Rev. Esp. Cardiol*. 2023. 76. (8). Editorial Material.

Letters

- Anguita Gamez, M; Esteban Fernandez, A; del Prado, N; Bernal, JL; Elola Somoza, FJ; Anguita Sanchez, M. Clinical features and outcomes of acute heart failure in nonagenarians: Results of a nationwide study. *Geriatr Gerontol Int*. 2023. 23. (1): p. 64-66. Letter.
- Bernal, JL; Bonilla Palomas, JL; Rosillo, N; Bonanad, C; Elola, J; Anguita, M. Validity of the minimum data set for outcomes research in patients hospitalized for heart failure in Spain. *Rev. Esp. Cardiol*. 2023. 76. (11): p. 938-939. Letter.
- Cequier, Á; Bernal, JL; Fernández Pérez, C; Elola, FJ. RECALCAR methodology. Some clarifications. *Rev. Esp. Cardiol*. 2023. 76. (1): p. 74-75. Letter.
- Honerlaw, JP; Maripuri, M; Beaulieu Jones, BR; Baig, HS; Panickan, VA; Liao, KP; Muralidhar, S et al. Potential pitfalls in the use of real-world data for studying long COVID. *Nat. Med*. 2023. 29. (5): p. 1040-1043. Letter.

case fatality rates: 2003-2019. *Eur. Heart J-Qual. Care Clin. Outcomes*. 2023. 9. (2): p. 184-193. Article.

- Villegas, M; Gonzalez Agirre, A; Gutiérrez Fandiño, A; Armengol Estapé, J; Carrino, CP; Pérez Fernández, D; Soares, F et al. Predicting the evolution of COVID-19 mortality risk: A Recurrent Neural Network approach. *Comput Methods Programs Biomed Update*. 2023. 3. p. 100089-100089. Article.
- Vivas, D; Anguita Gámez, M; Ferrandis, R; Esteve Pastor, MA; Echeverri, M; Igualada, J; Anguita, M et al. Prospective observational registry of perioperative and periprocedural management of antithrombotic therapy in "real world": the REQXAA study. *Rev. Esp. Cardiol*. 2023. 76. (9): p. 729-738. Article.
- Voss, EA; Shoaibi, A; Lai, LYH; Blacketer, C; Alshammari, T; Makadia, R; Haynes, K et al. Contextualising adverse events of special interest to characterise the baseline incidence rates in 24 million patients with COVID-19 across 26 databases: a multinational retrospective cohort study. *EClinicalMedicine*. 2023. 58. 101932. Article.
- Zapata, AIP; Rodríguez, CV; Arroba, CMA; Ballesteros, MD; Fernández, MBD; Grau, NA; Herrero, EF et al. Advanced Lipoproteins and Lipidomic Profile in Plasma Determined by Nuclear Magnetic Resonance Before and After Bariatric Surgery. *Obes. Surg*. 2023. 33. (12): p. 3981-3987. Article.

- Lopez Muñoz, N; Hernández Ibarburu, G; Alonso, R; Sanchez Pina, JM; Ayala, R; Calbacho, M; Cuellar, C et al. Large-scale real-life analysis of survival and usage of therapies in multiple myeloma. *J. Hematol. Oncol*. 2023. 16. (1): 76. Letter.
- Nombela Franco, L; Mcinerney, A; Bernal, J; Elola, J. In-hospital outcomes after PCI and TAVI versus combined aortic valve replacement and coronary surgery. *Response. Rev. Esp. Cardiol*. 2023. 76. (10): p. 834-835. Letter.

THESES DEFENDED OR SUPERVISED WITHIN THE GROUP

- **Doctoral candidate:** Carmen Romero Ferreiro.
Thesis title: Variabilidad Geográfica y Temporal del Consumo de Ultraprocesados y Mortalidad Asociada en España.
University: Universidad Complutense de Madrid.
Date read: 27/06/2023.
Thesis director: Agustín Gomez de la Cámara.
International mention: No.

END MASTER INVESTIGATIONS DIRECTED ON THE GROUP

- **Student:** Diego Alvaredo Rodrigo.
Title: Aplicación del análisis de datos longitudinales al consumo de alimentos ultraprocesados y su relación con enfermedades crónicas y la mortalidad en España.
Directors: Carmen Romero Ferreiro and David Lora Pablos.
Master: Bioestadística.
University: Universidad Complutense de Madrid.
- **Student:** Sofía Sánchez Fernández.
Title: Ensayo clínico por conglomerados con diseño secuencial bayesiano. Una aplicación a los brotes epidémicos de ébola.
Director: David Lora Pablos.
Master: Bioestadística.
University: Universidad Complutense de Madrid.
- **Student:** mayora Guadalupe Fuentes Pineda.
Title: Proximidad a industrias y riesgo de cáncer de mama por estado menopáusico, subtipo tumoral estadio al diagnóstico: Estudio MCC-Spain.
Directors: Javier García Pérez and David Lora Pablos.
Master: Bioestadística.
University: Universidad Complutense de Madrid.
- **Student:** Laura Sánchez Sánchez.
Title: Riesgo de cáncer colorrectal, según localización tumoral, en el entorno de instalaciones industriales.
Directors: Javier García Pérez and David Lora Pablos.
Master: Bioestadística.
University: Universidad Complutense de Madrid.
- **Student:** Juan Fernando Plata Morán.
Title: Análisis de mortalidad por insuficiencia cardíaca.
Director: David Lora Pablos.
Master: Minería de Datos e Inteligencia de Negocio.
University: Universidad Complutense de Madrid.

PRIZES AND AWARDS

- Academic award for research work granted by the Ayuntamiento de Madrid within the call "Premios a Trabajos Académicos y de Investigación sobre Sistemas de Alimentación Saludable y Sostenible de la Ciudad de Madrid 2023", in the category of "Tesis doctorales", to the thesis entitled "Variabilidad Geográfica y Temporal del Consumo de Ultraprocesados y Mortalidad Asociada en España". Published in the BOAM of 20/12/2023.

Maternal and Child Health

CENTER: Hospital Universitario 12 de Octubre (HU12O).

GROUP LEADER: Pallás Alonso, Carmen Rosa (R4).

Alonso Díaz, Clara - Doctoral researcher (R3).
 Belda Hofheinz, Sylvia María - Postdoctoral researcher (R2).
 Bergón Sendín, Elena - Postdoctoral researcher (R2).
 Cabañes Alonso, Esther - Support nurse.
 De Alba Romero, Concepción - Doctoral researcher (R3).
 De la Cruz Bertolo, Francisco Javier - Doctoral researcher, technical manager (R3).
 Escuder Vieco, Diana - Doctoral researcher (R3).
 García Lara, Nadia Raquel - Doctoral researcher (R3).
 Llorente De la Fuente, Ana María - Graduate researcher.
 López Maestro, María - Doctoral researcher (R2).

Moral Pumarega, María Teresa - Doctoral researcher (R3).
 Mosqueda Peña, Rocío - Doctoral researcher (R2).
 Núñez Ramos, Raquel - Doctoral researcher (R2).
 Palacios Cuesta, Alba - Graduate researcher.
 Piris Borregas, Salvador - Postdoctoral researcher (R2).
 Ramos Casado, María Victoria - Postdoctoral researcher (R2).
 Rodríguez López, Jesús - Postdoctoral researcher (R2).
 Tejada Palacios, Pilar - Doctoral researcher (R4).
 Torres Valdivieso, María José - Doctoral researcher (R2).
 Ureta Velasco, Noelia - Predoctoral researcher.
 Vázquez Román, Sara - Predoctoral researcher.

ACTIVE RESEARCH PROJECTS

Type of funding	Funding body	No. of projects
Competitive	Fundación Menudos Corazones	1
Competitive	ISCIII	4
Competitive	Ministerio de Economía y Competitividad	1
No competitive	Various	1
Total		7

- **Title:** Impacto clínico y económico de la suplementación con leche donada pasteurizada por el método HTST vs. método HOLDER en prematuros de muy bajo peso al nacer. Ensayo clínico randomizado.
Principal investigator: Pallás Alonso, Carmen Rosa.
Project No.: PI18/00834.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2019.
End date: 31/12/2021; extended to 30/06/2023.
- **Title:** Desarrollo de un suplemento nutricional para niños prematuros a partir de grasa extraída de leche de propia madre.
Principal investigator: García Lara, Nadia Raquel.
Project No.: PI21/00439.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2022.
End date: 31/12/2024.
- **Title:** Ensayo clínico para evaluar el impacto clínico, eficacia y seguridad de mascarillas nasales personalizadas con impresión 3d en ventilación no invasiva en recién nacidos prematuros.
Principal investigator: Moral Pumarega, María Teresa.
Project No.: PI21/00628.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2022.
End date: 31/12/2024.
- **Title:** Optimización de la terapia antibiótica en pacientes pediátricos con sepsis con el uso combinado de técnicas de identificación bacteriana rápida y monitorización de

- procalcitonina sérica.
Principal investigator: Belda Hofheinz, Sylvia María.
Project No.: PI21/01828.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2022.
End date: 31/12/2024.
- **Title:** Valor pronóstico del ángulo de fase en pacientes pediátricos sometidos a cirugía cardíaca.
Principal investigator: Ramos Casado, M.^a Victoria.
Funding body: Fundación Menudos Corazones.
Start date: 05/04/2022.
End date: 04/04/2025.
 - **Title:** potenciar los recursos para mejorar el impacto: participación efectiva y liderazgo en proyectos europeos
Principal investigator: de la Cruz Bertolo, Francisco Javier.
Project No.: GPE2022-000934.
Funding body: Ministerio de Economía y Competitividad.
Start date: 01/02/2023.
End date: 31/12/2024.
 - **Title:** Estudio de los cambios en la composición corporal mediante bioimpedanciometría eléctrica vectorial en una cohorte de recién nacidos de peso al nacimiento inferior a 1.000 kg.
Principal investigator: Pallás Alonso, Carmen Rosa.
Funding body: Fundación Familia Alonso.
Start date: 01/02/2021.
End date: 31/01/2023.

OTHER ACTIVE PROJECTS OF THE RESEARCH GROUP NOT MANAGED BY THE FUNDACIÓN PARA LA INVESTIGACIÓN BIOMÉDICA DEL HOSPITAL 12 DE OCTUBRE (FIBH12O)

- **Title:** Validación prospectiva mediante un estudio metacéntrico estatal (red Samid) de modelos predictivos de mortalidad neonatal en prematuros.
Principal investigator: Martí Iriondo.
Project No.: PI20/00295.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: January 2021.
End date: December 2023.
- **Title:** Paneles genómicos y metabólicos para el diagnóstico rápido de la sepsis en recién nacidos menores de 1.500 gramos.
Principal investigator: Bergón Sendín, Elena.
Project No.: PI22/00131.
Funding body: Instituto de Investigación Sanitaria Carlos III.
Start date: 01/01/2023.
End date: 31/12/2025.
- **Title:** Proyecto colaborativo del Banco Regional de Leche Materna de la Comunidad de Madrid, el Grupo Enfermedad Inflamatoria Intestinal del Instituto de Investigaciones Biomédicas August Pi i Sunyer (IDIBAPS). Barcelona (España) y la Facultad de Ciencias y la Facultad de Química de la Universidad de la República. Montevideo (Uruguay). Aplicación de organoides derivados de colon humano para la evaluación de la actividad biológica de la leche materna donada.
Researcher in Uruguay: Ana Hernández and Claudio Rodríguez Camejo.
Researcher in Barcelona: Dr. Azucena Salas, Isabella Dotti, Miriam Esteller Viñal and Iris Álvarez Teubel.
Researchers of the Regional Breast Milk Bank of the Comunidad de Madrid: Nadia Raquel García Lara and Diana Escuder Vieco.

PUBLICATIONS*

Type of Document	No. of document	Σ IF (JCR 2022)
Articles	26	316.9
Reviews	1	3.8
Editorials	1	8.8
Total	28	329.5
Letters	2	30.6
Total	30	360.1

Articles

- Bagudá, JD; Chaverri, AR; Pérez, PC; Aguilar Rodríguez, F; Carmena, MDGC; Carmena, DGC; Pérez, SM et al. Twenty-four hour ambulatory blood pressure monitoring in patients with stable heart failure. Prevalence and associated factors. Rev. Esp. Cardiol. 2023. 76. (11): p. 852-861. Article.
- Barreuzeta, LB; Hofheinz, SB; Garde, AMD; Pérez, SB; Faza, MN; Núñez, AR; Soc Espanola Cuidados, Intensivos et al. Thrombotic microangiopathies in critically ill children: The MATUCIP registry in Spain. An. Pediatr. 2023. 98. (3): p. 194-203. Article.
- Barrio, MS; Hofheinz, SB; Pardellans, CG; García Salido, A; Vicente, JCD; Tejedor, MCM; Yuste, AH et al. Characteristics and management of patients with SARS-CoV2 infection admitted to pediatric intensive care units: Data analysis of the Spanish national multicenter registry. Pediatr. Pulmonol. 2023. 58. (10): p. 2916-2929. Article.
- Burgos, L; Tamariz Amador, LE; Puig, N; Cedena, MT; Guerrero, C; Jelínek, T; Johnson, S et al. Definition and Clinical Significance of the Monoclonal Gammopathy of Undetermined Significance-Like Phenotype in Patients With Monoclonal Gammopathies. J. Clin. Oncol. 2023. 41. (16): p. 3019-3019. Article.
- Colom, JC; Manzanares, A; Gómez, AA; Escribano, IS; Esquivel, E; Pérez Rivilla, A; Moral Pumarega, MT et al. Clinical outcomes and antibody transfer in a cohort of infants with in utero or perinatal exposure to SARS-CoV-2 (Coronascope Study). Eur. J. Pediatr. 2023. 182. (10): p. 4647-4654. Article.
- Daverio, M; Hofheinz, SB; Vida, V; Scattolin, F; Fernández, EL; Torres, EG; Tajuelo Llopis, I et al. Pediatric COVID-19 extracorporeal membrane oxygenation transport during the pandemic. Perfusion-UK. 2023. Article.
- Gómez Montes, E; Lobato, ES; Izquierdo, AG; Alcázar, DG; González, CV; Moral Pumarega, MT; Lozano, GB et al. Prenatal cystic fibrosis transmembrane conductance regulator modulator therapy: A promising way to change the impact of cystic fibrosis. Fetal Diagn. Ther. 2023. 50. (2): p. 136-142. Article.
- Hansen, ML; Pellicer, A; Hyttel Srensen, S; Ergenekon, E; Szczapa, T; Hagmann, C; Naulaers, G et al. Cerebral Oximetry Monitoring in Extremely Preterm Infants. N. Engl. J. Med. 2023. 388. (16): p. 1501-1511. Article.

* Publications: only "Article", "Review", "Editorial Material" and "Letter" have been selected in "Document Type" of ISI Web Of Knowledge. The breakdown of publications includes some not included in the 2022 JCR, which are therefore not taken into account in the final count shown in the table, since they do not have IF.

- Hofheinz, SB; Fernández, EL; Torres, EG; Dachary, JA; Boni, L; Llopis, IT; Gámez, RO et al. Primary neonatal and pediatric ECMO transport: First experience in Spain. *Perfusion-UK*. 2023. Article.
- Horber, V; Andersen, GL; Arnaud, C; De La Cruz, J; Dakovic, I; Greitane, A; Hensey, O et al. Prevalence, Clinical Features, Neuroimaging, and Genetic Findings in Children With Ataxic Cerebral Palsy in Europe. *Neurology*. 2023. 101. (24): p. 2509-2521. Article.
- Lagares, A; Payen, JF; Biberthaler, P; Poca, MA; Méjan, O; Pavlov, V; Viglino, D et al. Study protocol for investigating the clinical performance of an automated blood test for glial fibrillary acidic protein and ubiquitin carboxy-terminal hydrolase L1 blood concentrations in elderly patients with mild traumatic BRAIN Injury and reference values (BRAINI-2 Elderly European study): a prospective multicentre observational study. *BMJ OPEN*. 2023. 13. (7). Article.
- Lewald, ZS; Prusakov, P; Magers, JK; Kiehl, MJ; Romero, CD; White, NO; Miller, RR et al. Short-course antibiotic therapy for pneumonia in the neonatal intensive care unit. *J. Perinatol*. 2023. 43. (9): p. 1145-1151. Article.
- López Fernández, E; Palacios Cuesta, A; Rodríguez Martínez, A; Olmedilla Jodar, M; Fernández Andrade, R; Mediavilla Fernández, R; Sánchez Díaz, JI et al. Implementation feasibility of animal-assisted therapy in a pediatric intensive care unit: effectiveness on reduction of pain, fear, and anxiety. *Eur. J. Pediatr*. 2023. 183. (2): p. 843-851. Article.
- Martínez López, J; De la Cruz, J; Gil Manso, R; Alegre, A; Ortiz, J; Llamas, P; Martínez, Y et al. COVID-19 Severity and Survival over Time in Patients with Hematologic Malignancies: A Population-Based Registry Study. *Cancers*. 2023. 15. (5): 1497. Article.
- Martín González, A; Morrás de la Torre, B; Bergon Sendin, E; Jesús Pérez López, A; Ferrando Sánchez, A; Pallás Alonso, CR; Moral Pumarega, MT. Feasibility of three-dimensional nasal imaging and printing in producing customized nasal masks for non-invasive ventilation in extremely low birth weight infant: A pilot study. *Int. J. Bioprinting*. 2023. 9. (1): p. 627-627. Article.
- Olsen, MH; Hansen, ML; Lange, T; Gluud, C; Thabane, L; Greisen, G; Jakobsen, JC et al. Detailed statistical analysis plan for a secondary Bayesian analysis of the SafeBoosC-III trial: a multinational, randomised clinical trial assessing treatment guided by cerebral oximetry monitoring versus usual care in extremely preterm infants. *Trials*. 2023. 24. (1): 737. Article.
- Pallas Alonso, C; Montealegre, A; Hernández Aguilar, MT; Muñoz Amat, B; Collados Gómez, L; Jiménez Fernández, L; García Lara, N et al. XIII International Conference on Kangaroo Mother Care
- Piris Borregas, S; Bellón Vaquerizo, B; Muñoz López, O; Cuadrado Obregón, N; Melchor Muñoz, P; Niño Díaz, L; González Mora, FJ et al. Parents who spent more hours in intensive care units with their low birthweight newborn infant did not achieve autonomous care faster. *Acta Paediatr*. 2023. 112. (10): p. 2104-2112. Article.
- Pons, C; Brochard, S; Grigoriu, A; Newman, CJ; Monbaliu, E; Mensah Gourmel, J; Gaudin Drouelle, D et al. Digital technologies for motor rehabilitation in children: protocol for a cross-sectional European survey. *BMJ OPEN*. 2023. 13. (4): e069034. Article.
- Rosiñol, L; Oriol, A; Rios, R; Blanchard, MJ; Jarque, I; Bargay, J; Hernández, MT et al. Lenalidomide and dexamethasone maintenance with or without ixazomib, tailored by residual disease status in myeloma. *Blood*. 2023. 142. (18): p. 1518-1528. Article.
- Sánchez, PJ; Prusakov, P; de Alba Romero, C; Zamora Flores, E; Reyes Escamilla, MC; White, NO; Miller, RR et al. Short-course empiric antibiotic therapy for possible early-onset sepsis in the NICU. *J. Perinatol*. 2023. 43. (6): p. 741-745. Article.
- Slocker Barrio, M; López Cid, J; Bustinza Arriortúa, A; Fresán Ruiz, E; Jordán García, I; de Carlos Vicente, JC; Morteruel Arizcuren, E et al. Increase in Incidence Rates and Risk Factors for Multidrug Resistant Bacteria in Septic Children: A Nationwide Spanish Cohort Study (2013-2019). *Antibiotics-Basel*. 2023. 12. (11): 1626. Article.
- Ureta Velasco, N; Keller, K; Escuder Vieco, D; Fontecha, J; Calvo, MV; Megino Tello, J; Serrano, JCE et al. Human Milk Composition and Nutritional Status of Omnivore Human Milk Donors Compared with Vegetarian/Vegan Lactating Mothers. *Nutrients*. 2023. 15. (8): 1855. Article.
- Ureta Velasco, N; Montealegre Pomar, A; Keller, K; Escuder Vieco, D; Fontecha, J; Calvo, MV; Megino Tello, J et al. Associations of Dietary Intake and Nutrient Status with Micronutrient and Lipid Composition in Breast Milk of Donor Women. *Nutrients*. 2023. 15. (15): 3486. Article.
- Vieco, DE; Vidal, JA; García, PR; González, MJ; Lara, NRG; Alonso, CRP. Comparative analyses of holder pasteurization vs. HTST pasteurization for donor milk: a cost-minimization study applicable to human milk banks. *Int. Breastfeed. J*. 2023. 18. (1): 20. Article.
- Villanueva Bueno, C; Montecatine Alonso, E; Jiménez Parrilla, F; González López, M; Manrique Rodríguez, S; Moreno Ramos, F; Cañete Ramírez, C et al. Antimicrobial Defined Daily Dose in Neonatal Population: Validation in the Clinical Practice. *Antibiotics-Basel*. 2023. 12. (3): 602. Article.
- Villaverde, S; Carbonell Sahuquillo, S; López Fernández, E; Belda Hofheinz, S; Ramos Casado, V; García Torres, E; Montañés, E et al. MEDIASTINITIS AFTER CONGENITAL HEART SURGERY: EPIDEMIOLOGY, CLINICAL FEATURES AND OUTCOMES. *Pediatr. Infect. Dis. J*. 2023. 42. (7): p. 250-253. Article.

Reviews

- Different opinions, experiences and related KMC issues: Good practices, stabilisation concept, nutrition and basic respiratory support. *Acta Paediatr*. 2023. 112. (12): p. 2478-2485. Review.

Editorials

- Belda Hofheinz, S. To Look Beyond Death: Focusing on Grief and Bereavement. *Crit. Care Med*. 2023. 51. (9): p. 1264-1267. Editorial Material.

Letters

- Fernández, EL; Melgares, LO; Sáez, OO; Hofheinz, SB; Casado, MVR. Feasibility and acceptance of ICU diaries adapted to pediatric patients. A new tool against family post-intensive care syndrome? *An. Pediatr*. 2023. 98. (4): p. 308-310. Letter.
- Lopez Muñoz, N; Hernández Ibarburu, G; Alonso, R; Sanchez Pina, JM; Ayala, R; Calbacho, M; Cuellar, C et al. Large-scale real-life analysis of survival and usage of therapies in multiple myeloma. *J. Hematol. Oncol*. 2023. 16. (1): 76. Letter.

THESES DEFENDED OR SUPERVISED WITHIN THE GROUP

- **Doctoral candidate:** Jesús Rodríguez López.
Thesis title: Episodios de disminución de la saturación de oxígeno en recién nacidos en contacto piel con piel.
University: Universidad Complutense de Madrid.
Date read: 07/02/2023.
Thesis director: Carmen Pallás Alonso.
International mention: No.

END GRADUATED INVESTIGATIONS DIRECTED ON THE GROUP

- **Student:** Andrea Carrasco Pérez.
Title: Diseño de las unidades neonatales nivel 3 en España y su relación con la implicación de los padres en el cuidado de sus hijos ingresados.
Director: Carmen Rosa Pallás Alonso and María Teresa Moral.
Degree: Medicina.
University: Universidad Complutense de Madrid.
- **Student:** Ana Paloma Sanz Trujillo.
Title: Implementación, análisis y validación de la primera fase de ensayo clínico de mascarillas nasales personalizadas con impresión 3D en ventilación no invasiva en recién nacidos prematuros.
Director: María Teresa Moral.
Degree: Ingeniería Biomédica.
University: Universidad Politécnica de Madrid.

PATENTS

- **Title:** Pasteurizador en continuo a altas temperaturas y tiempos cortos para la leche humana.
Number: P201531186.
Type: SPANISH patent.
Inventors: Diana Escuder Vieco, Carmen Rosa Pallás Alonso, Pablo Siegfried Seley, Leónides Fernández Álvarez.
Owners: Fundación i+12 (33,33 %), SIVE FLUID SYSTEMS, S.L. (33,33 %), PROBISEARCH, S.L. (33,33 %).
Priority Date: 11/08/2015.
Status: Granted (15/11/2017).
Graduate: SIVE FLUID SYSTEM, S.L.
- **Title:** Pasteurizador en Continuo para Leche Humana.
Number: 000218-2018/DIN.
Type: Entry into national phases of the PCT/ES2016/070294 - PERÚ.
Inventors: Carmen Rosa Pallas Alonso, Diana Escuder Vieco, Irene Espinosa Martos, Leónides Fernández Álvarez, Pablo Siegfried Seley, Juan Miguel Rodríguez Gómez.
Owners: Fundación i+12 (33,33 %), PROBISEARCH (33,33 %), SIVE FLUID SYSTEMS (33,33 %).
EFFNN Date: 09/02/2018.
- **Priority data:** P201531186 (11/08/2015).
Status: In process.
Graduate: SIVE FLUID SYSTEM, S.L.
- **Title:** Pasteurizador en Continuo para Leche Humana.
Número: EP16834706.
Type: Entry into national phases of the PCT/ES2016/070294 - EUROPEAN Patent.
Inventors: Carmen Rosa Pallas Alonso, Diana Escuder Vieco, Irene Espinosa Martos, Leónides Fernández Álvarez, Pablo Siegfried Seley, Juan Miguel Rodríguez Gómez.
Owners: Fundación i+12 (33,33 %), PROBISEARCH (33,33 %), SIVE FLUID SYSTEMS (33,33 %).
Priority data: P201531186 (11/08/2015).
Status: In process.
Graduate: SIVE FLUID SYSTEM, S.L.
- **Title:** Sistema de Anclaje Umbilical.
Number: P202030426.
Type: SPANISH patent.
Inventors: Imanol Tajuelo Llopis.
Owners: Fundación i+12 (100 %).

Priority Date: 11/05/2020.
Status: Granted (24/03/2022).

● **Title:** Sistema de Anclaje Umbilical.
Number: US17924210.

Type: Entry into national phases of the PCT/ES2021/070324 - UNITED STATES.

Inventors: Imanol Tajuelo Llopis.

Owners: Fundación i+12 (100 %).

EFFN Date: 09/11/2022.

Priority data: P202030426 (11/05/2020).

Status: In process.

● **Title:** Sistema de Anclaje Umbilical.

Number: EP218050524.

Type: Entry into national phases of the PCT/ES2021/070324 - EUROPEAN Patent.

Inventors: Imanol Tajuelo Llopis.

Owners: Fundación i+12 (100 %).

EFFN Date: 17/11/2022.

Priority data: P202030426 (11/05/2020).

Status: In process.

COORDINATOR:

Héctor José Bueno Zamora

Translational Multidisciplinary Cardiovascular Research

Research in Cardiovascular Image

Heart Failure - Pulmonary Hypertension

Research on Cardiovascular Risk

Translational Research in Hypertension and Cardiorenal Disease

Perinatal Medicine

Cardiovascular diseases (CVD) are the leading cause of mortality in Spain and in most other countries. The prevalence of diseases such as arterial hypertension, heart failure, ischemic heart disease or atrial fibrillation in the population is very high and can be considered almost epidemic at older ages.

The Cardiovascular Research Area was created with the generic objectives of increasing synergies between researchers in this field, with the aim of avoiding dispersion and redundancy of functions and increasing the efficiency of research in all areas. At the same time, it aims to promote the generation of scientific knowledge that can ultimately be transferred to patient care and the health system.

The i+12 Cardiovascular Research Area is a functional unit of patient-centered, multidisciplinary research, open to collaboration and synergistic work with other i+12 research areas, other hospitals and research centers, and technological innovation companies. The aim is to efficiently generate solid, useful, quality knowledge to advance in the understanding of problems related to cardiovascular diseases, their diagnosis and solution, all for the benefit of the public.

Cooperative development objectives set in the area:

Resource indicators

- Recruitment of transversal and centralizing personnel. Researcher: 6/5 years. Degree of achievement: high.
- Recruitment of transversal and centralizing personnel. Research coordinators: 2/5 years. Degree of achievement: medium.
- Recruitment of transversal and centralizing personnel. Support staff: 2/5 years. Degree of achievement: high.
- Obtaining funds. Calls for proposals that grant funds for RR. (e.g.: youth guarantee program, PFIS or FPU predoctoral contracts, Río Hortega, Juan Rodés, Sara Borrell, etc.): ≥ 3/5 years. Degree of achievement: high.
- Obtaining funds. Calls for proposals that grant funds for RR. Private or public funding projects, national/international (H2020): ≥ 5/5 years. Degree of achievement: high.
- Obtaining funds. Calls for proposals that grant funds for RR. Clinical trials, observational studies and trials with medical devices through contracts with industry: ≥ 10/5 years.
- Obtaining funds. Calls for proposals that grant funds for RR. Collaborations and donations from pharmaceutical and device industry: ≥ 10/5 years. Degree of achievement: medium.
- Obtaining funds. Calls for proposals that grant funds for RR. Technological development agreements with academia and industry: ≥ 3/5 years.
- Infrastructure improvement. Acquisition of a new confocal microscope with super-resolution module. Planned for 2023. Degree of achievement: high.

Process indicators

- Increase production of intra-area and inter-area projects. Degree of achievement: medium.
- To increase translational research activity. Degree of achievement: high.
- Promote participation in the CIBERCV. Degree of achievement: high.
- Consolidate collaboration with research institutes of excellence (CNIC, CNIO, and other accredited regional and national IIS). Degree of achievement: high.
- Participation in other national and international networks of: 1. Experimental research: National research network on inflammasome and pyroptosis in chronic diseases and cancer. Academic. 3. Research: TIMI group, Duke University, McMaster, etc. Translational research: Consortium for the study of renal failure and its impact on cardiovascular pathology (Community of Madrid). Degree of achievement: high.

Performance indicators

- Promote scientific activity by publishing at least 10 articles indexed in JCR and within the first quartile in journals in the cardiovascular category per year. Degree of achievement: high (101 in 2023).
- Development of at least 1 co-directed doctoral thesis per year. Degree of achievement: low.
- Development of collaboration agreements with other academic areas and universities (biotechnology, engineering, etc.). Degree of achievement: high.

- Promote the dissemination and disclosure of results in the area to the scientific community through courses, congresses, conferences, etc., with participation in at least 5 activities per year. Degree of achievement: high.
- Promote the dissemination and disclosure of results in the area to the scientific community through courses, congresses, conferences, etc., with participation in at least 5 activities per year. Degree of achievement: high.
- Promote training activities aimed at healthcare professionals from different areas involved in the prevention, diagnosis, treatment and rehabilitation of cardiovascular diseases by organizing a minimum of 5 activities each year. Degree of achievement: high.
- Encourage professional training through specialized training programs or internships, organizing at least 1 activity per year. Degree of achievement: high.
- Bring cardiovascular medicine closer to pre-university students by participating in events such as Science Week or similar, with at least 2 activities per year. Degree of achievement: high.

List of the 5 most relevant publications in the Cardiovascular Area during 2023

The following are the 5 most relevant publications in the Cardiovascular Area selected on the basis of original articles led by researchers in the area, published in quartile 1 of their subject category in JCR and most frequently cited:

1. **Poveda, J; González Lafuente, L; Vázquez Sánchez, S; Mercado García, E; Rodríguez Sánchez, E; García Consuegra, I; Sanz, AB; Segura, J; Fernández-Velasco, M; Liaño, F; Ruilope, LM; Ruiz-Hurtado, G.** Targeting the TWEAK-Fn14 pathway prevents dysfunction in cardiac calcium handling after acute kidney injury. *J. Pathol.* 2023. 261. (4): p. 427-441. Article.
2. **Rodríguez Calvo, J; Villalain, C; Gomez Arriaga, PI; Quezada, MS; Herraiz, I; Galindo, A.** Perinatal survival counseling of early-onset fetal growth restriction with placental growth factor. *Ultrasound Obstet Gynecol.* 2023. 61. (2): p. 181-190. Article.
3. Corbacho Alonso, N; Rodríguez Sánchez, E; Sastre Oliva, T; **Mercado García, E;** Perales Sánchez, I; Juarez Alía, C; López Almodovar, LF; Padial, LR; Tejerina, T; Mourino-Alvarez, L; **Ruiz-Hurtado, G;** et Barderas, MG. Global Oxidative Status Is Linked to Calcific Aortic Stenosis: The Differences Due to Diabetes Mellitus and the Effects of Metformin. *Antioxidants.* 2023. 12. (5): 1024. Article.
4. **Muñoz, DR;** del Castillo, AM; Al Mahdi, EAR; Rivera, CL; Cienfuegos, MG; Jimenez, JR; **Bernabe, LB; Ynsaurriaga, FA; et Salguero-Bodes, R.** Systematic Workflow and Electrogram guidance to reduce X-ray Exposure Time during cryoballoon ablation of atrial fibrillation: the SWEET-Cryo strategy. *Europace.* 2023. 25. (9): eua231. Article.
5. **López Azor, JC; Delgado, JF; Vélez, J;** Rodríguez, R; Solís, J; del Oro, M; Ortega, C; **Salguero-Bodes, R;** Palacios, B; **Vicent, L; Moreno, G; Rosillo, N;** Varela, L; Capel, M; **Arribas, F; Bernal, J; et Bueno, H.** Differences in clinical outcomes, health care resource utilization and costs in heart failure patients according to left ventricular ejection fraction. *Rev. Esp. Cardiol.* 2023. 76. (11): p. 862-871. Article.

Translational Multidisciplinary Cardiovascular Research

CENTER: Hospital Universitario 12 de Octubre (HU12O).

GROUP LEADER: Bueno Zamora, Héctor José (R4).

Andrade de Andrade, Carolina - Superior technique.
Arribas Ynsaurriaga, Fernando - Researcher.R4).
Borrego Bernabé, Luis - Junior clinical researcher.
Dominguez Pérez, Laura - Predoctoral researcher (R1).
Durante López, Alejandro - Doctoral researcher (R2).
Echeverría Orellana, Ruth - Doctoral researcher.
Feysi, Berk Mehmet - Support nurse.
García Martín, Elena Puerto - Graduate researcher.
García Tejada, Julio - Doctoral researcher (R2).
Gómez Blázquez, Iván Tomás - Junior clinical researcher.
Gómez Grande, Adolfo - Predoctoral researcher (R1).
González Gómez, María del Pilar - Support technician.
Hernández Gómez, Miguel - Superior technique.
Huertas Nieto, Sergio -Graduate researcher.
López Gude, María Jesús - Doctoral researcher (R3).

Maneiro Melón, Nicolás Manuel - Predoctoral researcher (R1).
Martín Asenjo, Roberto - Senior Clinical Researcher
Moreno Muñoz, Guillermo - Postdoctoral researcher (R2).
Palomino Doza, Addison Julián - Postdoctoral researcher (R2).
Peñaloza Martínez, Eduardo Luis -Graduate researcher.
Rodríguez Muñoz, Daniel Antonio - Doctoral researcher (R2).
Rosillo Ramírez, Nicolás - Predoctoral researcher (R1).
Salguero Bodes, Rafael - Senior Clinical Researcher
Sarnago Cebada, Fernando - Senior Clinical Researcher
Tello de Meneses Becerra, Rocío - Senior Clinical Researcher
Vélez García, Jorge -Graduate researcher.
Vicent Alaminos, María Lourdes - Doctoral researcher (R2).
Vicente Iglesias, Marta - Support nurse.
Zamora Pérez, Lydia Yasmin - Predoctoral researcher (R1).

ACTIVE RESEARCH PROJECTS

Type of funding	Funding body	No. of projects
Competitive	Commission of the European Communities	1
Competitive	Fundación Menudos Corazones	1
Competitive	ISCIII	2
No competitive	Various	3
Total		7

- **Title:** Estudio del papel de la inflamación dependiente de neutrófilos en la fisiopatología del infarto agudo de miocardio y sus complicaciones: en busca de nuevas dianas y oportunidades terapéuticas.
Principal investigator: Bueno Zamora, Héctor José.
Project No.: PI21/01572.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2022.
End date: 31/12/2024.
- **Title:** Estimulación de rama izquierda y ablación del nodo auriculoventricular en pacientes con insuficiencia cardíaca, FEVI > 40 % y fibrilación auricular permanente: el estudio PACE-FIB.
Principal investigator: Rodríguez Muñoz, Daniel Antonio.
Project No.: PI22/00113.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2023.
End date: 31/12/2025.
- **Title:** Empoderamiento y evaluación de experiencias y resultados en pacientes con cardiopatías congénitas mediante una aplicación móvil.
Principal investigator: Sarnago Cebada, Fernando.
Funding body: Fundación Menudos Corazones.
Start date: 28/09/2023.
End date: 27/09/2026.

- **Title:** Jacardi.
Principal investigator: Bueno Zamora, Héctor José.
Project No.: 101126953.
Funding body: Commission of the European Communities.
Start date: 01/11/2023.
End date: 31/10/2027.
- **Title:** Validación de la ecografía intravascular de alta definición frente a la reserva fraccional de flujo como método diagnóstico para identificar estenosis coronarias funcionalmente significativas.
Principal investigator: Sarnago Cebada, Fernando.
Funding body: Funded by the PI.
Start date: 01/04/2022.
End date: 31/03/2025.
- **Title:** Riesgo arrítmico tras síndrome coronario agudo con elevación del ST (ESTUDIO RIATEST).
Principal investigator: Borrego Bernabé, Luis.
Funding body: Boston Scientific Ibérica, S.A.
Start date: 24/08/2022.
End date: 23/08/2025.
- **Title:** Simulación *in situ* en cardiología.
Principal investigator: Durante López, Alejandro.
Funding body: Fundación Casa del Corazón.
Start date: 15/11/2023.
End date: 14/11/2024.

OTHER ACTIVE PROJECTS OF THE RESEARCH GROUP NOT MANAGED BY THE FUNDACIÓN PARA LA INVESTIGACIÓN BIOMÉDICA DEL HOSPITAL 12 DE OCTUBRE (FIBH12O)

- Title:** Biomarcadores de precisión para la mejora del diagnóstico y tratamiento de la enfermedad inflamatoria del miocardio.
Principal investigator: Domingo Pascual Figal.
IG researcher participating in the project: Héctor Bueno Zamora.
Project No.: PMP22/00105.
Funding body: Instituto de Salud Carlos III.
Start date: 01/01/2023.
End date: 31/12/2025.
 - Title:** Efectos de dos tipos de entrenamiento aeróbico a largo plazo en la presión arterial ambulatoria en hipertensos: un enfoque de biología de sistemas (HIITABP) – Proyecto I+D+i Retos Investigación.
Principal investigator: Luis Miguel Ruilope.
IG researcher participating in the project: Rafael Salguero Bodes.
Project No.: PID2020-114862RB-I00.
Funding body: Agencia Estatal de Investigación. Ministerio de Ciencia e Innovación.
Start date: 01/01/2021.
End date: 31/12/2023.
 - Title:** Análisis estructurado de la brecha de género en la atención médica cardiovascular: áreas de mejora a nivel hospitalario.
Principal investigator: M.^a Lourdes Vicent Alaminos.
Project No.: SEC/FEC-INV-CLI 21/009 (SEC project for translational research in cardiology).
Funding body: Sociedad Española de Cardiología.
Start date: 01/11/2021.
End date: 01/11/2024.
 - Title:** Fenomapeo: Un retrato robot de la enfermedad cardiovascular.
Principal investigator: M.^a Lourdes Vicent Alaminos.
Project No.: SEC/FEC-INV-CLI 22/06 (SEC project for translational research in cardiology).
Funding body: Sociedad Española de Cardiología.
Start date: 01/11/2022.
End date: 01/11/2025.
 - Title:** Variación interregional en la incidencia, el tratamiento y los resultados hospitalarios de la estenosis aórtica en España.
Principal investigator: Nicolás Rosillo Ramírez.
Project No.: SEC/FEC-INV-CLI 23/17.
Funding body: Sociedad Española de Cardiología.
Start date: 01/11/2023.
End date: 01/11/2026.
 - Title:** Estudio del inflammasoma NLRP3 en el síndrome cardiorrenal tras un fracaso renal agudo inducido por contraste en el intervencionismo cardiológico.
Principal investigator: Gema Ruiz Hurtado.
IG researcher participating in the project: Rafael Salguero Bodes.
- Project No.:** SEC/FEC-INV-BAS 23/09.
Funding body: Sociedad Española de Cardiología.
Start date: 01/11/2023.
End date: 01/11/2026.
 - Title:** Diferencias de género en el manejo temprano y posterior al alta después de un infarto agudo de miocardio (GENAMI PREVENTION).
Principal investigator: Héctor Bueno Zamora.
Project No.: ORG-21-359.
Funding body: Sociedad Española de Cardiología.
Start date: 2023.
End date: 2025.
 - Title:** Randomized clinical trial assessing the value of Beta-Blockers and Antiplatelet Agents in patients with Spontaneous Coronary Artery Dissection.
Principal investigator: Lourdes Vicent Alaminos (member of the IG) and Maite Velázquez Martín.
Project No.: 21/447.
Funding body: Sociedad Española de Cardiología.
Start date: 2021.
End date: 2023.
 - Title:** Tratamiento con betabloqueantes tras infarto de miocardio sin fracción de eyección reducida (REBOOT).
Principal investigator: Borja Ibáñez.
IG researcher participating in the project: Héctor Bueno Zamora.
Project No.: 2019/2049.
Funding body: Fundación Centro Nacional de Investigaciones Cardiovasculares Carlos III.
Start date: 11/03/2019.
End date: 11/03/2023.
 - Title:** Desarrollo y validación de una herramienta para la potencial detección precoz de la cardiotoxicidad a través del análisis de los PET-TAC realizados rutinariamente en pacientes con linfoma.
Principal investigator: David Palomino Fernández.
IG researcher participating in the project: Héctor Bueno Zamora, Lourdes Vicent Alaminos, Guillermo Moreno Muñoz and Adolfo Gómez Grande.
Project No.: SEC/FEC-INV-BAS 21/022.
Funding body: Sociedad Española de Cardiología.
Start date: October 2021.
End date: October 2024.

PUBLICATIONS*

Type of Document	No. of document	Σ IF (JCR 2022)
Articles	43	330.5
Reviews	2	12
Editorials	8	114.6
Total	53	457.1
Letters	1	5.9
Total	54	463

Articles

- Abtan, J; Bhatt, DL; Elbez, Y; Ducrocq, G; Goto, S; Smith, SC; Ohman, EM et al. External applicability of the Effect of ticagrelor on Health Outcomes in diabetes Mellitus patients Intervention Study (THEMIS) trial: An analysis of patients with diabetes and coronary artery disease in the REduction of Atherothrombosis for Continued Health (REACH) registry. *Int. J. Cardiol.* 2023. 370. p. 51-57. Article.
- Alfonso, F; Fernández Pérez, C; del Prado, N; García Guimaraes, M; Bernal, JL; Bastante, T; del Val, D et al. Primary Percutaneous Coronary Intervention in Patients With Spontaneous Coronary Artery Dissection vs Coronary Artery Disease. *JACC-Cardiovasc. Interv.* 2023. 16. (15): p. 1860-1869. Article.
- Anguita Gámez, M; Giraldo, MA; Nombela Franco, L; Esteve, AE; Cuerpo, G; Lopez Menendez, J; Gomez Polo, JC et al. Validation of the TRI-SCORE in patients undergoing surgery for isolated tricuspid regurgitation. *Heart.* 2023. 109. (18): p. 1401-1406. Article.
- Avila, P; Berrueto, A; Jiménez Candil, J; Tercedor, L; Calvo, D; Arribas, F; Fernández Portales, J et al. Bayesian analysis of the Substrate Ablation vs. Antiarrhythmic Drug Therapy for Symptomatic Ventricular Tachycardia trial. *Europace.* 2023. 25. (7): eua181. Article.
- Ayesta, A; Valero Masa, MJ; Vidán, MT; Segovia Cubero, J; García Cosío, MD; López Ibor, J; Caravaca, P et al. Frailty Is Common in Heart Transplant Candidates But Is Not Associated With Clinical Events and Is Reversible After Heart Transplantation. *Am. J. Cardiol.* 2023. 205. p. 28-34. Article.
- Bagudá, JD; Chaverri, AR; Pérez, PC; Aguilar Rodríguez, F; Carmena, MDGC; Carmena, DGC; Pérez, SM et al. Twenty-four hour ambulatory blood pressure monitoring in patients with stable heart failure. Prevalence and associated factors. *Rev. Esp. Cardiol.* 2023. 76. (11): p. 852-861. Article.
- Barrionuevo Sánchez, MI; Viana Tejedor, A; Ariza Solé, A; del Prado, N; Rosillo, N; Sánchez Salado, JC; Lorente, V et al. Impact of annual volume of cases and intensive cardiac care unit availability on mortality of patients with acute myocardial infarction-related cardiogenic shock treated at revascularization capable centres. *Eur. Heart J.-Acute Cardiovasc. Care.* 2023. 12. (7): p. 422-429. Article.
- de Frutos, F; Ochoa, JP; Fernández, AI; Gallego Delgado, M; Navarro Peñalver, M; Casas, G; Basurte, MT et al. Late gadolinium enhancement distribution patterns in non-ischaemic dilated cardiomyopathy: genotype-phenotype correlation. *Eur. Heart J.-Cardiovasc. Imaging.* 2023. 25. (1): p. 75-85. Article.
- Devesa, A; Fuster, V; Vazirani, R; García Lunar, I; Oliva, B; España, S; Moreno Arciniegas, A et al. Cardiac Insulin Resistance in Subjects With Metabolic Syndrome Traits and Early Subclinical Atherosclerosis. *Diabetes Care.* 2023. 46. (11). Article.
- Fernández, MS; Silva Melchor, L; Martínez Sellés, M; Viana Tejedor, A; Aguilar, R; Lopez de Sa Areses, E; Martín Asenjo, R. Early approach to LDL-related risk after acute coronary syndrome: the OPTA project. *Expert Rev. Cardiovasc. Ther.* 2023. 21. (6): p. 1-6. Article.
- Fontenla, A; Tamargo, J; Salgado, R; López Gil, M; Mejía, E; Matía, R; Toquero, J et al. Ivabradine for controlling heart rate in permanent atrial fibrillation: A translational clinical trial. *Heart Rhythm.* 2023. 20. (6): p. 822-830. Article.
- Galiana, A; Ruiz, S; Alen, JF; Grande, AG; Panero, I; Vega, D; García Perez, D et al. Effects of cranioplasty in cerebral blood perfusion using quantification with 99m-Tc HMPAO SPECT-CT. *J Neuroimaging.* 2023. 33. (1): p. 174-183. Article.
- Galvan Roman, F; Fernandez Herrero, I; Ariza Sole, A; Sanchez Salado, JC; Puerto, E; Lorente, V; Gomez Lara, J et al. Prognosis of cardiogenic shock secondary to culprit left main coronary artery lesion-related myocardial infarction. *ESC Heart Fail.* 2023. 10. (1): p. 111-120. Article.
- Gómez Grande, A; Seiffert, AP; Villarejo Galende, A; González Sánchez, M; Llamas Velasco, S; Bueno, H; Gómez, EJ et al. Static first-minute-frame (FMF) PET imaging after 18F-labeled amyloid tracer injection is correlated to [18F]FDG PET in patients with primary progressive aphasia. *Rev. Esp. Med. Nucl. Imagen Mol.* 2023. 42. (4): p. 211-217. Article.
- González Hoyo, M; Rossello, X; Peral, V; Pocock, S; Van de Werf, F; Chin, CT; Danchin, N et al. Impact of standard modifiable cardiovascular risk factors on 2-year all-cause mortality: Insights from an international cohort of 23, 489 patients with acute coronary syndrome. *Am. Heart J.* 2023. 264. p. 20-30. Article.
- Gupta, A; Barthel, AB; Mahajan, S; Dreyer, RP; Yaggi, H; Bueno, H; Lichtman, JH et al. Sex-Specific Associations of Obstructive Sleep Apnea Risk With Patient Characteristics and Functional Outcomes After Acute Myocardial Infarction: Evidence From the VIRGO Study. *J. Am. Heart Assoc.* 2023. 12. (18): e027225.

* Publications: only "Article", "Review", "Editorial Material" and "Letter" have been selected in "Document Type" of ISI Web Of Knowledge. The breakdown of publications includes some not included in the 2022 JCR, which are therefore not taken into account in the final count shown in the table, since they do not have IF.

- Article.
- Hinojosa, W; Cruz Utrilla, A; López Guarch, CJ; Velázquez Martín, M; de la Cal, TS; Gomez Burgueño, L; Otero, M et al. Outcome of moderate-severe tricuspid regurgitation after pulmonary endarterectomy or balloon pulmonary angioplasty. *Rev. Esp. Cardiol.* 2023. 76. (10): p. 774-782. Article.
 - Huguet, B; Lasheras, M; Fernandez, MF; Rivilla, AP; Gomez Grande, A; Tato, LP; Fernandez Cooke, E. Prolonged Fever in a Child With Congenital Heart Disease and a Prosthetic Valve. *Pediatr. Infect. Dis. J.* 2023. 42. (4): p. 350-352. Article.
 - Izquierdo García, J; Arranz Escudero, A; de Meneses, RT; de la Torre, N; Amat Macías, IM; Martín, JIC; Sanz Ayán, MP et al. Efficacy of a cardiac rehabilitation program in a municipal sports center compared to the hospital program: randomized controlled trial eCARCEX. *An. Sist. Sanit. Navar.* 2023. 46. (3): e1050. Article.
 - Jermakow, MT; Obradovic, S; Salinas, P; Roik, M; Dzudovic, B; Sekulic, I; Macaya, F et al. Initial results of investigator initiated international database on catheter directed therapy of acute pulmonary embolism. *Cardiol. J.* 2023. Article.
 - Landi, A; Heg, D; Frigoli, E; Vranckx, P; Windecker, S; Siegrist, P; Cayla, G et al. Abbreviated or Standard Antiplatelet Therapy in HBR Patients: Final 15-Month Results of the MASTER-DAPT Trial. *JACC-Cardiovasc. Interv.* 2023. 16. (7): p. 798-812. Article.
 - López Azor, JC; Delgado, JF; Vélez, J; Rodríguez, R; Solís, J; del Oro, M; Ortega, C et al. Differences in clinical outcomes, health care resource utilization and costs in heart failure patients according to left ventricular ejection fraction. *Rev. Esp. Cardiol.* 2023. 76. (11): p. 862-871. Article.
 - Luna Lopez, R; de la Cal, TS; Cebada, FS; de Miguel, IM; Hinojosa, W; Cruz Utrilla, A; Velazquez, MT et al. Triple vasodilator therapy in pulmonary arterial hypertension associated with congenital heart disease. *Heart.* 2023. 110. (5): p. 346-352. Article.
 - Magán, I; Moreno, G; Jurado Barba, R; Corral, M; Bueno, H. Potential role of positive psychology on risk stratification in patients with myocardial infarction. *Rev. Fed. Argent. Cardiol.* 2023. 52. (1): p. 36-44. Article.
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 - Ronco, D; Ariza Solé, A; Kowalewski, M; Matteucci, M; Di Mauro, M; López Sá, E; Ranucci, M et al. The current clinical practice for management of post-infarction ventricular septal rupture: a European survey. *Eur Heart J Open.* 2023. 3. (5): p. 91-91. Article.
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 - Sánchez Cabo, F; Fuster, V; Silla Castro, JC; González, G; Lorenzo Vivas, E; Alvarez, R; Callejas, S et al. Subclinical atherosclerosis and accelerated epigenetic age mediated by inflammation: a multi-omics study. *Eur Heart J.* 2023. 44. (29): p. 2698-2698. Article.
 - Sanchis, J; Bueno, H; Miñana, G; Guerrero, C; Martí, D; Martínez Sellés, M; Domínguez Pérez, L et al. Effect of Routine Invasive vs Conservative Strategy in Older Adults With Frailty and Non-ST-Segment Elevation Acute Myocardial Infarction A Randomized Clinical Trial. *JAMA Intern. Med.* 2023. 183. (5): p. 407-415. Article.
 - Suero, C; Martín, A; Coll Vinent, B; González Torrecilla, E; Ormaetxe, J; Alvarez, M; del Arco, C et al. Long-term prognosis and emergency management for patients with an implantable cardioverter defibrillator: the EMERGE-ICD study. *Emergencias.* 2023. 35. (3): p. 185-195. Article.
 - Velásquez Rodríguez, J; Vicent, L; Díez Delhoyo, F; Masa, MJ; Bruña, V; Sousa Casanovas, I; Juárez Fernández, M et al. Prognostic Implications of High-Degree Atrio-Ventricular Block in Patients with Acute Myocardial Infarction in the Contemporary Era. *J. Clin. Med.* 2023. 12. (14): 4834. Article.
 - Vicent, L; Alvarez García, J; Vazquez Garcia, R; González Juanatey, JR; Rivera, M; Segovia, J; Pascual Figal, D et al. Coronary Artery Disease and Prognosis of Heart Failure with Reduced Ejection Fraction. *J. Clin. Med.* 2023. 12. (8): 3028. Article.
 - Vicent, L; Rosillo, N; Moreno, G; Salguero Bodes, R; Goñi, C; Bernal, JL; Seara, G et al. Sex differences in patterns of referral and resource utilization in the cardiology clinic: an outpatient analysis. *Front. Cardiovasc. Med.* 2023. 10. 1202960. Article.
 - Vicent, L; Sanz, DMD; Rosillo, N; Penalzoza Martinez, E; Moreno, G; Bernal, JL; Elola, J et al. Sex differences in temporal trends in main and secondary pulmonary embolism diagnosis and case fatality rates: 2003-2019. *Eur Heart J Qual Care Clin Outcomes.* 2023. 9. (2): p. 184-193. Article.
- Reviews**
- Diaz Arocutipa, C; Chumbiauca, M; Medina, HM; Hernandez, AV; Vicent, L. Echocardiographic Criteria to Differentiate Constrictive Pericarditis From Restrictive Cardiomyopathy: A Meta-analysis. *CJC Open.* 2023. 5. (9): p. 680-690. Review.
 - Diaz Arocutipa, C; Denegri Galvan, J; Vicent, L; Pariona, M; Mamas, MA; Hernandez, AV. The added value of hypertonic saline solution to furosemide monotherapy in patients with acute decompensated heart failure: A meta-analysis and trial sequential analysis. *Clin. Cardiol.* 2023. 46. (8): p. 853-865. Review.
- Editorials**
- Bueno, H; Packer, M. Acetazolamide for acute heart failure: is ADVOR a riddle wrapped in a mystery inside an enigma? *Eur Heart J.* 2023. 44. (37): p. 3683-3685. Editorial Material.
 - Cruz Utrilla, A; Martín, EPG; Pérez, LD; Curiel, AR; Quezada, A; López, AD; Vicent, L et al. ECMO in pulmonary arterial hypertension and chronic thromboembolic pulmonary hypertension as a bridge to therapy. *Kardiol. Pol.* 2023. 81. (5): p. 500-504. Editorial Material.
 - Díez Delhoyo, F; Gómez Blázquez, I; Puerto, E; Rivadulla Varela, CM; Sarnago Cebada, F. OCT Features in Simultaneous 3-Vessel Thrombosis in a Patient With Essential Thrombocythemia. *JACC-Cardiovasc. Interv.* 2023. 16. (11): p. 1415-1417. Editorial Material.
 - González Torrecilla, E; López, R; Alonso, PA. Atrioventricular Block: Does This Patient Require a Pacemaker? *Circulation.* 2023. 148. (21): p. 1725-1727. Editorial Material.
 - Luna López, R; de Pablo Gafas, A; Escribano Subías, P; López Gude, MJ; Real, MI; Gámez, P. Double lung transplantation in pulmonary arterial hypertension associated with congenital heart disease. *Rev. Esp. Cardiol.* 2023. 76. (2): p. 132-134. Editorial Material.

- Paredes Hurtado, N; Fontenla, A; Sarnago, F. Leadless pacemaker through bicaval valve. Rev. Esp. Cardiol. 2023. 76. (2): p. 137-137. Editorial Material.
- Salguero Bodes, R; Arribas Ynsaurriaga, F. Ten years of the RECALCAR registry: reflections on cardiovascular care in Spain. Rev. Esp. Cardiol. 2023. 76. (7): p. 500-502. Editorial Material.
- Varela Rodríguez, C; Rosillo Ramírez, N; Rubio Valladolid, G; Ruiz López, P. Editorial: Real world evidence, outcome research and healthcare management improvement through real world data (RWD). Front. Public Health. 2023. 10. p. 1064580-1064580. Editorial Material.

Letters

- Bernal, JL; Bonilla Palomas, JL; Rosillo, N; Bonanad, C; Elola, J; Anguita, M. Validity of the minimum data set for outcomes research in patients hospitalized for heart failure in Spain. Rev. Esp. Cardiol. 2023. 76. (11): p. 938-939. Letter.

THESES DEFENDED OR SUPERVISED WITHIN THE GROUP

- **Doctoral candidate:** Guillermo Moreno Muñoz.
Thesis title: Predictores de incumplimiento de las medidas de prevención secundaria en infarto.
University: Universidad Complutense de Madrid.
Date read: 20/02/2023.
Thesis director: Héctor Bueno Zamora.
International mention: No.

END MASTER INVESTIGATIONS DIRECTED ON THE GROUP

- **Student:** Pablo Pérez Ruiz.
Title: Determinación de Predictores de Mortalidad a 2 Años en Pacientes con Síndrome Coronario Agudo Mediante Herramientas de Machine Learning.
Director: Héctor Bueno Zamora and Nicolás Rosillo Ramírez.
Master: Salud Pública.
Centro: Escuela Nacional de Sanidad – Instituto de Salud Carlos III.
- **Student:** Carol Ingrid Castellares González.
Title: Efecto de la Pandemia de la Covid-19 en la Tendencia de Miocarditis, Pericarditis e Infarto De Miocardio.
Director: Héctor Bueno Zamora and Nicolás Rosillo Ramírez.
Master: Salud Pública.
Centro: Escuela Nacional de Sanidad – Instituto de Salud Carlos III.
- **Student:** Jorge Vélez García.
Title: Diseño y desarrollo de una herramienta de visualización de resultados clínicos combinados, utilización de recursos y costes en pacientes con COVID-19.
Director: Héctor Bueno Zamora.
Master: Ingeniería Biomédica y Salud Digital.
University: Universidad de Sevilla.

END GRADUATED INVESTIGATIONS DIRECTED ON THE GROUP

- **Student:** Javier Iglesias Varea.
Title: Análisis del impacto de un comité monográfico multidisciplinar en el manejo y en la evolución de los pacientes con endocarditis infecciosa diagnosticados en un hospital de tercer nivel.
Director: Laura Domínguez Pérez.
Degree: Medicina.
University: Universidad Complutense de Madrid.

PRIZES AND AWARDS

- Award for the best communication by young researchers at the Congreso Nacional de Informática de la Salud (INFORSALUD 2023), granted by the Sociedad Española de Informática de la Salud (SEIS), for Jorge Velez Garcia, on March 23, 2023.

Research in Cardiovascular Image

CENTER: Hospital Universitario 12 de Octubre (HU12O).

GROUP LEADER: Solís Martín, Jorge (R4).

Abad Romero, Rocío - Graduate researcher.
Carbonell San Román, Sonsoles Alejandra - Graduate researcher.
Casalvázquez Aranda, Sergio - Superior technique.
Corros Vicente, Cecilia - Senior Clinical Researcher
Díaz Antón, Belén - Predoctoral researcher (R1).
Echeverría Orellana, Ruth - Doctoral researcher (R2).
Fernández Galindo, Marta - Predoctoral researcher (R1).
García Robles, José Antonio - Senior Clinical Researcher

González Lizarbe, Sofía - Support nurse.
Jiménez López-Guarch, María del Carmen - Doctoral researcher.
López Maldonado, Laura - Support technician.
Soroa Ortuño, Miguel - Graduate researcher.
Vicente Iglesias, Marta - Support nurse.
Wasniewski, Samantha Natalia - Doctoral researcher.

OTHER ACTIVE PROJECTS OF THE RESEARCH GROUP NOT MANAGED BY THE FUNDACIÓN PARA LA INVESTIGACIÓN BIOMÉDICA DEL HOSPITAL 12 DE OCTUBRE (FIBH12O)

- **Title:** Estudio de aterosclerosis subclínica y disfunción endotelial en mujeres con antecedentes de preeclampsia precoz.
Principal investigator: Solís Martín, Jorge.
Project No.: PI19/01579.
Funding body: Instituto de Salud Carlos III.
Start date: 01/01/2020.
End date: 31/12/2023.
- **Title:** Predicción de riesgo de cardiotoxicidad en las unidades de cardiooncología. Valor de la genética y diferentes biomarcadores. El registro CARDIOTOX.
Principal investigator: José Ramón González Juanatey.
IG researcher participating in the project: Carmen Jiménez López-Guarch and Ruth Echeverría Orellana.
Project No.: PMP22/00098.
Funding body: Instituto de Salud Carlos III.
Start date: 01/01/2023.
End date: 31/12/2025.
- **Title:** Eating Matters: los desafíos de una alimentación inclusiva, saludable y sostenible para un mejor envejecimiento.
Principal investigator: Mabel Gracia Arnaiz (Subproject 1) and Cristina Larrea Killinger (Subproject 2).
IG researcher participating in the project: Ruth Echeverría Orellana.
Project No.: PID2019-104253RB-C22.
Funding body: Agencia Estatal de Investigación.
Start date: 01/06/2020.
End date: 31/05/2024.
- **Title:** Efectos de dos tipos de entrenamiento aeróbico a largo plazo en la presión arterial ambulatoria en hipertensos: un enfoque de biología de sistemas.
Principal investigator: Luis Miguel Ruilope Urioste.
IG researcher participating in the project: Jorge Solís Martín.
Project No.: PID2020-114862RB-I00.
Funding body: Universidad Europea de Madrid.
Start date: 01/09/2021.
End date: 31/08/2025.

EUROPEAN PROJECT APPLICATIONS 2023

- **Call Identifier:** EU4H-2022-JA-03
Project title: Direct grants to Member States' authorities: prevention of NCDs – Cardiovascular diseases and diabetes (JACARDI).
Acronym: JACARDI.
Number: EU4H-2022-JA-03.
Coordinator: No, Work Package 7 co-leader.
Coordinating Centre: Istituto Superiore di Sanità-ISS (Italia).
Researcher participating in the project: Ruth Echeverría Orellana.
Granted: Yes.
- **Call Identifier:** HORIZON-HLTH-2024-ENVHLTH-02-two-stage.
Project title: Data-driven causal mechanisms in exposome for health.
Acronym: EXPOHEALTH.
Number: 101157138-1.
Coordinator: No.
Coordinating Centre: FONDAZIONE LINKS - LEADING INNOVATION & KNOWLEDGE FOR SOCIETY.
Researcher participating in the project: Ruth Echeverría Orellana.
Granted: No.

PUBLICATIONS*

Type of Document	No. of document	Σ IF (JCR 2022)
Articles	4	22,5
Reviews	2	11,9
Total	6	34,4

Articles

- Corbacho Alonso, N; Sastre Oliva, T; López Almodovar, LF; Solís, J; Padial, LR; Tejerina, T; Carrascal, M et al. Diabetes mellitus and aortic stenosis head to head: toward personalized medicine in patients with both pathologies. *Transl. Res.* 2023. 259. p. 35-45. Article.
- de Aragon, CAJ; Berna Rico, E; Ballester Martinez, MA; Jaén, P; Solís, J; Barderas, M; Fernández Frieria, L et al. Early Detection and Progression of Subclinical Atherosclerosis in Psoriasis (EDSAP): protocol for an observational, single-centre, prospective cohort study. *BMJ OPEN.* 2023. 13. (9): e072455. Article.
- Díez Villanueva, P; Jimenez Mendez, C; Lopez Lluva, MT; Wasniewski, S; Solís, J; Fernandez Frieria, L; Martinez Selles, M. Heart Failure in the Elderly: the Role of Biological and Sociocultural Aspects Related to Sex. *Curr. Heart Fail. Rep.* 2023. 20. (5): p. 321-332. Article.
- Hinojosa, W; Cruz Utrilla, A; López Guarch, CJ; Velázquez Martín, M; de la Cal, TS; Gomez Burgueño, L; Otero, M et al. Outcome of moderate-severe tricuspid regurgitation after pulmonary endarterectomy or balloon pulmonary angioplasty. *Rev. Esp. Cardiol.* 2023. 76. (10): p. 774-782. Article.
- López Azor, JC; Delgado, JF; Vélez, J; Rodríguez, R; Solís, J; del Oro, M; Ortega, C et al. Differences in clinical outcomes, health care resource utilization and costs in heart failure patients according to left ventricular ejection fraction. *Rev. Esp. Cardiol.* 2023. 76. (11): p. 862-871. Article.

Reviews

- González, CV; García, IH; Fernández Frieria, L; Ruiz Hurtado, G; Morales, E; Solís, J; Galindo, A. Cardiovascular and renal health: Preeclampsia as a risk marker. *Nefrología.* 2023. 43. (3): p. 269-280. Review.
- Melendo Víu, M; Marchán Lopez, A; Guarch, CJL; Roubín, SR; Abu Assi, E; Meneses, RT; Ynsaurriaga, FA et al. A systematic review and meta-analysis of randomized controlled trials evaluating pharmacologic therapies for acute and recurrent pericarditis. *Trends Cardiovasc. Med.* 2023. 33. (5): p. 319-326. Review.

THESES DEFENDED OR SUPERVISED WITHIN THE GROUP

- **Doctoral candidate:** Luca Vannini.
Thesis title: Técnicas de imagen cardiopulmonar no invasivas y pruebas funcionales respiratorias: identificación de secuelas cardiopulmonares durante la pandemia por COVID 19.
University: Universidad Rey Juan Carlos.
Date read: 19/09/2023.
Thesis director: Maria Dolores Martín Ríos, Carmen Jiménez López-Guarch.
International mention: No.

STAYS

- Jorge Solís Martín stayed at MGH - Harvard Medical School Boston from August 1 to 31, 2023.

* Publications: only "Article", "Review", "Editorial Material" and "Letter" have been selected in "Document Type" of ISI Web Of Knowledge. The breakdown of publications includes some not included in the 2022 JCR, which are therefore not taken into account in the final count shown in the table, since they do not have IF.

PATENTS

- **Title:** Método *in vitro* para el pronóstico y/o diagnóstico de diabetes mellitus en pacientes con estenosis aórtica y/ o para el pronóstico y/o diagnóstico de estenosis aórtica en pacientes con diabetes mellitus.
Number: P202330321.
Type: SPANISH patent.
Inventors: Elena Ana López Jiménez; Irene González Martínez; Jorge Solís Martín; María Eugenia González Barderas; Laura Mouriño Álvarez; Nerea Corbacho Alonso; Tamara Sastre Oliva; Inés Perales Sánchez; Cristina Juárez Alía; Luis Fernando López Almodóvar; Luis Rodríguez Padial.
Owners: Fundación i+12 (25 %), Fundación de Investigación del Hospital Nacional de Paraplégicos de Toledo (75 %).
Date of application: 21/04/2023.
Status: In process.
- **Title:** Método de diagnóstico, pronóstico o predicción de la evolución de la estenosis aórtica.
Number: P202130281.
Type: SPANISH patent.
Inventors: Jorge Solís Martín, Laura Mouriño Álvarez, Luis Fernando Lopez Almodovar, Luis Rodríguez Padial, Nerea Corbacho Alonso, Tamara Satre Oliva, Cecilia Corros Vicente, M.ª Eugenia Gonzalez Barderas.
Owners: Fundación i+12 (25 %), Fundación de Investigación del Hospital Nacional de Paraplégicos de Toledo (75 %).
Date of application: 30/03/2021.
Status: In process.

Heart Failure - Pulmonary Hypertension

CENTER: Hospital Universitario 12 de Octubre (HU12O).

GROUP LEADERS: Delgado Jiménez, Juan Francisco (R4) and Escribano Subías, María del Pilar (R4).

Cruz Utrilla, Alejandro - Postdoctoral researcher (R2).

De Juan Baguda, Javier Salvador - Senior Clinical Researcher

Flox Camacho, Ángela - Junior clinical researcher.

García-Cosío Carmena, María Dolores - Postdoctoral researcher (R2).

González Martín, Javier - Graduate researcher.

González Sardinero, Esther - Support nurse.

Jiménez López-Guarch, María del Carmen - Doctoral researcher (R3).

Marco Clement, Irene - Predoctoral researcher (R1).

Martín de Miguel, Irene - Predoctoral researcher (R1).

Melus de Cabo, Esther - Superior technique.

Morán Fernández, Laura Lucía - Junior clinical researcher.

Ochoa Parra, Nuria - Support technician.

Rincón Fernández, Daniel Mauricio - Support nurse.

Sánchez Sánchez, Violeta - Senior Clinical Researcher

Segura de la Cal, Teresa - Graduate researcher.

Velázquez Martín, María Teresa - Junior clinical researcher.

ACTIVE RESEARCH PROJECTS

Type of funding	Funding body	No. of projects
Competitive	Fundación Casa del Corazón	1
Competitive	ISCIII	3
No competitive	Various	3
Total		7

• **Title:** Hacia una clasificación ómica en la hipertensión arterial pulmonar.

Principal investigator: Escribano Subías, María del Pilar.

Project No.: PI21/01690.

Funding body: Instituto de Salud Carlos III (ISCIII).

Start date: 01/01/2022.

End date: 31/12/2024.

• **Title:** Multimodality evaluation of antibody mediated damage in heart transplantation (LEON - HT PROJECT).

Principal investigator: Delgado Jiménez, Juan Francisco.

Project No.: PI20/01389.

Funding body: Instituto de Salud Carlos III (ISCIII).

Start date: 01/01/2021.

End date: 31/12/2023.

• **Title:** Bases genético-moleculares de la medicina de precisión en la hipertensión arterial pulmonar.

Principal investigator: Escribano Subías, M.ª del Pilar.

Project No.: PI18/01233.

Funding body: Instituto de Salud Carlos III (ISCIII).

Start date: 01/01/2019.

End date: 31/12/2021, extended to 30/06/2023.

• **Title:** Evaluación multimodal del daño mediado por anticuerpos en trasplante cardíaco.

Principal investigator: Delgado Jiménez, Juan Francisco.

Funding body: Fundación Casa del Corazón.

Start date: 26/10/2021.

End date: 25/10/2024.

• **Title:** Enfermedad arterial coronaria transmitida por el donante en receptores de trasplante cardíaco: prevalencia, factores de riesgo y repercusión pronóstica.

Principal investigator: Delgado Jiménez, Juan Francisco.

Funding body: Fundación Profesor Novoa Santos.

Start date: 29/04/2022.

End date: 28/04/2023.

• **Title:** Análisis de distintas estrategias para pacientes en insuficiencia cardíaca avanzada.

Principal investigator: Delgado Jiménez, Juan Francisco.

Funding body: Funded by the PI.

Start date: 07/09/2021.

End date: 06/09/2023.

• **Title:** Impacto de la telemonitorización no invasiva sobre los eventos clínicos, costes sanitarios y no sanitarios en la insuficiencia cardíaca. IMPACT-IC.

Principal investigator: Delgado Jiménez, Juan Francisco.

Funding body: AstraZeneca Farmacéutica Spain, S.A.

Start date: 09/03/2023.

End date: 31/01/2025.

OTHER ACTIVE PROJECTS OF THE RESEARCH GROUP NOT MANAGED BY THE FUNDACIÓN PARA LA INVESTIGACIÓN BIOMÉDICA DEL HOSPITAL 12 DE OCTUBRE (FIBH12O)

• **Title:** Integración de los biomarcadores de metilación genómica global (metiloma) en pacientes con sospecha de enfermedades raras, como complemento diagnóstico: desentrañando las variantes de significado incierto.

Principal investigator: Jair Antonio Tenorio Castaño.

Project No.: PMP22/00049.

Funding body: Instituto de Salud Carlos III.

Start date: 01/01/2023.

End date: 31/12/2025.

• **Title:** New targets and therapeutic strategies in Pulmonary Arterial Hypertension (ADRENALIN).

Principal investigator: Eduardo Oliver Pérez. María del Pilar Escribano Subías is a member of the research team.

Project No.: PID2021-123167OB-I00.

Funding body: Agencia Estatal de Investigación. Ministerio de Ciencia e Innovación.

Start date: 01/01/2022.

End date: 31/12/2025.

• **Title:** Caracterización de pacientes con hipertensión pulmonar basada en la función mitocondrial para el desarrollo de un test diagnóstico.

Principal investigator: María José Sánchez Quintero (IP, HUVV).

Participants: María José Sánchez Quintero (IP, HUVV); Juan José Gómez Doblás (IP, HUVV); Víctor Manuel Becerra Muñoz (C.; HUVV); Francisco Javier Pavón Morón (C.; HUVV); Dina Medina Vera (C.; HUVV); Ada Carmona Segovia (C.; HUVV); Luis Carlos López García (C.; HUVV); Alejandro Recio Mayoral (Hospital Virgen de Macarena, Sevilla); Rafael Bravo Marqués (C.; Hospital Costa del Sol, Marbella); Pilar Escribano Subías (C.; Hospital 12 de Octubre). María del Pilar Escribano Subías is a member of the research team.

Project No.: PI-0245-2021.

Funding body: Consejería de Salud y Familias de la Junta de Andalucía.

Start date: 01/01/2022.

End date: 31/12/2024.

• **Title:** Estudio prospectivo, aleatorizado, multicéntrico, abierto, guiado por eventos, para evaluar la no inferioridad de una estrategia personalizada de precisión para la prevención de la muerte súbita en pacientes con miocardiopatía dilatada no isquémica. ESTUDIO CIBER-SPANISH I.

Principal investigator: Domingo Francisco Javier Díez Martínez. Juan Delgado Jiménez leads the collaborating group in CIBERCV.

Project No.: PMP21/00064.

Funding body: Instituto de Salud Carlos III (ISCIII).

Start date: 01/01/2022.

End date: 31/12/2025.

• **Title:** Hacia una clasificación ómica en la hipertensión arterial pulmonar.

Principal investigator: María Pilar Escribano Subías.

Project No.: PI21/01690.

Funding body: Instituto de Salud Carlos III.

Start date: 01/01/2022.

End date: 31/12/2024.

• **Title:** Multimodality evaluation of antibody mediated damage in heart transplantation (LEON- HT PROJECT).

Principal investigator: Juan Francisco Delgado Jiménez.

Project No.: PI20/01389.

Funding body: Instituto de Salud Carlos III.

Start date: 01/01/2021.

End date: 31/12/2023.

• **Title:** Enfermedad arterial coronaria transmitida por el donante en receptores de trasplante cardíaco: prevalencia, factores de riesgo y repercusión pronóstica.

Principal investigator: Juan Francisco Delgado Jiménez.

Funding body: Fundación Profesor Novoa Santos.

Start date: 29/04/2022.

End date: 28/04/2023.

• **Title:** Análisis de distintas estrategias para pacientes en insuficiencia cardíaca avanzada.

Principal investigator: Juan Francisco Delgado Jiménez.

Funding body: Fundación Casa del Corazón.

Start date: 07/09/2021.

End date: 06/09/2023.

PUBLICATIONS*

Type of Document	No. of document	Σ IF (JCR 2022)
Articles	38	444,962
Reviews	4	52,3
Editorials	5	31,1
Total	47	528,362
Letters	2	21
Total	49	549,362

* Publications: only "Article", "Review", "Editorial Material" and "Letter" have been selected in "Document Type" of ISI Web Of Knowledge. The breakdown of publications includes some not included in the 2022 JCR, which are therefore not taken into account in the final count shown in the table, since they do not have IF.

Articles

- Aguilar Rodríguez, F; Lemes, MP; Carrillo, JA; Bagudá, JD. Impact of early follow-up from primary care on 30 days readmission after heart failure hospitalization. *Med. Fam.-SEMERGEN*. 2023. 49. (2): 1019-111. Article.
- Aktaa, S; Gale, CP; Brida, M; Giannakoulas, G; Kovacs, G; Adir, Y; Benza, RL et al. European Society of Cardiology quality indicators for the care and outcomes of adults with pulmonary arterial hypertension. Developed in collaboration with the Heart Failure Association of the European Society of Cardiology. *Eur. J. Heart Fail*. 2023. 25. (4): p. 469-477. Article.
- Alvarez García, J; Ropero, MJC; Manjavacas, AMI; Díez Villanueva, P; Esteban Fernández, A; Baguda, JD; Rivas Lasarte, M et al. Do Women Physicians Accept and Follow Heart Failure Guidelines More Than Men? *Curr. Heart Fail. Rep*. 2023. 20. (3): p. 151-156. Article.
- Aysta, A; Valero Masa, MJ; Vidán, MT; Segovia Cubero, J; García Cosío, MD; López Ibor, J; Caravaca, P et al. Frailty Is Common in Heart Transplant Candidates But Is Not Associated With Clinical Events and Is Reversible After Heart Transplantation. *Am. J. Cardiol*. 2023. 205. p. 28-34. Article.
- Bagudá, JD; Chaverri, AR; Pérez, PC; Aguilar Rodríguez, F; Carmena, MDGC; Carmena, DGC; Pérez, SM et al. Twenty-four hour ambulatory blood pressure monitoring in patients with stable heart failure. Prevalence and associated factors. *Rev. Esp. Cardiol*. 2023. 76. (11): p. 852-861. Article.
- Barge Caballero, E; González Vilchez, F; Almenar Bonet, L; Carmena, MDG; González Costello, J; Gómez Bueno, M; Castel Lavilla, MA et al. Temporal trends in the use and outcomes of temporary mechanical circulatory support as a bridge to cardiac transplantation in Spain. Final report of the ASIS-TC study. *J. Heart Lung Transplant*. 2023. 42. (4): p. 488-502. Article.
- Barradas Pires, A; Merás, P; Constantine, A; Costola, G; de la Cal, TS; Rafiq, I; Kempny, A et al. Repair of Aortic Regurgitation in Young Adults: Sooner Rather Than Later. *J. Am. Heart Assoc*. 2023. 12. (18): e029251. Article.
- Codina, P; Dobarro, D; de Juan Bagudá, J; De Frutos, F; Lupón, J; Bayes Genis, A; Gonzalez Costello, J et al. Heart failure risk scores in advanced heart failure patients: insights from the LEVO-D registry. *ESC Heart Fail*. 2023. 10. (5): p. 2875-2881. Article.
- Cruz Utrilla, A; Gallego Zazo, N; Pérez Olivares, C; Hernández González, I; Bedate, P; Martínez Meñaca, A; López Meseguer, M et al. Usefulness of genetics for clinical reclassification and refinement of prognostic stratification in pulmonary arterial hypertension. *Rev. Esp. Cardiol*. 2023. 76. (6): p. 460-467. Article.
- Díez Villanueva, P; García Guimaraes, M; Sanz Ruiz, R; Sabaté, M; Macaya, F; Roura, G; Jimenez Kockar, M et al. Prognostic implications of left ventricular systolic dysfunction in patients with spontaneous coronary artery dissection. *Eur. Heart J.-Acute Cardiovasc. Care*. 2023. 12. (5): p. 299-305. Article.
- Dobarro, D; Donoso Trenado, V; Solé González, E; Moliner Abós, C; Garcia Pinilla, JM; Lopez Fernandez, S; Ruiz Bustillo, S et al. Intermittent inotropic support with levosimendan in advanced heart failure as destination therapy: The LEVO-D registry. *ESC Heart Fail*. 2023. 10. (2): p. 1193-1204. Article.
- Eichstaedt, CA; Belge, C; Chung, WK; Graef, S; Gruenig, E; Montani, D; Quarck, R et al. Genetic counselling and testing in pulmonary arterial hypertension: a consensus statement on behalf of the International Consortium for Genetic Studies in PAH. *Eur. Resp. J*. 2023. 61. (2): 2201471. Article.
- Escobar, C; Palacios, B; Gonzalez, V; Gutiérrez, M; Duong, M; Chen, HT; Justo, N et al. Burden of Illness beyond Mortality and Heart Failure Hospitalizations in Patients Newly Diagnosed with Heart Failure in Spain According to Ejection Fraction. *J. Clin. Med*. 2023. 12. (6): 2410. Article.
- Escobar, C; Palacios, B; Gonzalez, V; Gutiérrez, M; Duong, M; Chen, HT; Justo, N et al. Evolution of economic burden of heart failure by ejection fraction in newly diagnosed patients in Spain. *BMC Health Serv. Res*. 2023. 23. (1): 1340. Article.
- Esteban Fernández, A; Gómez Otero, I; López Fernández, S; Santamarta, MR; Pastor Pérez, FJ; Fluvia Brugués, P; Pérez Rivera, JA et al. Influence of the medical treatment schedule in new diagnoses patients with heart failure and reduced ejection fraction. *Clin. Res. Cardiol*. 2023. Article.
- Fernández Cordón, C; Núñez Gil, IJ; de Miguel, IM; Pérez Castellanos, A; Vedia, O; Almendro Delia, M; López País, J et al. Takotsubo Syndrome, Stressful Triggers, and Risk of Recurrence. *Am. J. Cardiol*. 2023. 205. p. 58-62. Article.
- Galian Gay, L; Gisela, T; Casas, G; Ferrer Sistach, E; Mitroi, C; Mingo, S; Monivas, V et al. Changes in echocardiographic parameters over time in paradoxical low-flow low-gradient aortic stenosis. *Eur. Heart J.-Cardiovasc. Imaging*. 2023. 24. (8): p. 1120-1128. Article.
- García Alvarez, A; Blanco, I; García Lunar, I; Jordà, P; Rodriguez Arias, JJ; Fernández Friera, L; Zegri, I et al. B3 adrenergic agonist treatment in chronic pulmonary hypertension associated with heart failure (SPHERE-HF): a double blind, placebo-controlled, randomized clinical trial. *Eur. J. Heart Fail*. 2023. 25. (3): p. 373-385. Article.
- García Guimaraes, M; Sanz Ruiz, R; Sabaté, M; Velazquez Martín, M; Veiga, G; Ojeda, S; Avanzas, P et al. Spontaneous coronary artery dissection and ST-segment elevation myocardial infarction: Does clinical presentation matter? *Int. J. Cardiol*. 2023. 373. p. 1-6. Article.
- Garcia, AR; Blanco, I; Ramon, L; Pérez Sagredo, J; Guerra Ramos, FJ; Martín Ontiyuelo, C; Tura Ceide, O et al. Predictors of the response to phosphodiesterase-5 inhibitors in pulmonary arterial hypertension: an analysis of the Spanish registry. *Respir. Res*. 2023. 24. (1): 223. Article.
- Gómez Bueno, M; Pérez de la Sota, E; Forteza Gil, A; Ortiz Berbel, D; Castrodeza, J; García Cosío, MD; Barge Caballero, E et al. Durable ventricular assist device in Spain (2007-2020). First report of the REGALAD registry. *Rev. Esp. Cardiol*. 2023. 76. (4): p. 227-237. Article.
- González Vilchez, F; Hernández Pérez, F; Almenar Bonet, L; Crespo Leiro, MG; Jiménez Granados, A; Ortiz Bautista, C; Delgado Jiménez, JF et al. Spanish heart transplant registry. 34th official report of the Heart Failure Association of the Spanish Society of Cardiology. *Rev. Esp. Cardiol*. 2023. 76. (11): p. 901-909. Article.
- Hinojosa, W; Cruz Utrilla, A; López Guarch, CJ; Velázquez Martín, M; de la Cal, TS; Gomez Burgueño, L; Otero, M et al. Outcome of moderate-severe tricuspid regurgitation after pulmonary endarterectomy or balloon pulmonary angioplasty. *Rev. Esp. Cardiol*. 2023. 76. (10): p. 774-782. Article.

- Hoeper, MM; Badesch, DB; Ghofrani, HA; Gibbs, JSR; Gombert Maitland, M; McLaughlin, VV; Preston, IR et al. Phase 3 Trial of Sotatercept for Treatment of Pulmonary Arterial Hypertension. *N. Engl. J. Med*. 2023. 388. (16): p. 1478-1490. Article.
- Humbert, M; Kovacs, G; Hoeper, MM; Badagliacca, R; Berger, RMF; Brida, M; Carlsen, J et al. 2022 ESC/ERS Guidelines for the diagnosis and treatment of pulmonary hypertension. *Eur. Resp. J*. 2023. 61. (1): 2200879. Article.
- Humbert, M; Kovacs, G; Hoeper, MM; Badagliacca, R; Berger, RMF; Brida, M; Carlsen, J et al. Linee guida ESC/ERS 2022 per la diagnosi e il trattamento dell'ipertensione polmonare. *G. Ital. Cardiol*. 2023. 24. (4 Suppl 1): p. 1-116. Article.
- Humbert, M; McLaughlin, V; Gibbs, JSR; Gombert Maitland, M; Hoeper, MM; Preston, IR; Souza, R et al. Sotatercept for the treatment of pulmonary arterial hypertension: PULSAR open-label extension. *Eur. Resp. J*. 2023. 61. (1): 2201347. Article.
- Jermakow, MT; Obradovic, S; Salinas, P; Roik, M; Dzudovic, B; Sekulic, I; Macaya, F et al. Initial results of investigator initiated international database on catheter directed therapy of acute pulmonary embolism. *Cardiol. J*. 2023. Article.
- López Azor, JC; Delgado, JF; Vélez, J; Rodríguez, R; Solís, J; del Oro, M; Ortega, C et al. Differences in clinical outcomes, health care resource utilization and costs in heart failure patients according to left ventricular ejection fraction. *Rev. Esp. Cardiol*. 2023. 76. (11): p. 862-871. Article.
- Luna Lopez, R; de la Cal, TS; Cebada, FS; de Miguel, IM; Hinojosa, W; Cruz Utrilla, A; Velazquez, MT et al. Triple vasodilator therapy in pulmonary arterial hypertension associated with congenital heart disease. *Heart*. 2023. 110. (5): p. 346-352. Article.
- Manzo Silberman, S; Velázquez, M; Burgess, S; Sahni, S; Best, P; Mehran, R; Piccaluga, E et al. Radiation protection for healthcare professionals working in catheterisation laboratories during pregnancy: a statement of the European Association of Percutaneous Cardiovascular Interventions (EAPCI) in collaboration with the European Heart Rhythm Association (EHRA), the European Association of Cardiovascular Imaging (EACVI), the ESC Regulatory Affairs Committee and Women as One. *EuroIntervention*. 2023. 19. (1): p. 53-62. Article.
- Melon, NM; Martin, MV; Nieto, SH; Gonzalez Trevilla, AA; Cebada, FS; Utrilla, AC; Camargo, WH et al. Effectiveness and Safety of Balloon Pulmonary Angioplasty for the Treatment of Patients with Persistent Pulmonary Hypertension after Pulmonary Endarterectomy. *J. Clin. Med*. 2023. 12. (3): 905. Article.
- Muñoz, DR; Crespo Leiro, MG; Lozano, IF; Gómez, JLZ; Peinado, RP; Espinosa, LM; Bagudá, JD et al. Conduction system pacing and atrioventricular node ablation in heart failure: The PACE-FIB study design. *ESC Heart Fail*. 2023. 10. (6): p. 3700-3709. Article.
- Olivella, A; Almenar Bonet, L; Gonzalez Vilchez, F; Díez Lopez, C; Diaz Molina, B; Blazquez Bermejo, Z; Sobrino Marquez, JM et al. Mechanical circulatory support in severe primary graft dysfunction: Peripheral cannulation but not earlier implantation improves survival in heart transplantation. *J. Heart Lung Transplant*. 2023. 42. (8): p. 1101-1111. Article.
- Pascual, J; Mazuecos, A; Sánchez Antolín, G; Solé, A; Ventura Aguiar, P; Crespo, M; Farrero, M et al. Best practices during COVID-19 pandemic in solid organ transplant programs in Spain. *Transplant. Rev*. 2023. 37. (1): p. 100749-100749. Article.
- Pözl, G; Altenberger, J; Comín Colet, J; Delgado, JF; Fedele, F; García González, MJ; Gustafsson, F et al. Repetitive levosimendan infusions for patients with advanced chronic heart failure in the vulnerable post-discharge period: The multinational randomized Leodor trial. *Eur. J. Heart Fail*. 2023. 25. (11): p. 2007-2017. Article.
- Sagastagoitia Fornie, M; Morán Fernández, L; Blázquez Bermejo, Z; Díaz Molina, B; Gómez Bueno, M; Almenar Bonet, L; López Granados, A et al. Incidence and Prognosis of Colorectal Cancer After Heart Transplantation: Data From the Spanish Post-Heart Transplant Tumor Registry. *Transpl. Int*. 2023. 36. 11042. Article.
- Salamanca, J; García Guimaraes, M; Sabaté, M; Sanz Ruiz, R; Macaya, F; Roura, G; Jimenez Kockar, M et al. Multivessel spontaneous coronary artery dissection: Clinical features, angiographic findings, management, and outcomes. *Int. J. Cardiol*. 2023. 370. p. 65-71. Article.
- Surkova, E; Constantine, A; Xu, ZY; de la Cal, TS; Bispo, D; West, C; Senior, R et al. Prognostic significance of subpulmonary left ventricular size and function in patients with a systemic right ventricle. *Eur. Heart J.-Cardiovasc. Imaging*. 2023. 25. (1): p. 58-65. Article.
- Vera Zambrano, A; Lago Docampo, M; Gallego, N; Franco Gonzalez, JF; Morales Cano, D; Cruz Utrilla, A; Villegas Esguevillas, M et al. Novel Loss-of-Function KCNA5 Variants in Pulmonary Arterial Hypertension. *Am. J. Respir. Cell Mol. Biol*. 2023. 69. (2): p. 147-158. Article.
- Welch, CL; Aldred, MA; Balachandar, S; Dooijes, D; Eichstaedt, CA; Graef, S; Houweling, AC et al. Defining the clinical validity of genes reported to cause pulmonary arterial hypertension. *Genet. Med*. 2023. 25. (11): 100925. Article.
- Lang, IM; Andreassen, AK; Andersen, A; Bouvaist, H; Coghlan, G; Escribano Subias, P; Jansa, P et al. Balloon pulmonary angioplasty for chronic thromboembolic pulmonary hypertension: a clinical consensus statement of the ESC working group on pulmonary circulation and right ventricular function. *Eur Heart J*. 2023. 44. (29): p. 2659-2671. Review.
- Marco, I; García, JCLA; Martín, JG; Sánchez, AS; Carmena, MDGC; Sierra, EM; Bagudá, JD et al. De Novo Donor-Specific Antibodies after Heart Transplantation: A Comprehensive Guide for Clinicians. *J. Clin. Med*. 2023. 12. (23): 7474. Review.

Reviews

- de Miguel, IM; Cruz Utrilla, A; Oliver, E; Escribano Subias, P. Novel Molecular Mechanisms Involved in the Medical Treatment of Pulmonary Arterial Hypertension. *Int. J. Mol. Sci*. 2023. 24. (4): 4147. Review.
- Gallego Zazo, N; Miranda Alcaraz, L; Cruz Utrilla, A; Marín, MJD; Alvarez Fuente, M; del Rey, MDRV; Rodríguez, IG et al. Seven Additional Patients with SOX17 Related Pulmonary Arterial Hypertension and Review of the Literature. *Genes*. 2023. 14. (10): 1965. Review.

Editorials

- Cruz Utrilla, A; Escribano Subías, MP; Tenorio Castaño, JA; Del Cerro Marín, MJ. Digenic Inheritance in a Case of Pulmonary Arterial Hypertension Associated with Two Incidental Septal Defects and Multiple Thoracic Collaterals. Arch. Bronconeumol. 2023. 59. (3): p. 169-170. Editorial Material.
- Cruz Utrilla, A; Martín, EPG; Pérez, LD; Curiel, AR; Quezada, A; López, AD; Vicent, L et al. ECMO in pulmonary arterial hypertension and chronic thromboembolic pulmonary hypertension as a bridge to therapy. Kardiol. Pol. 2023. 81. (5): p. 500-504. Editorial Material.
- Del Pozo, R; Cruz Utrilla, A; Escribano Subías, P. Prognostic Stratification and Treatment for Pulmonary Arterial Hypertension. Gaps and Promising Remedies. Arch. Bronconeumol. 2023. 59. (10): p. 617-618. Editorial Material.
- Luna López, R; de Pablo Gafas, A; Escribano Subías, P; López Gude, MJ; Real, MI; Gámez, P. Double lung transplantation in pulmonary arterial hypertension associated with congenital heart disease. Rev. Esp. Cardiol. 2023. 76. (2): p. 132-134. Editorial Material.
- Subías, P. Chronic Whipple's disease, a diagnostic challenge for the cardiologist. Rev. Esp. Cardiol. 2023. 76. (12): p. 954-955. Editorial Material.

Letters

- Del Pozo, R; Blanco, I; López Meseguer, M; Escribano Subías, P; Cruz Utrilla, A. Effectiveness and persistence with selexipag in pulmonary arterial hypertension in the real-life setting. Eur. J. Intern. Med. 2023. 111. p. 140-142. Letter.
- Enriquez Vázquez, D; Barge Caballero, E; Gonzalez Vilchez, F; Almenar Bonet, L; Carmena, MDGC; Gonzalez Costello, J; Gomez Bueno, M et al. Sex, Temporary Mechanical Circulatory Support, and Heart Transplantation. JACC-Heart Fail. 2023. 11. (12): p. 1763-1766. Letter.

THESES DEFENDED OR SUPERVISED WITHIN THE GROUP

- **Doctoral candidate:** Alejandro Cruz Utrilla.
Thesis title: Prevalencia e Impacto en el Fenotipo de las Variantes Genéticas en la Hipertensión Arterial Pulmonar Pediátrica y del Adulto.
University: Universidad Complutense de Madrid.
Date read: 30/03/2023.
Thesis director: María del Pilar Escribano Subías, María Jesús del Cerro Marín, Juan Francisco Delgado Jiménez.
International mention: No.

Research on Cardiovascular Risk

CENTER: Atención Primaria (AP).

GROUP LEADER: Minué Lorenzo, César (R3).

Camarelles Guillem, Francisco - Doctoral researcher.
Gámez Cabero, María Isabel - Senior Clinical Researcher
Granados Garrido, José Antonio - Senior Clinical Researcher
Martínez Suberviola, Francisco Javier - Senior Clinical Researcher

Matilla Pardo, Blanca - Senior Clinical Researcher
Olano Espinosa, Eduardo - Senior Clinical Researcher
Serrano Serrano, Encarnación - Senior Clinical Researcher
Vizcaino Sánchez-Rodrigo, José María - Senior Clinical Researcher

PUBLICATIONS*

Type of Document	No. of document	Σ IF (JCR 2022)
Articles	1	2,5
Editorials	1	2,5
Total	2	5

Articles

- Bolibar Ribas, B; Llobera Cànaves, J; García Ortiz, L; Bellón, JÁ; Ramos, R; García Campayo, J; Sánchez Pérez, Á et al. La Red de Investigación en Actividades Preventivas y Promoción de la Salud (redIAPP): una red de referencia e impulsora de la investigación en atención primaria. Aten. Prim. 2023. 55. (11): p. 102694-102694. Article.
- Lozano Hernández, CM; Medina García, R; de Hoyos Alonso, MC; Garrido Barral, A; Minué Lorenzo, C; Sanz Cuesta, T; Serrano, J et al. Improvement in Quality of Life With the Use of a Technological System Among Patients With Chronic Disease Followed Up in Primary Care (TeNDER Project): Protocol for a Randomized Controlled Trial. JMIR RES. Protoc. 2023. 12. e47331. Article.

Editorials

- Camarelles Guillem, F. ¿Podrán los nuevos fármacos frenar la epidemia mundial de la obesidad y el sobrepeso? Aten. Prim. 2023. 55. (1): p. 102518-102518. Editorial Material.

END GRADUATED INVESTIGATIONS DIRECTED ON THE GROUP

- **Student:** Andrea Ávalos Valera.
Title: Prevalencia de nuevas formas de consumo de tabaco y nicotina en estudiantes de Grado en Medicina de la Universidad de Alcalá.
Director: Encarnación Serrano Serrano.
Master: Medicina.
University: Universidad de Alcalá de Henares.

PRIZES AND AWARDS

- Award from the Health Start Program of the Conocimiento madri+d and the Plataforma de Innovación en Tecnologías Médicas y Sanitarias, promoted by the Instituto de Salud Carlos III (ITEMAS) to the Dejalobot Project for Eduardo Olano and César Minué.

* Publications: only "Article", "Review", "Editorial Material" and "Letter" have been selected in "Document Type" of ISI Web Of Knowledge. The breakdown of publications includes some not included in the 2022 JCR, which are therefore not taken into account in the final count shown in the table, since they do not have IF.

Translational Research in Hypertension and Cardiorenal Disease

CENTER: Hospital Universitario 12 de Octubre (HU12O).

GROUP LEADER: Ruiz Hurtado, Gema (R4).

González Lafuente, Laura - Predoctoral researcher (R1).
González Moreno, Daniel - Predoctoral researcher (R1).
López Sánchez-Oro, María Luisa - Researcher in Nursing.
Mercado García, Elisa - Superior technique.
Pérez Gómez, Alberto Luis - Doctoral researcher (R3).

Pineros Pitalúa, Patricia - Graduate researcher.
Poveda Núñez, Jonay - Postdoctoral researcher (R2).
Segura de la Morena, José Julián - Doctoral researcher (R3).
Vázquez Sánchez, Sara - Graduate researcher.

ACTIVE RESEARCH PROJECTS

Type of funding	Funding body	No. of projects
Competitive	Comunidad de Madrid	1
Competitive	Fundación Casa del Corazón	1
Competitive	Fundación Senefro	1
Competitive	Instituto de Salud Carlos III.	1
Total		4

- Title:** Abordaje traslacional para el estudio del daño cardíaco en el fracaso renal agudo: Código CARDIOAKI.
Principal investigator: Ruiz Hurtado, Gema.
Project No.: PI20/00763.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2021.
End date: 31/12/2023; extended to 30/06/2025.
- Title:** S2022/BMD-7223 Consorcio para el estudio del fracaso renal y su impacto en la patología cardiovascular.
Principal investigator: Segura de la Morena, José Julián.
Project No.: S2022/BMD-7223.
Funding body: Comunidad de Madrid.
Start date: 01/01/2023.
End date: 31/12/2026.
- Title:** Código CARDIOAKI: abordaje multidisciplinar para el estudio del eje FGF23-KLOTTHO en el fracaso renal agudo.
Principal investigator: Ruiz Hurtado, Gema.
Funding body: Fundación Senefro.
Start date: 30/10/2021.
End date: 29/10/2023.
- Title:** Estudio del inflammasoma NLRP3 en el síndrome cardiorenal tras un fracaso renal agudo inducido por contraste en el intervencionismo cardiológico.
Principal investigator: Ruiz Hurtado, Gema.
Funding body: Fundación Casa del Corazón.
Start date: 26/10/2023.
End date: 31/12/2027.

OTHER ACTIVE PROJECTS OF THE RESEARCH GROUP NOT MANAGED BY THE FUNDACIÓN PARA LA INVESTIGACIÓN BIOMÉDICA DEL HOSPITAL 12 DE OCTUBRE (FIBH12O)

- Title:** Efectos de dos tipos de entrenamiento aeróbico a largo plazo en la presión arterial ambulatoria en hipertensos: un enfoque de biología de sistemas.
Principal investigator: Luis Miguel Ruilope Urioste.
Project No.: PID2020-114862RB-I00.
Funding body: Ministerio de Ciencia e Innovación.
Start date: 2021.
End date: 2023.

PUBLICATIONS*

Type of Document	No. of document	Σ IF (JCR 2022)
Articles	21	356.208
Reviews	3	45.1
Total	24	401.308

Articles

- Agarwal, R; Pitt, B; Palmer, BF; Kovesdy, CP; Burgess, E; Filippatos, G; Malyszko, J et al. A comparative post hoc analysis of finerenone and spironolactone in resistant hypertension in moderate-to-advanced chronic kidney disease. *Clin. Kidney J.* 2023. 16. (2): p. 293-302. Article.
- Agarwal, R; Pitt, B; Rossing, P; Anker, SD; Filippatos, G; Ruilope, LM; Kovesdy, CP et al. Modifiability of Composite Cardiovascular Risk Associated With Chronic Kidney Disease in Type 2 Diabetes With Finerenone. *JAMA Cardiol.* 2023. 8. (8): p. 732-741. Article.
- Agarwal, R; Ruilope, LM; Ruiz Hurtado, G; Haller, H; Schmieder, RE; Anker, SD; Filippatos, G et al. Effect of finerenone on ambulatory blood pressure in chronic kidney disease in type 2 diabetes. *J. Hypertens.* 2023. 41. (2): p. 295-302. Article.
- Agarwal, R; Tu, WZ; Farjat, AE; Fang, YMK; Toto, R; Kaul, S; Lawatscheck, R et al. Impact of Finerenone-Induced Albuminuria Reduction on Chronic Kidney Disease Outcomes in Type 2 Diabetes A Mediation Analysis. *Ann. Intern. Med.* 2023. 176. (12). Article.
- Bagudá, JD; Chaverri, AR; Pérez, PC; Aguilar Rodríguez, F; Carmena, MDGC; Carmena, DGC; Pérez, SM et al. Twenty-four hour ambulatory blood pressure monitoring in patients with stable heart failure. Prevalence and associated factors. *Rev. Esp. Cardiol.* 2023. 76. (11): p. 852-861. Article.
- Corbacho Alonso, N; Rodríguez Sánchez, E; Sastre Oliva, T; Mercado García, E; Perales Sánchez, I; Juárez Alía, C; López Almodovar, LF et al. Global Oxidative Status Is Linked to Calcific Aortic Stenosis: The Differences Due to Diabetes Mellitus and the Effects of Metformin. *Antioxidants.* 2023. 12. (5): 1024. Article.
- Filippatos, G; Anker, SD; August, P; Coats, AJS; Januzzi, JL; Mankovsky, B; Rossing, P et al. Finerenone and effects on mortality in chronic kidney disease and type 2 diabetes: a FIDELITY analysis. *EUR. HEART J.-CARDIOVASC. PHARMACOTHER.* 2023. 9. (2): p. 183-191. Article.
- Flack, JM; Agarwal, R; Anker, SD; Pitt, B; Ruilope, LM; Rossing, P; Adler, SG et al. Finerenone in Black Patients With Type 2 Diabetes and CKD: A Post hoc Analysis of the Pooled FIDELIO-DKD and FIGARO-DKD Trials. *Kidney Med.* 2023. 5. (12): 100730. Article.
- Frías, A; Vargas, F; Sandino, J; Berzal, R; Rivero, M; Cordero, L; Cavero, T et al. Octogenarians with chronic kidney disease in the nephrology clinic: Progressors vs. non-progressors. *Front Nephrol.* 2023. 3. p. 1114486-1114486. Article.
- González Lafuente, L; Navarro García, JA; Valero Almazán, A; Rodríguez Sánchez, E; Vázquez Sánchez, S; Mercado García, E; Pineros, P et al. Partial Genetic Deletion of Klotho Aggravates Cardiac Calcium Mishandling in Acute Kidney Injury. *Int J Mol Sci.* 2023. 24. (2): 1322. Article.
- Koya, D; Anker, SD; Ruilope, LM; Rossing, P; Liu, ZH; Lee, BW; Lee, CT et al. Cardiorenal Outcomes with Finerenone in Asian Patients with Chronic Kidney Disease and Type 2 Diabetes: A FIDELIO-DKD post hoc Analysis. *Am. J. Nephrol.* 2023. 54. (9-10): p. 370-378. Article.
- Mahfoud, F; Mancía, G; Schmieder, RE; Ruilope, L; Narkiewicz, K; Schlaich, M; Williams, B et al. Outcomes Following Radiofrequency Renal Denervation According to Antihypertensive Medications: Subgroup Analysis of the Global SYMPLICITY Registry DEFINE. *Hypertension.* 2023. 80. (8): p. 1759-1770. Article.
- McGill, JB; Agarwal, R; Anker, SD; Bakris, GL; Filippatos, G; Pitt, B; Ruilope, LM et al. Effects of finerenone in people with chronic kidney disease and type 2 diabetes are independent of HbA1c at baseline, HbA1c variability, diabetes duration and insulin use at baseline. *Diabetes Obes Metab.* 2023. 25. (6): p. 1512-1522. Article.
- Ortiz, A; Ferro, CJ; Balafa, O; Burnier, M; Ekart, R; Halimi, JM; Kreutz, R et al. Mineralocorticoid receptor antagonists for nephroprotection and cardioprotection in patients with diabetes mellitus and chronic kidney disease. *Nephrol Dial Transplant.* 2023. 38. (1): p. 10-25. Article.
- Poveda, J; González Lafuente, L; Vázquez Sánchez, S; Mercado García, E; Rodríguez Sánchez, E; García Consuegra, I; Sanz, AB et al. Targeting the TWEAK-Fn14 pathway prevents dysfunction in cardiac calcium handling after acute kidney injury. *J. Pathol.* 2023. 261. (4): p. 427-441. Article.
- Rosas, SE; Ruilope, LM; Anker, SD; Pitt, B; Rossing, P; Bonfanti, AAC; Correa Rotter, R et al. Finerenone in Hispanic Patients With CKD and Type 2 Diabetes: A Post Hoc FIDELITY Analysis. *Kidney Med.* 2023. 5. (10): 100704. Article.
- Rossing, P; Agarwal, R; Anker, SD; Filippatos, G; Pitt, B; Ruilope, LM; Fonseca, V et al. Finerenone in patients across the spectrum of chronic kidney disease and type 2 diabetes by glucagon-like peptide-1 receptor agonist use. *Diabetes Obes Metab.* 2023. 25. (2): p. 407-416. Article.
- Rossing, P; Anker, SD; Filippatos, G; Pitt, B; Ruilope, LM; Billings, LK; Green, JB et al. The impact of obesity on cardiovascular and kidney outcomes in patients with chronic kidney disease and type 2 diabetes treated with finerenone: Post hoc analysis of the FIDELITY study. *Diabetes Obes Metab.* 2023. 25. (10): p. 2989-2998. Article.

* Publications: only "Article", "Review", "Editorial Material" and "Letter" have been selected in "Document Type" of ISI Web Of Knowledge. The breakdown of publications includes some not included in the 2022 JCR, which are therefore not taken into account in the final count shown in the table, since they do not have IF.

- Rossing, P; Garweg, JG; Anker, SD; Osonoi, T; Pitt, B; Rosas, SE; Ruilope, LM et al. Effect of finerenone on the occurrence of vision-threatening complications in patients with non-proliferative diabetic retinopathy: Pooled analysis of two studies using routine ophthalmological examinations from clinical trial participants (ReFineDR/DeFineDR). *Diabetes Obes Metab.* 2023. 25. (3): p. 894-898. Article.
- Ruilope, LM; Pitt, B; Anker, SD; Rossing, P; Kovesdy, CP; Pecoits Filho, R; Pergola, P et al. Kidney outcomes with finerenone: An analysis from the FIGARO-DKD study. *Nephrol Dial Transplant.* 2023. 38. (2): p. 372-383. Article.
- Sanz Gómez, M; Manzano Lista, FJ; Vega Martín, E; González Moreno, D; Alcalá, M; Gil Ortega, M; Somoza, B et al. Finerenone protects against progression of kidney and cardiovascular damage in a model of type 1 diabetes through modulation of proinflammatory and osteogenic factors. *Biomed. Pharmacother.* 2023. 168. 115661. Article.

Reviews

- Camafort, M; Ihm, SH; Ruilope, LM. Renal denervation for the treatment of hypertension and kidney disease. *Curr. Opin. Nephrol. Hypertens.* 2023. 32. (6): p. 544-550. Review.
- González, CV; García, IH; Fernández Frieria, L; Ruiz Hurtado, G; Morales, E; Solís, J; Galindo, A. Cardiovascular and renal health: Preeclampsia as a risk marker. *Nefrología.* 2023. 43. (3): p. 269-280. Review.

Editorials

- Carasol, M; Muñoz Aguilera, E; Ruilope, LM. Oral health, hypertension and cardiovascular diseases. *Hipertens. Riesgo Vasc.* 2023. 40. (4): p. 167-170. Editorial Material.

END GRADUATED INVESTIGATIONS DIRECTED ON THE GROUP

- **Student:** Lucía González Márquez.

Title: Implicación del inflammasoma en la enfermedad cardiorenal.

Director: Gema Ruiz Hurtado and Laura González Lafuente.

Master: Biología Sanitaria.

University: Universidad de Alcalá (UAH).

- **Student:** Marino Polo Salguero.

Title: Papel del factor de crecimiento de fibroblasto (FGF)23 en el contexto de la cardiopatía isquémica.

Director: Gema Ruiz Hurtado and Sara Vázquez Sánchez.

Master: Biología Sanitaria.

University: Universidad de Alcalá (UAH).

PRIZES AND AWARDS

- Jóvenes Investigadores 2023 award, in the Cardiovascular, Renal and Metabolism Area, Fundación AstraZeneca.
Coordinator: Ana Belén Sanz. PI: Gema Ruiz Hurtado.

PATENTS

- **Title:** Un método pronóstico y kit para la identificación de riesgo de desarrollo de albuminuria, riesgo de daño renal y riesgo cardiovascular en un sujeto humano hipertenso.
Number: P201630559.
Type: SPANISH patent.
Inventors: Luis Miguel Ruilope Urioste, Gema Ruiz Hurtado, Eugenia González Barderas, Fernando Vivanco Martínez, Gloria Álvarez Llamas, Laura González Calero.

Owners: Fundación i+12 (20 %), Fundación Jiménez Díaz (60 %), Fundación de Investigación del Hospital Nacional de Parapléjicos de Toledo (20 %).
Priority Date: 29/04/2016.
Status: Granted (15/11/2017).
Full licence OEPM.

- Sarafidis, P; Agarwal, R; Pitt, B; Wanner, C; Filippatos, G; Boletis, J; Tuttle, KR et al. Outcomes with Finerenone in Participants with Stage 4 CKD and Type 2 Diabetes A FIDELITY Subgroup Analysis. *Clin. J. Am. Soc. Nephrol.* 2023. 18. (5): p. 602-612. Article.
- Song, J; Navarro Garcia, JA; Wu, J; Saljic, A; Abu Taha, I; Li, LG; Lahiri, SK et al. Chronic kidney disease promotes atrial fibrillation via inflammasome pathway activation. *J. Clin. Invest.* 2023. 133. (19): e167517. Article.
- Staplin, N; Sierra, AD; Ruilope, LM; Emberson, JR; Vinyoles, E; Gorostidi, M; Hurtado, GR et al. Relationship between clinic and ambulatory blood pressure and mortality: an observational cohort study in 59 124 patients. *Lancet.* 2023. 401. (10393): p. 2041-2050. Article.

- Valenzuela, PL; Ruilope, LM; Santos Lozano, A; Wilhelm, M; Kränkel, N; Fiuza Lucas, C; Lucia, A. Exercise benefits in cardiovascular diseases: from mechanisms to clinical implementation. *Eur Heart J.* 2023. 44. (21): p. 1874-1889. Review.

Perinatal Medicine

CENTER: Hospital Universitario 12 de Octubre (HU12O).

GROUP LEADERS: Galindo Izquierdo, Alberto (R4) y Mendoza Soto, Alberto (R4).

Albert de la Torre, Leticia - Senior Clinical Researcher
Arias Dachary, Francisco Javier - Junior clinical researcher.
Boni, Lorenzo - Senior Clinical Researcher
Escribano Abad, David - Senior Clinical Researcher
Flores Fernández, Marta - Junior clinical researcher.
García Burguillo, Antonio - Senior Clinical Researcher
García Torres, Enrique - Senior Clinical Researcher
Gómez Arriaga, Paula Isabel - Senior Clinical Researcher
Gómez Montes, María Enery - Senior Clinical Researcher

Granados Ruiz, Miguel Ángel - Researcher.línea sénior.
Herraiz García, Ignacio - Senior Clinical Researcher
Herrera Linde, María Dolores - Junior clinical researcher.
Montañés Delmás, María Elena - Junior clinical researcher.
Quezada Rojas, María Soledad - Senior Clinical Researcher
Rodríguez Calvo, Jesús - Junior clinical researcher.
Toral Vázquez, Belén - Junior clinical researcher.
Villalaín González, Cecilia - Junior clinical researcher.

ACTIVE RESEARCH PROJECTS

Type of funding	Funding body	No. of projects
Competitive	ISCIII	2
Total		2

- **Title:** Ensayo clínico aleatorizado para la inducción del parto a término en la restricción del crecimiento intrauterino: dinoprostona vaginal versus sonda de Foley.
Principal investigator: Herraiz García, Ignacio.
Project No.: PI19/01005.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2020.
End date: 31/12/2022; extended to 30/06/2024.

- **Title:** Estudio de salud cardiovascular en mujeres con antecedentes de preeclampsia precoz.
Principal investigator: Galindo Izquierdo, Alberto.
Project No.: PI19/01579.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2020.
End date: 31/12/2022; extended to 30/06/2024.

OTHER ACTIVE PROJECTS OF THE RESEARCH GROUP NOT MANAGED BY THE FUNDACIÓN PARA LA INVESTIGACIÓN BIOMÉDICA DEL HOSPITAL 12 DE OCTUBRE (FIBH12O)

- **Title:** KD-CAAP: Kawasaki Disease Coronary Artery Aneurism Prevention Trial.
Principal investigators: Despina Eleftheriou and Paul Brogan.
Participating researcher: Dr. Belén Toral Vázquez and Dr. Ana Teresa Caro Barri.
Project No.: Grant agreement No. 777389
Funding body: Innovative Medicines Initiative 2 Joint Undertaking (JU), under grant agreement No. 777389 that supports the Conect4children (c4c) research consortium (UK).
Start date: 08/04/2021.
End date: Asset.
- **Title:** FIONA-OLE.
Principal investigator: M.ª Mar Espino Hernández.
Participating researcher: Dr. Leticia Albert de la Torre.
Project No.: Grant agreement No. 945153.
Funding body: Grant from the European Union's Horizon 2020 research and innovation programme under grant agreement N.º 945153.
Start date: 2021.
End date: Asset.

- **Title:** Evaluación a largo plazo de pacientes con enfermedad de Kawasaki y MIS-C. Estudio piloto sobre la activación del sistema inmune, biomarcadores cardíacos, evaluación cardiopulmonar y calidad de vida.
Principal investigator: Elisa Fernández Cooke.
Participating researcher: Ana Teresa Caro Barri, Marta Flores Fernández and Belén Toral Vázquez.
Project No.: PI23/00218.
Funding body: Instituto de Salud Carlos III.
Start date: October 2023.
End date: Asset.
- **Title:** Estudio multicéntrico, aleatorizado y doble ciego para determinar el efecto de la triheptanoína en comparación con triglicéridos de cadena media (TCM) par sobre los episodios clínicos importantes (ECI) en pacientes pediátricos con trastornos de la oxidación de ácidos grasos de cadena larga (LC-FAOD).
Principal investigator: M.ª Pilar Quijada Fraile.
Participating researcher: Ana Teresa Caro Barri.
Funding body: Ultragenyx Pharmaceutical Inc.
Start date: October 2022.
End date: Asset.

PUBLICATIONS*

Type of Document	No. of document	Σ IF (JCR 2022)
Articles	16	104.3
Reviews	4	14.1
Editorials	1	7.1
Total	21	125.5

Articles

- Alonso Lloret, F; Mendoza Soto, A; Gil Domínguez, S; Fontecha Merino, VM; Romero Ferreiro, C. Perioperative stress and anxiety in parents of children operated on for congenital heart disease. *Enferm. Intensiv.* 2023. 34. (4): p. 205-217. Article.
- Colom, JC; Manzanares, A; Gómez, AA; Escribano, IS; Esquivel, E; Pérez Rivilla, A; Moral Pumarega, MT et al. Clinical outcomes and antibody transfer in a cohort of infants with in utero or perinatal exposure to SARS-CoV-2 (Coronascope Study). *Eur. J. Pediatr.* 2023. 182. (10): p. 4647-4654. Article.
- Daverio, M; Hofheinz, SB; Vida, V; Scattolin, F; Fernández, EL; Torres, EG; Tajuelo Llopis, I et al. Pediatric COVID-19 extracorporeal membrane oxygenation transport during the pandemic. *Perfusion-UK.* 2023. Article.
- Díaz, ML; Antón Pacheco, JL; Herrero, CG; Vals, AE; Novillo, IC; Valverde, RM; Izquierdo, AG. Diagnostic accuracy of imaging compared to histology in congenital lung malformations. *An. Pediatr.* 2023. 99. (5): p. 304-311. Article.
- Gomez Arriaga, PI; Nunez, N; Zamora, B; Villalain, C; Risco, B; Liebana, C; Herraiz, I et al. Natural history and mid-term neurodevelopmental outcome of fetuses with isolated mild ventriculomegaly diagnosed in the second half of pregnancy. *J. Matern.-Fetal Neonatal Med.* 2023. 36. (1): 2214836. Article.
- Gómez Montes, E; Lobato, ES; Izquierdo, AG; Alcázar, DG; González, CV; Moral Pumarega, MT; Lozano, GB et al. Prenatal cystic fibrosis transmembrane conductance regulator modulator therapy: A promising way to change the impact of cystic fibrosis. *Fetal Diagn. Ther.* 2023. 50. (2): p. 136-142. Article.
- Hascoët, S; Benthams, JR; Giugno, L; Betrián Blasco, P; Kempny, A; Houeijeh, A; Baho, H et al. Outcomes of transcatheter pulmonary SAPIEN 3 valve implantation: an international registry. *Eur Heart J.* 2023. 45. (3): p. 198-210. Article.
- Hofheinz, SB; Fernández, EL; Torres, EG; Dachary, JA; Boni, L; Llopis, IT; Gámez, RO et al. Primary neonatal and pediatric ECMO transport: First experience in Spain. *Perfusion-UK.* 2023. Article.
- Huguet, B; Lasheras, M; Fernandez, MF; Rivilla, AP; Gomez Grande, A; Tato, LP; Fernandez Cooke, E. Prolonged Fever in a Child With Congenital Heart Disease and a Prosthetic Valve. *Pediatr. Infect. Dis. J.* 2023. 42. (4): p. 350-352. Article.
- Juzga Corrales, C; Ayerza Casas, A; Figueras Coll, M; Escribà Borí, S; Plata Izquierdo, B; Collell, R; González Marín, M et al. Characteristics and outcomes of the Spanish registry for pediatric patients with bicuspid aortic valve (REVAB). *Rev. Esp. Cardiol.* 2023. 76. (12): p. 961-969. Article.
- Khoury, M; Harahsheh, AS; Raghuvver, G; Dahdah, N; Lee, S; Fabi, M; Selamet Tierney, ES et al. Obesity and Outcomes of Kawasaki Disease and COVID-19-Related Multisystem Inflammatory Syndrome in Children. *JAMA Netw. Open.* 2023. 6. (12): e2346829. Article.
- Luna Lopez, R; de la Cal, TS; Cebada, FS; de Miguel, IM; Hinojosa, W; Cruz Utrilla, A; Velazquez, MT et al. Triple vasodilator therapy in pulmonary arterial hypertension associated with congenital heart disease. *Heart.* 2023. 110. (5): p. 346-352. Article.
- Mazarico, E; Meler, E; Mendoza, M; Herraiz, I; Llurba, E; De Diego, R; Comas, M et al. Mortality and severe neurological morbidity in extremely preterm growth-restricted fetuses. *Ultrasound Obstet Gynecol.* 2023. 62. (6): p. 788-795. Article.
- Núñez, FR; Pardeiro, CA; Albert, BI; Alvarez Fuente, M; Barreiro, VB; Tejerizo, FB; Betrián Blasco, P et al. Dosimetric parameters in congenital cardiac catheterizations in Spain: the GTH-SECPC Radcong-21 multicenter registry. *REC-Interv. Cardiol.* 2023. 5. (4): p. 254-262. Article.
- Rodríguez Calvo, J; Villalain, C; Gomez Arriaga, PI; Quezada, MS; Herraiz, I; Galindo, A. Perinatal survival counseling of early-onset fetal growth restriction with placental growth factor. *Ultrasound Obstet Gynecol.* 2023. 61. (2): p. 181-190. Article.
- San Juan, R; Sanz Prieto, A; Contreras Mora, J; Fojo Suárez, I; Caso Laviana, JM; Fernández Ruiz, M; López Medrano, F et al. Comprehensive analysis of current epidemiology, clinical features and prognostic factors of puerperal endometritis: A retrospective cohort analysis. *Eur. J. Obstet. Gynecol. Reprod. Biol.-X.* 2023. 18. 100199. Article.
- Soriano Ramos, M; Esquivel De la Fuente, E; Vicent, EA; de la Calle, M; Baquero Artigao, F; Domínguez Rodríguez, S; Cabanes, M et al. The role of the T-cell mediated immune response to Cytomegalovirus infection in intrauterine transmission. *PLoS One.* 2023. 18. (2): e0281341. Article.
- Tejerizo, FB; Sánchez, FC; Freixa, X; Amat Santos, IJ; Domingo, EB; Blasco, PB; Mata, RB et al. Spanish cardiac catheterization in congenital heart diseases registry. Second official report from the ACI-SEC and the GTH-SECPC (2021). *REC-Interv. Cardiol.* 2023. 5. (3): p. 185-192. Article.
- Villaverde, S; Carbonell Sahuquillo, S; López Fernández, E; Belda Hofheinz, S; Ramos Casado, V; García Torres, E; Montañés, E et al. MEDIASTINITIS AFTER CONGENITAL HEART SURGERY: EPIDEMIOLOGY, CLINICAL FEATURES AND OUTCOMES. *Pediatr. Infect. Dis. J.* 2023. 42. (7): p. 250-253. Article.

- Viñals, F; Correa, F; Escribano, D; Hormazábal, L; Diaz, L; Galindo, A; Zambrano, B et al. Feasibility of extended ultrasound examination of the fetal brain between 24 and 37 weeks' gestation in low-risk pregnancies. *J. Perinat. Med.* 2023. 51. (6): p. 815-822. Article.

Reviews

- Dagklis, T; Akolekar, R; Villalain, C; Tsakiridis, I; Kesrouani, A; Tekay, A; Plasencia, W et al. Management of preterm labor: Clinical practice guideline and recommendation by the WAPM-World Association of Perinatal Medicine and the PMF-Perinatal Medicine Foundation. *Eur. J. Obstet. Gynecol. Reprod. Biol.* 2023. 291. p. 196-205. Review.
- Gómez Arriaga, PI; Escribano, D; Gómez Montes, E; Villalain, C; Mendoza, A; Galindo, A. Prenatal diagnosis of isolated coronary artery fistula: systematic review, analysis of perinatal prognostic factors and case report. *J. Matern.-Fetal Neonatal Med.* 2023. 36. (1): 2206938. Review.
- González, CV; García, IH; Fernández Frieria, L; Ruiz Hurtado, G; Morales, E; Solís, J; Galindo, A. Cardiovascular and renal health: Preeclampsia as a risk marker. *Nefrología.* 2023. 43. (3): p. 269-280. Review.

Letters

- Soto, AM; de la Torre, LA; Fernández, MF; Linde, DH; Vázquez, BT; Barri, AC. Interventional catheterization in pediatric patients after Fontan procedure. *REC-Interv. Cardiol.* 2023. 6. (1). Letter.

THESES DEFENDED OR SUPERVISED WITHIN THE GROUP

- **Doctoral candidate:** Jesús Rodríguez Calvo.
Thesis title: Evolución perinatal y a corto-medio plazo de los recién nacidos con crecimiento intrauterino restringido.
University: Universidad Complutense de Madrid.
Date read: 03/10/2023.
Thesis director: Alberto Galindo Izquierdo, Ignacio Herraiz García.
International mention: No.

- Stepan, H; Galindo, A; Hund, M; Schlembach, D; Sillman, J; Surbek, D; Vatish, M. Clinical utility of sFlt-1 and PlGF in screening, prediction, diagnosis and monitoring of pre-eclampsia and fetal growth restriction. *Ultrasound Obstet Gynecol.* 2023. 61. (2): p. 168-180. Review.
- Villalain, C; Moon Grady, AJ; Herberg, U; Strainic, J; Cohen, JL; Shah, A; Levi, DS et al. Prediction of postnatal circulation in pulmonary atresia/critical stenosis with intact ventricular septum: systematic review and external validation of models. *Ultrasound Obstet Gynecol.* 2023. 62. (1): p. 14-22. Review.

- **Doctoral candidate:** María Concepción Carrera Roig.
Thesis title: Diseño y validación de un modelo predictivo del riesgo de gestación múltiple con transferencia de dos embriones en fecundación in vitro.
University: Universidad Complutense de Madrid.
Date read: 23/10/2023.
Thesis director: Alberto Galindo Izquierdo, Laura de la Fuente Bitaine, Juan Antonio García Velasco.
International mention: No.

END MASTER INVESTIGATIONS DIRECTED ON THE GROUP

- **Student:** José Javier Jaulín Pueyo.
Title: Factores predictores de cardiopatía en menores de 2 años derivados por soplo cardíaco en atención primaria.
Director: Miguel Ángel Granados.
Master: Pediatría de Atención Primaria.
University: Universidad Complutense de Madrid.

* Publications: only "Article", "Review", "Editorial Material" and "Letter" have been selected in "Document Type" of ISI Web Of Knowledge. The breakdown of publications includes some not included in the 2022 JCR, which are therefore not taken into account in the final count shown in the table, since they do not have IF.

END GRADUATED INVESTIGATIONS DIRECTED ON THE GROUP

- **Student:** Manuel Costafreda Fernández and María Valcarce Alba.
Title: Implicaciones del diagnóstico prenatal del feto pequeño para la edad gestacional en los resultados perinatales.
Director: Ignacio Herraiz García and Cecilia Villalaín González.
Degree: Medicina.
University: Universidad Complutense de Madrid.
- **Student:** Elena Hidalgo Mateos.
Title: Implicaciones del diagnóstico prenatal del feto pequeño para la edad gestacional en los resultados maternos.
Director: Ignacio Herraiz and Cecilia Villalaín González.
Degree: Medicina.
University: Universidad Complutense de Madrid.
- **Student:** Laura Vicente Sagredo.
Title: Resultados pre- y posnatales de drenajes toraco-amnióticos.
Director: M. Eney Gómez Montes
Degree: Medicina.
University: Universidad Complutense de Madrid.
- **Student:** Álvaro Juárez Segura.
Title: Foramen oval redundante en fetos con asimetría cardíaca: evaluación de su efecto simulador de coartación de aorta.
Director: M. Eney Gómez Montes.
Degree: Medicina.
University: Universidad Complutense de Madrid.

COORDINATOR:

José Luis Pablos Álvarez

Asthma and Immunoallergic Diseases
Inflammatory and Autoimmune Diseases
Lymphocyte Immunobiology
Immunodeficiencies and Immunology of Transplants

The Inflammatory Diseases and Immune Disorders Area (EITI) is a multidisciplinary area made up of four groups belonging to the Hospital Universitario 12 de Octubre (3) and the Universidad Complutense de Madrid (1), grouped thematically and whose collaboration in projects and lines of research extends beyond the hospital setting.

The Area brings together more than 80 researchers, who carry out both healthcare and teaching activities as well as intensive translational research focused on pathologies with an inflammatory and immunological basis.

The EITI Area constitutes a cooperative structure that promotes research into the mechanisms responsible for the development and maintenance of inflammatory and immunological pathologies and, in this way, contributes to the benefit of patients, the overall health of the population and the sustainability of the health system.

Research in the EITI Area is markedly translational. In it, basic and experimental studies arise from the approach to clinical problems, such as immunodeficiencies, chronic inflammation and the need to develop individualized and pathogenesis-based curative therapies.

Therefore, its general objective is the study of the pathophysiological bases of inflammatory and immunological diseases and their translational implications aimed at the development of precision medicine and personalized therapies.

Cooperative development objectives set in the area:

General objective

- Achieve 2 joint projects between groups in the area by 2025 and another 2 by 2027. Degree of achievement: low.
- Hold one joint meeting a year between all the research groups in the area. Degree of achievement: high.
- Achieve four shared publications by 2024 and three more by 2027. Degree of achievement: medium.

List of the 5 most relevant publications of the Inflammatory Diseases and Immune Disorders Area during 2023

Below are the 5 most relevant publications in the area of Inflammatory Diseases and Immune Disorders selected on the basis of the original articles led by researchers in the area, published in quartile 1 of their subject category in JCR and most frequently cited:

1. **Muñoz Ruiz, M;** Llorian, M; D'Antuono, R; Pavlova, A; Mavrigiannaki, AM; McKenzie, D; García Cassani, B et al. IFN- γ -dependent interactions between tissue-intrinsic $\gamma\delta$ T cells and tissue-infiltrating CD8 T cells limit allergic contact dermatitis. *J. Allergy Clin. Immunol.* 2023. 152. (6): p. 1520-1540. Article.
2. Valle Noguera, A; Sancho Temiño, L; Aragone, J; Castillo González, R; Villa Gómez, C; Gomez Sánchez, MJ; Ochoa Ramos, A; **González-Granado, JM; Cruz-Adalia, A;** et al. IL-18-induced HIF-1 α in ILC3s ameliorates the inflammation of C. rodentium-induced colitis. *Cell Reports.* 2023. 42. (12): 113508. Article.
3. **Lopez-Nevaldo, M;** Ortiz-Martin, J; Serrano, C; Perez-Saez, MA; Lopez-Lorenzo, JL; Gil-Etayo, FJ; Rodriguez-Frias, E; Cabrera-Marante, O; Morales-Perez, P; Rodriguez-Pinilla, MS; Manso, R; Salgado-Sanchez, RN; Cerda-Montagud, A; Quesada-Espinosa, JF; Gomez-Rodriguez, MJ; **Paz-Artal, E;** Munoz-Calleja, C; Arranz-Saez, R; et **Allende, LM.** Novel Germline TET2 Mutations in Two Unrelated Patients with Autoimmune Lymphoproliferative Syndrome-Like Phenotype and Hematologic Malignancy. *J. Clin. Immunol.* 2023. 43. (1): p. 165-180. Article.
4. **López Nevado, M;** Sevilla, J; **Almendo Vázquez, P;** Gil Etayo, FJ; Garcinuño, S; Serrano Hernández, A; **Paz Artal, E; González-Granado, L; et Allende, LM.** Inborn Error of STAT2-Dependent IFN-I Immunity in a Patient Presented with Hemophagocytic Lymphohistiocytosis and Multisystem Inflammatory Syndrome in Children. *J. Clin. Immunol.* 2023. 43. (6): p. 1278-1288. Article.
5. **Martín-Adrados, B;** Wculek, SK; Fernández-Bravo, S; Torres-Ruiz, R; Valle-Noguera, A; Gomez-Sánchez, MJ; Hernández-Walias, JC; Ferreira, FM; Corraliza, AM; Sancho, D; Esteban, V; Rodríguez-Perales, S; **Cruz-Adalia, A;** Nakaya, HI; Salas, A; Bernardo, D; Campos-Martín, Y; Martínez-Zamorano, E; Muñoz-López, D; **del Moral, MG; Cubero, FJ;** Blumberg, RS; et **Martínez-Naves, E.** Expression of HMGCS2 in intestinal epithelial cells is downregulated in inflammatory bowel disease associated with endoplasmic reticulum stress. *Front. Immunol.* 2023. 14. 1185517. Article.

Asthma and Immunoallergic Diseases

CENTER: Hospital Universitario 12 de Octubre (HU12O).

GROUP LEADERS: Cabanillas Martín, Beatriz (R3) and Fernández Crespo, Jesús (R4).

Barranco Jiménez, Ruth - Predoctoral researcher (R1).

Barrionuevo Sánchez, Esther - Doctoral researcher.

Diéguez Pastor, María del Carmen - Doctoral researcher (R3).

Enríquez Matas, Alicia - Doctoral researcher (R2).

Fernández Rodríguez, Consuelo - Doctoral researcher (R3).

Galleani, Celine - Graduate researcher.

García Medina, María Guadalupe - Support technician.

García Moguel, Ismael - Predoctoral researcher (R1).

Mielgo Ballesteros, Ruth - Predoctoral researcher (R1).

Valdelvira Contreras, Rafael - Predoctoral researcher (R1).

ACTIVE RESEARCH PROJECTS

Type of funding	Funding body	No. of projects
Competitive	Commission of the European Communities	1
Competitive	ISCIII	2
No competitive	Various	2
Total		5

• **Title:** Estudio de los mecanismos moleculares implicados en la alergia alimentaria para el desarrollo de nuevas dianas terapéuticas y avance en la mejora de herramientas diagnósticas.

Principal investigator: Cabanillas Martín, Beatriz.

Funding body: Instituto de Salud Carlos III (ISCIII).

Project No.: PI20/00351.

Start date: 01/01/2021.

End date: 31/12/2023; extended to 30/06/2025.

• **Title:** Hipersensibilidad a antibióticos betalactámicos: prevalencia real e impacto en la calidad de vida y en la economía de sistema público de salud.

Principal investigator: Barrionuevo Sánchez, Esther.

Funding body: Instituto de Salud Carlos III (ISCIII).

Project No.: PI19/00814.

Start date: 01/01/2020.

End date: 31/12/2022; extended to 30/06/2024.

• **Title:** Analysis of molecular mechanisms triggering food allergy versus tolerance and characterization of nove allergens in food.

Principal investigator: Cabanillas Martín, Beatriz.

Funding body: Comunidad de Madrid.

Project No.: 2019-T1/BIO-12690.

Start date: 20/01/2020.

End date: 19/01/2024.

• **Title:** Identificación de fenotipos y endotipos en pacientes con asma y su aplicación en la medicina personalizada.

Principal investigator: García Moguel, Ismael.

Funding body: Glaxosmithkline IHC Limited.

Start date: 26/06/2020.

End date: 10/09/2024.

• **Title:** Identificación de fenotipos y endotipos en pacientes con asma y su aplicación en la medicina personalizada.

Principal investigator: García Moguel, Ismael.

Funding body: Glaxosmithkline IHC Limited.

Start date: 05/09/2022.

End date: 08/09/2024.

PUBLICATIONS*

Type of Document	No. of document	Σ IF (JCR 2022)
Articles	4	42.462
Reviews	4	27.7
Total	8	59.162
Letters	3	31.4
Total	11	86.862

Articles

- Crespo, JF; Cabanillas, B. Recent advances in cellular and molecular mechanisms of IgE-mediated food allergy. *Food Chem.* 2023. 411. p. 135500-135500. Article.
- Cuadrado, C; Sanchiz, A; Arribas, C; Pedrosa, MM; Gamboa, P; Betancor, D; Blanco, C et al. Mitigation of peanut allergenic reactivity by combined processing: Pressured heating and enzymatic hydrolysis. *Innov. Food Sci. Emerg. Technol.* 2023. 86. 103383. Article.
- Galleani, C; Diéguez, MC; Cabanillas, B; Martín Arriscado Arroba, C; Enríquez Matas, A; Crespo, JF. Sunflower (*Helianthus annuus*) Seed Allergy. *J Investg Allergol Clin Immunol.* 2023. p. 0-0. Article.
- Herraiz, L; Sala, PA; Mielgo, R. Subcutaneous plasma-derived C1 inhibitor for long-term prophylaxis during pregnancy and breast-feeding in a patient with factor XII hereditary angioedema. *J. Allergy Clin. Immunol.-Pract.* 2023. 11. (8): p. 2587-2588. Letter.

- Kronfel, CM; Cheng, HP; McBride, JK; Nesbit, JB; Krouse, R; Burns, P; Cabanillas, B et al. IgE epitopes of Ara h 9, Jug r 3, and Pru p 3 in peanut-allergic individuals from Spain and the US. *Front. Allergy.* 2023. 3. p. 1090114-1090114. Article.
- Marín, L; Moya, B; Peñalver, MJ; Cabanillas, B; Barranco, R; García Moguel, I; Mielgo, R et al. Meropenem allergy testing performed at the bedside of hospitalized patients labelled with a penicillin allergy. *Allergol. Int.* 2023. 72. (4): p. 588-593. Article.
- Padilla Galo, A; Carmona, IM; Ausin, P; Fernández, LC; García Moguel, I; Velasco Garrido, JL; Andújar Espinosa, R et al. Achieving clinical outcomes with benralizumab in severe eosinophilic asthma patients in a real-world setting: orbe II study. *Respir. Res.* 2023. 24. (1): 235. Article.

Reviews

- Cabanillas, B. Dupilumab for Atopic Dermatitis-From Clinical Trials to Molecular and Cellular Mechanisms. *Dermatitis.* 2023. 34. (1): p. 21-28. Review.
- Cabanillas, B; Murdaca, G; Guemari, A; Torres, MJ; Azkur, AK; Aksoy, E; Vitte, J et al. A compilation answering 50 questions on Monkeypox virus and the current Monkeypox outbreak. *Allergy.* 2023. 78. (3): p. 639-662. Review.

- Novak, N; Tordesillas, L; Cabanillas, B. Diversity of T cells in the skin: Novel insights. *Int Rev Immunol.* 2023. 42. (3): p. 185-198. Review.

Letters

- Galleani, C; Valdelvira, R; Carmen Diéguez, M; Crespo, JF; Cabanillas, B. Anaphylaxis to pickled chili pepper (*Capsicum frutescens*): Role of pickling processing in the allergic reactivity. *Ann. Allergy Asthma Immunol.* 2023. 130. (3): p. 369-370. Letter.

- Valdelvira, R; Garcia Medina, G; Galleani, C; Kralova, V; Crespo, JF; Cabanillas, B. Ara h 1 but not Ara h 2 strongly adheres to oral epithelium and remains in the oral area upon peanut release. *Allergy.* 2023. 78. (7): p. 2024-2028. Letter.

PRIZES AND AWARDS

- Editor 2023 in Food Chemistry (Impact factor: 8,8. Editorial Elsevier): B. Cabanillas. <https://www.sciencedirect.com/journal/food-chemistry/about/editorial-board>.

- Associate Editor 2023 in Allergy (Impact factor: 12,4. Editorial Wiley): B. Cabanillas. <https://onlinelibrary.wiley.com/page/journal/13989995/homepage/editorialboard.html>.

* Publications: only "Article", "Review", "Editorial Material" and "Letter" have been selected in "Document Type" of ISI Web Of Knowledge. The breakdown of publications includes some not included in the 2022 JCR, which are therefore not taken into account in the final count shown in the table, since they do not have IF.

Inflammatory and Autoimmune Diseases

CENTER: Hospital Universitario 12 de Octubre (HU12O).

GROUP LEADER: Pablos Álvarez, José Luis (R4).

Antón-Pacheco Sánchez, Juan Luis - Senior Clinical Researcher
 Carreira Delgado, Patricia Esmeralda - Senior Clinical Researcher
 Criado Carrasco, Gabriel - Doctoral researcher, technical manager (R3).
 Galindo Izquierdo, María - Senior Clinical Researcher
 García González, Alfredo Javier - Junior clinical researcher.
 Gómez Bris, Raquel - Predoctoral researcher (R1).
 González Granado, José María - Doctoral researcher (R3).
 Herrero Fernández, Beatriz - Predoctoral researcher (R1).
 Joven Ibáñez, Beatriz Esther - Junior clinical researcher.

Martín López, María - Predoctoral researcher (R1).
 Melchor Díaz, Sheila - Junior clinical researcher.
 Mingorance Martínez, Claudia - Graduate researcher.
 Municio Rueda, Cristina María - Doctoral researcher.
 Ortega Zaperó, Marina - Predoctoral researcher (R1).
 Sánchez Martín, Julio - Predoctoral researcher (R1).
 Sánchez Martínez, Héctor - Support technician.
 Usategui Corral, Alicia - Doctoral researcher (R2).

ACTIVE RESEARCH PROJECTS

Type of funding	Funding body	No. of projects
Competitive	Fund. Invest. Biom. Hospital Clínico San Carlos	1
Competitive	ISCIII	5
No competitive	Various	2
Total		8

- **Title:** Endoprótesis biodegradables en la vía aérea: efectos histológicos y estructurales en la pared traqueal normal y en un modelo animal de estenosis traqueal.
Principal investigator: Antón-Pacheco Sánchez, Juan Luis.
Project No.: PI18/00693.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2019.
End date: 31/12/2021; extended to 30/06/2023.
- **Title:** Predictores de morbilidad y mortalidad en una cohorte de in cepción de pacientes con esclerodermia.
Principal investigator: Carreira Delgado, Patricia Esmeralda.
Project No.: PI18/00867.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2019.
End date: 31/12/2021; extended to 30/06/2023.
- **Title:** Acortamiento telomérico en esclerosis sistémica: estudios clínicos y traslacionales.
Principal investigator: Criado Carrasco, Gabriel.
Project No.: PI19/01129.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2020.
End date: 31/12/2022; extended to 30/06/2024.
- **Title:** Inmunología, inmunopatología y terapia en enfermedad inflamatoria intestinal.
Principal investigator: González Granado, José M.^a.
Project No.: PI20/00306.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2021.
End date: 31/12/2023; extended to 30/06/2025.

- **Title:** Efficacy, safety and cost-effectiveness of methotrexate, adalimumab, or their combination in non infectious non anterior uveitis: a multicenter, randomized, parallel 3ARM, active-controlled, phase 3 open label with blinded outcome assessment study.
Principal investigator: García González, Alfredo Javier.
Project No.: ICI19/00020.
Funding body: Fundación Investigación Biomédica Hospital Clínico San Carlos.
Start date: 12/07/2021.
End date: 31/12/2023.
- **Title:** Envejecimiento celular tisular e inmunosenescencia como factores patogénicos en la esclerosis sistémica (ES)
Principal investigator: Pablos Álvarez, José Luis.
Project No.: PI22/01218.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2023.
End date: 31/12/2025.
- **Title:** Protocolo de derivación preferente en perfiles de pacientes reumáticos: digitalización, formación y difusión en atención primaria.
Principal investigator: Pablos Álvarez, Jose Luis.
Funding body: Novartis Farmacéutica, S.A.
Start date: 01/01/2022.
End date: 31/03/2023.
- **Title:** Validación clínica del algoritmo Optibio para predecir permanencia en remisión en pacientes con artritis reumatoide a tratamiento con terapia biológica (REMRABIT-PLUS).
Principal investigator: Pablos Álvarez, José Luis.
Funding body: Fundación Profesor Novoa Santos.
Start date: 29/12/2023.
End date: 31/12/2025.

OTHER ACTIVE PROJECTS OF THE RESEARCH GROUP NOT MANAGED BY THE FUNDACIÓN PARA LA INVESTIGACIÓN BIOMÉDICA DEL HOSPITAL 12 DE OCTUBRE (FIBH12O)

- **Title:** PI3-kinase isoforms as therapeutic targets in infectious and inflammatory immune responses. New Therapies.
Principal investigator: Pilar Portolés Pérez.
IG researcher participating in the project: Alfredo Javier García González.
Project No.: PI21CIII/00022.
Funding body: Instituto de Salud Carlos III.
Start date: 2021.
End date: 2024.
- **Title:** Co-THEIA (Combination THERapy with mEthotrexate and adallmumAb for uveitis): Efficacy, safety and cost-effectiveness of methotrexate, adalimumab, or their combination in non infectious non anterior uveitis: a multicenter, randomized, parallel 3 arms, active-controlled, phase 3 open label with blinded outcome assessment study.
Principal investigator: Luis Rodríguez Rodríguez.
IG researcher participating in the project: Alfredo Javier García González.
Project No.: ICI19/00020.
Funding body: Instituto de Salud Carlos III.
Start date: 2020.
End date: 2024.
- **Title:** Estudio de la evolución y factores asociados a la calidad de vida relacionada con la visión y con la salud en sujetos con uveitis no infecciosa: un análisis longitudinal.
Principal investigator: Luis Rodríguez Rodríguez.
IG researcher participating in the project: Alfredo Javier García González.
Project No.: PI20/01221.
Funding body: Instituto de Salud Carlos III.
Start date: 2021.
End date: 31 December 2023, prorrogado hasta el 30 de June 2025.
- **Title:** Generación de cohortes y caracterización multiómica del síndrome de Sjögren y la dermatitis atópica. Proyecto SSAD.
Principal investigator: José Luis Andreu.
IG researcher participating in the project: Patricia Carreira Delgado.
Project No.: PR(AT)569/2021.
Funding body: IMIDOMICS Inc.
Start date: 2022.
End date: 2024.
- **Title:** Precision medicine in lupus nephritis: a multicenter proof-of-concept study for histopathological biomarkers analysis in renal biopsy.
Principal investigator: José María Pego Reigosa.
IG researcher participating in the project: María Galindo Izquierdo.
Funding body: Fundación Biomédica Galicia Sur.
Start date: 2023.
End date: 2024.
- **Title:** Registro longitudinal prospectivo de práctica clínica de tratamiento con anifrolumab en pacientes con lupus eritematoso sistémico en seguimiento en servicios de reumatología españoles (ANIFRO-Reu).
Principal investigator: Carlos Tarek Salman.
IG researcher participating in the project: María Galindo Izquierdo.
Project No.: 23/636.
Funding body: Instituto de Investigación Hospital del Mar.
Start date: 2023.
End date: 2024.
- **Title:** Generación de una cohorte longitudinal y caracterización multiómica del lupus eritematoso sistémico (Proyecto SMILES).
Principal investigator: Sara Marsal Barril.
IG researcher participating in the project: María Galindo Izquierdo.
Funding body: Hospital Vall d'Hebron.
Start date: 2023.
End date: 2024.
- **Title:** Análisis integrado mediante tecnologías ómicas e inteligencia artificial para la identificación e implementación de herramientas de medicina personalizada en las espondiloartritis.
Principal investigator: Eduardo Collantes Estévez.
IG researcher participating in the project: Beatriz Joven Ibáñez.
Project No.: PMP21/00119.
Funding body: Instituto de Salud Carlos III.
Start date: January 2022.
End date: December 2025.
- **Title:** Análisis integrado mediante tecnologías ómicas e inteligencia artificial para la identificación e implementación de herramientas de medicina personalizada en las espondiloartritis.
Principal investigator: Eduardo Collantes Estévez.
IG researcher participating in the project: Beatriz Joven Ibáñez.
Project No.: PMP21/00119.
Funding body: Instituto de Salud Carlos III.
Start date: January 2022.
End date: December 2025.

PUBLICATIONS*

Type of Document	No. of document	Σ IF (JCR 2022)
Articles	27	171.2
Reviews	5	28.316
Editorials	1	3.3
Total	33	202.816
Letters	1	2.6
Total	34	205.416

Articles

- Altabás González, I; Rúa Figueroa, I; Rubiño, F; Mouriño, C; Hernández Rodríguez, I; Menor Almagro, R; Uriarte Isacelaya, E et al. Does remission in systemic lupus erythematosus according to the 2021 DORIS definition match the treating rheumatologist's judgement? RHEUMATOLOGY. 2023. 63. (1): p. 72-78. Article.
- Barroso García, N; Atienza Mateo, B; Ferraz Amaro, I; Prieto Pena, D; Beltran, E; Adan, A; Hernandez Garfella, M et al. Anti-TNF vs tocilizumab in refractory uveitic cystoid macular edema due to Behcet's disease. Multicenter study of 49 patients. Semin. Arthritis Rheum. 2023. 58. p. 152153-152153. Article.
- Brito Zerón, P; Flores Chávez, A; Horváth, IF; Rasmussen, A; Li, XM; Olsson, P; Vissink, A et al. Mortality risk factors in primary Sjogren syndrome: a real-world, retrospective, cohort study. EClinicalMedicine. 2023. 61. 102062. Article.
- Calderón Goercke, M; Loricera, J; Moriano, C; Castañeda, S; Narváez, J; Aldasoro, V; Maiz, O et al. Optimisation of tocilizumab therapy in giant cell arteritis. A multicentre real-life study of 471 patients. Clin. Exp. Rheumatol. 2023. 41. (4): p. 829-836. Article.
- Campochiaro, C; Hoffmann Vold, AM; Avouac, J; Henes, J; de Vries Bouwstra, J; Smith, V; Siegert, E et al. Sex influence on outcomes of patients with systemic sclerosis-associated interstitial lung disease: a EUSTAR database analysis. RHEUMATOLOGY. 2023. 62. (7): p. 2483-2491. Article.
- de Miguel, E; Fernández Carballido, C; Gratacós, J; Pablos, JL; Juanola, X; Ariza, R; Terradas Montana, P et al. Disease control in patients with ankylosing spondylitis in real clinical practice in Spain: Results of the MIDAS study. Reumatol. Clin. 2023. 19. (2): p. 99-105. Article.
- De Silva, NS; Siewiera, J; Alkhoury, C; Nader, GPF; Nadalin, F; De Azevedo, K; Couty, M et al. Nuclear envelope disruption triggers hallmarks of aging in lung alveolar macrophages. Nature Aging. 2023. 3. (10): p. 1251-1251. Article.
- Deibel, E; Carreira, PE; Vonk, M; del Papa, N; Becvár, R; Guillén Castillo, A; Campochiaro, C et al. Does the Impact of COVID-19 on Patients With Systemic Sclerosis Change Over Time? Arthritis Care Res. 2023. 76. (1): p. 88-97. Article.
- Díaz, ML; Antón Pacheco, JL; Herrero, CG; Vals, AE; Novillo, IC; Valverde, RM; Izquierdo, AG. Diagnostic accuracy of imaging compared to histology in congenital lung malformations. An. Pediatr. 2023. 99. (5): p. 304-311. Article.
- Diaz Garcia, C; Valverde Molina, J; Martínez Gimeno, A; Sanchez, JLAP. Quality of life in children with diseases causing central airway obstruction: Reliability and validity of the TAPQOL questionnaire. Pediatr. Pulmonol. 2023. 58. (1): p. 279-287. Article.
- Exposito, L; Sánchez Piedra, C; Vela Casasempere, P; Moreno Ramos, MJ; Campos, C; Bohórquez, C; Manero, J et al. Real-world persistence of initial targeted therapy strategy in monotherapy versus combination therapy in patients with chronic inflammatory arthritis. Eur. J. Clin. Invest. 2023. 54. (2): e14095. Article.
- García Ferreras, R; Osuna Pérez, J; Ramírez Santiago, G; Méndez Pérez, A; Acosta Moreno, AM; Del Campo, L; Gómez Sánchez, MJ et al. Bacteria-instructed B cells cross-prime naive CD8⁺ T cells triggering effective cytotoxic responses. EMBO Rep. 2023. 24. (7). Article.
- Gonzalez Granado, JM; Del Monte Monge, A; Piqueras, L; Andres, V; Rius, C. Analysis of Monocyte Recruitment During Inflammation by Intravital Imaging. Methods Mol Biol. 2023. 2608. p. 451-467. Article.
- Gossec, L; Siebert, S; Bergmans, P; de Vlam, K; Gremese, E; Joven Ibáñez, B; Korotaeva, TV et al. Long-term effectiveness and persistence of ustekinumab and TNF inhibitors in patients with psoriatic arthritis: final 3-year results from the PsABio real-world study. Ann. Rheum. Dis. 2023. 82. (4): p. 496-506. Article.
- Gossec, L; Siebert, S; Bergmans, P; de Vlam, K; Gremese, E; Joven Ibáñez, B; Korotaeva, TV et al. Improvement in patient-reported outcomes and work productivity following 3-year ustekinumab or tumour necrosis factor inhibitor treatment in patients with psoriatic arthritis: results from the PsABio real-world study. Arthritis Res. Ther. 2023. 25. (1): 109. Article.
- Gratacos, J; Pablos, JL; de Miguel, E; Juanola, X; Fernandez Carballido, C; Ariza, R; Terradas Montana, P et al. Disease control in patients with psoriatic arthritis in real clinical practice in Spain: MiDAS study. Reumatol. Clin. 2023. 19. (4): p. 204-210. Article.
- Iudici, M; Mongin, D; Siegert, E; Carreira, PE; Distler, J; Henes, J; Zanatta, E et al. Glucocorticoids prescribing practices in systemic sclerosis: an analysis of the EUSTAR database. RHEUMATOLOGY. 2023. 62. (4): p. 1559-1567. Article.
- Joven, B; Manteca, CF; Rubio, E; Raya, E; Pérez, A; Hernández, R; Manrique, S et al. Real-World Persistence and Treatment

- Patterns in Patients with Psoriatic Arthritis Treated with Anti-IL17 Therapy in Spain: The PerflL-17 Study. Adv. Ther. 2023. 40. (12): p. 5415-5431. Article.
- Joven, B; Sánchez, RH; Pérez Pampín, E; Díez, AA; Almodóvar, R; Martínez Ferrer, A; Belzunegui, J et al. Persistence and Use of Ixekizumab in Patients with Psoriatic Arthritis in Real-World Practice in Spain. The PRO-STIP Study. Rheumatol. Ther. 2023. 10. (5): p. 1319-1333. Article.
- Laiño Piñeiro, MC; Rúa Figueroa, I; Jiménez, N; Lozano, MJC; Martínez Barrio, J; Serrano, B; Galindo Izquierdo, M et al. Pregnancy outcomes in 1869 pregnancies in a large cohort from the Spanish Society of Rheumatology Lupus Register (RELESSER). Semin. Arthritis Rheum. 2023. 61. 152232. Article.
- Magro Checa, C; Ramiro, S; Rúa Figueroa, I; Jimenez, N; Del Campo Pérez, V; Martínez Barrio, J; Galindo Izquierdo, M et al. Central nervous system involvement in systemic lupus erythematosus: Data from the Spanish Society of Rheumatology Lupus Register (RELESSER). Semin. Arthritis Rheum. 2023. 58. p. 152121-152121. Article.
- Membrive Jiménez, C; Sánchez Piedra, C; Martínez González, O; García González, J; Expósito Pérez, L; Bohórquez Heras, C; Campos Fernández, C et al. Safety and effectiveness of bDMARDs during pregnancy in patients with rheumatic diseases: Real-world data from the BIOBADASER registry. Reumatol. Clin. 2023. 19. (9): p. 500-506. Article.
- Monte, TCS; Mateo, PF; Izquierdo, MG; Cervera, R; López, N; Pallares, L; Torres, MJA et al. An online survey of the Spanish Lupus Patient Association (FELUPUS): patient perceptions and experiences. Clin. Rheumatol. 2023. 42. (5): p. 1259-1265. Article.
- Narváez, J; Aburto, M; Seoane Mato, D; Bonilla, G; Acosta, O; Candelas, G; Cano Jiménez, E et al. Screening criteria for interstitial lung disease associated to rheumatoid arthritis: Expert proposal based on Delphi methodology. Reumatol Clin (Engl Ed). 2023. 19. (2): p. 74-81. Article.
- Narváez, J; Aburto, M; Seoane Mato, D; Bonilla, G; Acosta, O; Candelas, G; Cano Jiménez, E et al. Screening criteria for interstitial lung disease associated to rheumatoid arthritis: Expert proposal based on Delphi methodology. Reumatol. Clin. 2023. 19. (2): p. 74-81. Article.
- Queiro, R; Seoane Mato, D; Laiz, A; Agirregoikoa, EG; Montilla, C; Park, HS; Tasende, JAP et al. Moderate-High Disease Activity

Reviews

- Candel, FJ; Barreiro, P; Salavert, M; Cabello, A; Fernández Ruiz, M; Pérez Segura, P; San Román, J et al. Expert Consensus: Main Risk Factors for Poor Prognosis in COVID-19 and the Implications for Targeted Measures against SARS-CoV-2. Viruses-Basel. 2023. 15. (7): 1449. Review.
- Gomez Bris, R; Saez, A; Herrero Fernandez, B; Rius, C; Sanchez Martinez, H; Gonzalez Granado, JM. CD4 T-Cell Subsets and the Pathophysiology of Inflammatory Bowel Disease. Int J Mol Sci. 2023. 24. (3): 2696. Review.
- Martín López, M; Carreira, PE. The Impact of Progressive Pulmonary Fibrosis in Systemic Sclerosis-Associated Interstitial Lung Disease. J. Clin. Med. 2023. 12. (20): 6680. Review.

- in Patients with Recent-Onset Psoriatic Arthritis-Multivariable Prediction Model Based on Machine Learning. J. Clin. Med. 2023. 12. (3): 931. Article.
- Queiro, R; Seoane Mato, D; Laiz, A; Galíndez Agirregoikoa, E; Montilla, C; Park, HS; Pinto Tasende, JA et al. Confounders contributing to explain the association between sex and disease impact in patients with recent-onset psoriatic arthritis. Clin. Exp. Rheumatol. 2023. 41. (1): p. 137-144. Article.
- Rodríguez Almaraz, E; Gutiérrez Solís, E; Rabadán, E; Rodríguez, P; Alonso, M; Carmona, L; de Yébenes, MJG et al. Searching for a prognostic index in lupus nephritis. Eur. J. Med. Res. 2023. 28. (1): p. 19-19. Article.
- Talarico, R; Ramirez, GA; Barreira, SC; Cardamone, C; Triggianese, P; Aguilera, S; Andersen, J et al. ERN ReCONNET points to consider for treating patients living with autoimmune rheumatic diseases with antiviral therapies and anti-SARS-CoV-2 antibody products. Clin. Exp. Rheumatol. 2023. 41. (3): p. 543-553. Article.
- Tandaipan, J; Guillén Castillo, A; Simeón Aznar, CP; Carreira, PE; De la Puente, C; Narváez, J; Lluch, J et al. Immunoglobulins in systemic sclerosis management. A large multicenter experience. Autoimmun. Rev. 2023. 22. (11): 103441. Article.
- Valero Martínez, C; Urgelles, JF; Sallés, M; Joven Ibáñez, BE; de Juanes, A; Ramírez, J; Juanola, X et al. Dual targeted therapy in patients with psoriatic arthritis and spondyloarthritis: a real-world multicenter experience from Spain. Front. Immunol. 2023. 14. 1283251. Article.
- Valle Noguera, A; Sancho Temiño, L; Aragone, J; Castillo González, R; Villa Gómez, C; Gomez Sánchez, MJ; Ochoa Ramos, A et al. IL-18-induced HIF-1a in ILC3s ameliorates the inflammation of C. rodentium-induced colitis. Cell Reports. 2023. 42. (12): 113508. Article.
- Watson, L; Coyle, C; Whately Smith, C; Brooke, M; Kiltz, U; Lubrano, E; Queiro, R et al. An international multicentre analysis of current prescribing practices and shared decision-making in psoriatic arthritis. RHEUMATOLOGY. 2023. Article.
- Winthrop, KL; Yndestad, A; Henrohn, D; Danese, S; Marsal, S; Galindo, M; Woolcott, JC et al. Influenza Adverse Events in Patients with Rheumatoid Arthritis, Ulcerative Colitis, or Psoriatic Arthritis in the Tofacitinib Clinical Development Programs. Rheumatol. Ther. 2023. 10. (2): p. 357-373. Article.

- Navarro Compán, V; Puig, L; Vidal, S; Ramírez, J; Llamas Velasco, M; Fernández Carballido, C; Almodóvar, R et al. The paradigm of IL-23-independent production of IL-17F and IL-17A and their role in chronic inflammatory diseases. Front. Immunol. 2023. 14. 1191782. Review.
- Saez, A; Herrero Fernandez, B; Gomez Bris, R; Sánchez Martínez, H; Gonzalez Granado, JM. Pathophysiology of Inflammatory Bowel Disease: Innate Immune System. Int J Mol Sci. 2023. 24. (2): 1526. Review.

* Publications: only "Article", "Review", "Editorial Material" and "Letter" have been selected in "Document Type" of ISI Web Of Knowledge. The breakdown of publications includes some not included in the 2022 JCR, which are therefore not taken into account in the final count shown in the table, since they do not have IF.

Editorials

- Cruz Utrilla, A; Martín, EPG; Pérez, LD; Curiel, AR; Quezada, A; López, AD; Vicent, L et al. ECMO in pulmonary arterial hypertension and chronic thromboembolic pulmonary hypertension as a bridge to therapy. *Kardiol. Pol.* 2023. 81. (5): p. 500-504. Editorial Material.

Letters

- Berzal, R; Agredano, B; Gil, M; Galindo, M; Morales, E. mTOR inhibitors in a patient with lupus nephritis; why not? *Nefrología.* 2023. 43. p. 100-102. Letter.
- de Larrinoa, IRFF; Delgado, PC; García, NB; Segura, BT; Cisneros, JD. Reply to the Letter to the Editor from Drs Suarez-Diaz and Caminal-Montero in reference to the special article "Recommendations for prevention of infection in systemic autoimmune rheumatic diseases". *Reumatol. Clin.* 2023. 19. (3). Letter.

END GRADUATED INVESTIGATIONS DIRECTED ON THE GROUP

- **Student:** Yali Chen Wang.
Title: Evolución clínica de las vasculitis ANCA positivo.
Directors: María Galindo Izquierdo y Enrique Morales Ruiz.
Degree: Medicina.
University: Universidad Complutense de Madrid.

PATENTS

- **Title:** Composiciones de nanocápsulas para la liberación controlada de agentes de interés terapéutico.
Number: EP18382005-ES.
Type: European patent validation in SPAIN.
Inventors: Pablo Luis Ortiz Romero, José Luis Pablos Álvarez, Alicia Usategui Corral, María Vallet Regí, M.ª Rocío Villegas Díaz, Alejandro Baeza García.
Owners: Universidad Complutense de Madrid (60 %), Fundación para la Investigación Biomédica del Hospital 12 de Octubre (40 %).
Date of validation: 19/02/2020.
Priority data: EP18382005 (09/01/2018).
Status: Granted (10/03/2021).

Lymphocyte Immunobiology

CENTER: Universidad Complutense de Madrid (UCM).

GROUP LEADERS: García-Yébenes Mena, Virginia (R4) and Regueiro González-Barros, José Ramón (R4).

- Aguilar Sopeña, Óscar - Predoctoral researcher (R1).
- Álvarez Corrales, Emigdio - Predoctoral researcher (R1).
- Álvaro Benito, Miguel - Postdoctoral researcher (R3).
- Amorós Pérez, Beatriz - Predoctoral researcher (R1).
- Benedé Pérez, Sara - Doctoral researcher.
- Briones Contreras, Alejandro - Predoctoral researcher (R1).
- Cabañas Gutiérrez, Carlos - Researcher.
- Cárdenas Mastrascusa, Paula Patricia - Doctoral researcher (R3).
- Chacón Arguedas, Carlos Daniel - Predoctoral researcher (R1).
- Cruz Adalia, Aranzazu - Doctoral researcher (R3).
- Fernández Arias, Cristina - Predoctoral researcher (R1).
- Fernández Malave, Edgar Gonzalo - Doctoral researcher (R4).
- Fernández Megino, Rebeca - Support technician.
- Gómez del Moral, Manuel María - Doctoral researcher (R4).
- González García, Sara - Doctoral researcher (R3).
- Hernández García, Elena - Predoctoral researcher (R1).
- Iborra Martín, Salvador - Doctoral researcher.
- Juárez Martín-Delgado, Ignacio - Doctoral researcher (R2).
- Lafuente Duarte, María Esther - Doctoral researcher (R4).
- Marín Marín, Ana Victoria - Predoctoral researcher (R1).
- Martínez Naves, Eduardo - Doctoral researcher (R4).
- Medrano García, Sandra - Predoctoral researcher (R1).
- Muñoz Ruiz, Miguel - Doctoral researcher (R3).
- Peláez Prestel, Héctor Fernando - Predoctoral researcher (R1).
- Reche Gallardo, Pedro Antonio - Doctoral researcher (R4).
- Recio Hoyas, María José - Doctoral researcher (R4).
- Redondo Urzainqui, Ana - Predoctoral researcher (R1).
- Reyes Manzanas, Raquel - Doctoral researcher (R2).
- Rivas Pardo, Benigno - Predoctoral researcher (R1).
- Roda Navarro, Pedro - Doctoral researcher (R4).
- Sanz García, Carlos - Doctoral researcher (R3).
- Torres Gómez, Álvaro - Predoctoral researcher (R1).
- Tortajada Alonso, Agustín - Doctoral researcher (R2).

OTHER ACTIVE PROJECTS OF THE RESEARCH GROUP NOT MANAGED BY THE FUNDACIÓN PARA LA INVESTIGACIÓN BIOMÉDICA DEL HOSPITAL 12 DE OCTUBRE (FIBH120)

- **Title:** Innate lymphoid cells.
Principal investigator: Aranzazu Cruz Adalia.
Project No.: RYC-2017-21837.
Funding body: Agencia Estatal de Investigación. Ministerio de Ciencia, Innovación y Universidades.
Start date: 2019.
End date: 2024.
- **Title:** Anticipación y prevención de COVID-19 en la Comunidad de Madrid.
Principal investigator: Pedro Antonio Reche Gallardo.
Project No.: CAM-REACT.
Funding body: Comunidad de Madrid
Start date: February de 2020.
End date: December 2023.
- **Title:** Contribución funcional de los microARNs a la transformación neoplásica de linfocitos B.
Principal investigator: Virginia García de Yébenes Mena.
Project No.: PID2019-107551RB-I00.
Funding body: Agencia Estatal de Investigación. Ministerio de Ciencia, Innovación y Universidades.
Start date: June 2020.
End date: February de 2024.
- **Title:** Immunity and COVID-19 patients' response.
Principal investigator: Aranzazu Cruz Adalia.
Funding body: Benevolentai Cambridge Limited.
Start date: 17/09/2020.
End date: 16/02/2023.
- **Title:** Novel comprehensive immunotherapy to specifically target the malignant clone in Sézary syndrome, and ultra-rare cancer of mature T lymphocytes.
Principal investigator: Jose R. Regueiro.
Project No.: PROYE20084REGU/4180112.
Funding body: Asociación Española Contra el Cáncer.
Start date: December 2020.
End date: April 2024.
- **Title:** El carbohidrato Ca10 como diana para el desarrollo de una inmunoterapia antitumoral basada en linfocitos T con receptores quiméricos (CARTs).
Principal investigator: Eduardo Martínez Naves.
Project No.: IND2019/BMD-17115.
Funding body: Comunidad de Madrid.
Start date: 01/01/2021.
End date: 31/12/2023.
- **Title:** Mecanismos reguladores y función de las fosfatasa de regeneración hepática y *slingshots* durante las respuestas inmunitarias.
Principal investigator: Pedro Roda Navarro.
Project No.: PID2020-115444GB-I00.
Funding body: Agencia Estatal de Investigación. Ministerio de Ciencia, Innovación y Universidades.
Start date: January 2021.
End date: December 2024.
- **Title:** Beyond the classics: Genetic and Functional profiling of nHLAII variation.
Principal investigator: Miguel Álvaro-Benito.
Project No.: DKMS-SLS-JHRG-2021-01.
Funding body: DKMS.
Start date: 01/07/2021.
End date: 30/06/2023.

- Title:** Estrés del retículo endoplásmico y señalización de JNK en la inflamación crónica: comprendiendo el camino a la malignificación epitelial (ERJUNK).
Principal investigators: Eduardo Martínez Naves and Francisco Javier Cubero Palero.
Project No.: PID2020-117941RB-I00.
Funding body: Agencia Estatal de Investigación. Ministerio de Ciencia, Innovación y Universidades.
Start date: 01/09/2021.
End date: 31/08/2024.
- Title:** Implicaciones de la eliminación específica de TPL2 en macrófagos en el desarrollo de la enfermedad hepática crónica.
Principal investigator: Carlos Sanz García.
Project No.: PID2020-113299RA-I00.
Funding body: Agencia Estatal de Investigación. Ministerio de Ciencia, Innovación y Universidades.
Start date: September 2021.
End date: August 2024.
- Title:** Caracterización de variantes en el componente de C3 del complemento asociadas con patologías renales.
Principal investigator: Agustín Tortajada Alonso.
Project No.: PR44/21-29938.
Funding body: Santander Universidades.
Start date: July 2022.
End date: July 2023.
- Title:** Caracterización dual de variantes en C3 del complemento asociadas con patología.
Principal investigator: Agustín Tortajada Alonso.
Project No.: PR27/21-022.
Funding body: Universidad Complutense de Madrid and Comunidad de Madrid.
Start date: September 2022.
End date: August 2024.
- Title:** Personalized preclinical models for rare human T cell malignancies: an unmet need for targeted therapy (PREMOTMA).
Principal investigator: Jose R. Regueiro.
Project No.: PID2021-125501OB-I00.
Funding body: Agencia Estatal de Investigación. Ministerio de Ciencia e Innovación.
Start date: September 2022.
End date: August 2025.
- Title:** Type 3 innate lymphoid cells as potential targets for unraveling the transition from inflammatory bowel diseases to colorectal cancer.
Principal investigator: Aranzazu Cruz Adalia.
Project No.: PID2021-122780OB-I00.
Funding body: Agencia Estatal de Investigación. Ministerio de Ciencia e Innovación.
Start date: September 2022.
End date: August 2025.

- Title:** Molecular determinants involved in the binding and uptake of tumoral exosomes by immune and non-immune cells.
Principal investigator: Carlos Cabañas Gutiérrez.
Project No.: PID2021-123199OB-I00.
Funding body: Agencia Estatal de Investigación. Ministerio de Ciencia e Innovación.
Start date: September 2022.
End date: August 2025.
- Title:** Conventional type 1 dendritic cells as circadian-driven gatekeepers and modulators of metabolic homeostasis.
Principal investigator: Salvador Iborra Martín.
Project No.: PID2021-125415OB-I00.
Funding body: Agencia Estatal de Investigación. Ministerio de Ciencia e Innovación.
Start date: September 2022.
End date: August 2025.
 Project managed by the Universidad Complutense de Madrid.
- Title:** Financiación adicional del investigador Miguel Álvaro-Benito dentro del Programa Atracción del Talento Researcher.M (2022).
Principal investigator: Miguel Álvaro-Benito.
Project No.: 2022-T1/BMD-23572.
Funding body: Comunidad Autónoma de Madrid en colaboración con la Universidad Complutense de Madrid.
Start date: 01/07/2023.
End date: 30/06/2028.
- Title:** Study of the regulatory mechanisms of the induction of RORgt+ Tregs cells relevant for the intestinal mucosa immune tolerance.
Principal investigator: Aranzazu Cruz Adalia.
Project No.: CNS2022-135365.
Funding body: Agencia Estatal de Investigación. Ministerio de Ciencia e Innovación.
Start date: September 2023.
End date: August 2025.
- Title:** Regulación de la expresión génica por ARN no codificantes en respuestas de células B y neoplasia.
Principal investigator: Virginia García de Yébenes Mena.
Project No.: PID2022-137014OB-I00.
Funding body: Agencia Estatal de Investigación. Ministerio de Ciencia, Innovación y Universidades.
Start date: 01/09/2023.
End date: 31/08/2026.
- Title:** Desentrañando las implicaciones del desequilibrio de la vida media de los glóbulos rojos y la autoinmunidad homeostática en el desarrollo de anemia en malaria.
Principal investigator: Cristina Fernández Arias.
Project No.: PID2022-138187OB-I00.
Funding body: Ministerio de Ciencia, Innovación y Universidades.
Start date: 01/09/2023.
End date: 31/08/2026.

- Title:** Abordaje de las interacciones de las células T residentes en tejidos: un enfoque transformador para la inmunoterapia contra el cáncer.
Principal investigator: Miguel Muñoz Ruiz.
Project No.: PID2022-139095OA-I00.
Funding body: Ministerio de Ciencia, Innovación y Universidades.
Start date: 01/09/2023.
End date: 31/08/2026.

- Title:** Identificación de epítomos de células T reguladoras.
Principal investigator: Pedro Antonio Reche Gallardo.
Project No.: IND2020_BMD-17364.
Funding body: Comunidad de Madrid.
Start date: January 2021.
End date: December 2024.

PUBLICATIONS*

Type of Document	No. of document	Σ IF (JCR 2022)
Articles	14	105,058
Reviews	2	11,808
Editorials	1	7,3
Total	17	124,166

Articles

- Ballesteros Sanabria, L; Pelaez Prestel, HF; Reche, PA; Lafuente, EM. EPIPOX: A Resource Facilitating Epitope-Vaccine Design Against Human Pathogenic Orthopoxviruses. *Methods Mol Biol.* 2023. 2673. p. 175-185. Article.
- Bodas Pinedo, A; Lafuente, EM; Pelaez Prestel, HF; Ras Carmona, A; Subiza, JL; Reche, PA. Combining different bacteria in vaccine formulations enhances the chance for antiviral cross-reactive immunity: a detailed in silico analysis for influenza A virus. *Front. Immunol.* 2023. 14. p. 1235053-1235053. Article.
- Carrasco Padilla, C; Aguilar Sopeña, O; Gómez Morón, A; Alegre Gómez, S; Sánchez Madrid, F; Martín Cofreces, NB; Roda Navarro, P. T cell activation and effector function in the human Jurkat T cell model. *Methods Cell Biol.* 2023. 178. p. 25-41. Article.
- de Lope Planelles, A; González Novo, R; Madrazo, E; Peralta Carrero, G; Rodríguez, MPC; Zamora Carreras, H; Torrano, V et al. Mechanical stress confers nuclear and functional changes in derived leukemia cells from persistent confined migration. *Cell. Mol. Life Sci.* 2023. 80. (11): 316. Article.
- Fiyouzi, T; Reche, PA. Vaccine Design: An Introduction. *Methods Mol Biol.* 2023. 2673. p. 1-14. Article.
- Fuertes, T; Alvarez Corrales, E; Gómez Escolar, C; Ubieto Capella, P; Serrano Navarro, A; de Molina, A; Méndez, J et al. miR-28-based combination therapy impairs aggressive B cell lymphoma growth by rewiring DNA replication. *Cell Death Dis.* 2023. 14. (10): 687. Article.
- García Solís, B; van den Rym, AD; Martínez Martínez, L; Franco, T; Pérez Caraballo, JJ; Markle, J; Cubillos Zapata, C et al. Inherited human ezrin deficiency impairs adaptive immunity. *J. Allergy Clin. Immunol.* 2023. 152. (4): p. 997-997. Article.
- Gómez Morón, A; Requena, S; Roda Navarro, P; Martín Cofreces, NB. Activation kinetics of regulatory molecules during immunological synapse in T cells. *Methods Cell Biol.* 2023. 178. p. 149-171. Article.
- Martín Adrados, B; Wculek, SK; Fernández Bravo, S; Torres Ruiz, R; Valle Noguera, A; Gomez Sánchez, MJ; Hernández Walias, JC et al. Expression of HMGCS2 in intestinal epithelial cells is downregulated in inflammatory bowel disease associated with endoplasmic reticulum stress. *Front. Immunol.* 2023. 14. 1185517. Article.
- Molina, E; García Gutiérrez, L; Junco, V; Perez Olivares, M; de Yébenes, VG; Blanco, R; Quevedo, L et al. MYC directly transactivates CR2/CD21, the receptor of the Epstein-Barr virus, enhancing the viral infection of Burkitt lymphoma cells. *Oncogene.* 2023. 42. (45): p. 3358-3370. Article.
- Muñoz Ruiz, M; Llorian, M; D'Antuono, R; Pavlova, A; Mavrigiannaki, AM; McKenzie, D; García Cassani, B et al. IFN-γ-dependent interactions between tissue-intrinsic T cells and tissue-infiltrating CD8 T cells limit allergic contact dermatitis. *J. Allergy Clin. Immunol.* 2023. 152. (6): p. 1520-1540. Article.
- Pelaez Prestel, HF; Fernandez, SA; Ballesteros Sanabria, L; Reche, PA. Prediction of TAP Transport of Peptides with Variable Length Using TAPREG. *Methods Mol Biol.* 2023. 2673. p. 227-235. Article.
- Pérez Flores, I; Juarez, I; Aiffil Meneses, AS; Lopez Gomez, A; Romero, NC; Rodriguez Cubillo, B; Moreno de la Higuera, MA et al. Role of mTOR inhibitor in the cellular and humoral immune response to a booster dose of SARS-CoV-2 mRNA-1273 vaccine in kidney transplant recipients. *Front. Immunol.* 2023. 14. p. 1111569-1111569. Article.
- Sanz García, Carlos; Nevzorova, Yulia A; Martínez Naves, Eduardo; Cubero, Francisco Javier; Hionides Gutiérrez, Alejandro; Sanudo, José Ramón; Enrich, Carlos et al. Novel therapeutic avenues for the study of chronic liver disease and regeneration: The foundation of the Iberoamerican Consortium for the study of liver Cirrhosis. *Gastroenterol. Hepatol.* 2023. 46. (4): p. 322-328. Article.

* Publications: only "Article", "Review", "Editorial Material" and "Letter" have been selected in "Document Type" of ISI Web Of Knowledge. The breakdown of publications includes some not included in the 2022 JCR, which are therefore not taken into account in the final count shown in the table, since they do not have IF.

- Valle Noguera, A; Sancho Temiño, L; Aragone, J; Castillo González, R; Villa Gómez, C; Gomez Sánchez, MJ; Ochoa Ramos, A et al. IL-18-induced HIF-1a in ILC3s ameliorates the inflammation of C. rodentium-induced colitis. Cell Reports. 2023. 42. (12): 113508. Article.
- Vera Zambrano, A; Lago Docampo, M; Gallego, N; Franco Gonzalez, JF; Morales Cano, D; Cruz Utrilla, A; Villegas Esguevillas, M et al. Novel Loss-of-Function KCNA5 Variants in Pulmonary Arterial Hypertension. Am. J. Respir. Cell Mol. Biol. 2023. 69. (2): p. 147-158. Article.

Reviews

- Fiyouzi, T; Pelaez Prestel, HF; Reyes Manzanar, R; Lafuente, EM; Reche, PA. Students' Perceptions of Their Student-Operated Restaurant Experience: A Qualitative Study. Int. J. Mol. Sci. 2023. 24. (9): 7797. Review.

Editorials

- Saksena, NK; Reche, PA; Bonam, SR; Mancini, N. Editorial: Innate immune responses to SARS-CoV-2 in infected and vaccinated individuals. Front. Immunol. 2023. 14. p. 1141405-1141405. Editorial Material.

THESES DEFENDED OR SUPERVISED WITHIN THE GROUP

- **Doctoral candidate:** Álvaro Torres Gómez.
Thesis title: Activación y señalización del receptor del complemento CR3. Signaling and activation of complement receptor CR3.
University: Universidad Complutense de Madrid.
Date read: 06/03/2023.
Thesis director: Esther Lafuente Duarte, Carlos Cabañas Gutiérrez.
International mention: Yes.
- **Doctoral candidate:** Juan López Relano.
Thesis title: Efecto in vitro de la lenalidomida sobre la diferenciación de células dendríticas.
University: Universidad Complutense de Madrid.
Date read: 28/02/2023.
Thesis director: Eduardo Martínez Naves, Manuel Gómez del Moral.
International mention: No.

- Zheng, K; Hao, FJ; Medrano Garcia, S; Chen, CB; Guo, FF; Morán Blanco, L; Rodríguez Perales, S et al. Neuroblastoma RAS viral oncogene homolog (N-RAS) deficiency aggravates liver injury and fibrosis. Cell Death Dis. 2023. 14. (8): 514. Article.

- Toribio, ML; González García, S. Notch Partners in the Long Journey of T-ALL Pathogenesis. Int J Mol Sci. 2023. 24. (2): 1383. Review.

- **Doctoral candidate:** Teresa Fuertes Novella.
Thesis title: Caracterización del potencial terapéutico de miR-28 para el tratamiento de linfomas B.
University: Universidad Autónoma de Madrid.
Date read: 17/03/2023.
Thesis director: Virginia García de Yébenes, Almudena R. Ramiro.
International mention: No.
- **Doctoral candidate:** Óscar Aguilar Sopena.
Thesis title: Las fosfatasa de regeneración hepática controlan los reordenamientos de actina y la arquitectura de la sinapsis inmunitaria de los linfocitos T a través del regulador de dominios repetidos WD 1.
University: Universidad Complutense de Madrid.
Date read: 02/11/2023.
Thesis director: Pedro Roda Navarro.
International mention: Yes.

END MASTER INVESTIGATIONS DIRECTED ON THE GROUP

- **Student:** Lara Álvarez Rodríguez.
Title: Estudio de la interacción de exosomas tumorales con los neutrófilos. Implicación en la inducción de la NETosis.
Director: Esther Lafuente Duarte and Raquel Reyes Manzanar.
Master: Investigación en Inmunología.
University: Universidad Complutense de Madrid.
- **Student:** Pablo José Alarcón.
Title: Uso de nanopartículas como método no invasivo para la detección de tumores que responden a inmunoterapia.
Director: Aranzazu Cruz Adalia.
Master: Investigación en Inmunología.
University: Universidad Complutense de Madrid.

- **Student:** Clara Bravo Martín.
Title: Repercusión de la afinidad de la interacción CAR-TAA en la activación de las CAR-T cells.
Director: Pedro Roda Navarro.
Master: Investigación en Inmunología.
University: Universidad Complutense de Madrid.
- **Student:** Edgardo Arce Soto.
Title: Mecanismo de acción de anticuerpos biespecíficos antitumorales en la sinapsis inmunitaria.
Director: Pedro Roda Navarro.
Master: Investigación en Inmunología.
University: Universidad Complutense de Madrid.
- **Student:** Iván Estévez Benito.
Title: Células T gamma delta y Complemento: Evidencias del Complosoma y su relación con el TCR.
Director: José Ramón Regueiro.
Master: Investigación en Inmunología.
University: Universidad Complutense de Madrid.

- **Student:** Jakob Holzapfel.
Title: Functional Characterization of natural variants of Human Leukocyte Antigen: HLA-DM and HLA-DO.
Director: Miguel Álvaro-Benito.
Master: MSc Biochemistry.
University: Freie Universität Berlin.
- **Student:** Franziska Budig.
Title: Optimization of the Immunoprecipitation protocol for a mass spectrometry characterization of the HLA-II immunopeptide to analyze the influence of natural variations of HLA-DM and HLA-DO.
Director: Miguel Álvaro-Benito.
Nombre del máster/ Degree: BSc Biochemie.
University: Freie Universität Berlin.

END GRADUATED INVESTIGATIONS DIRECTED ON THE GROUP

- **Student:** Lúa Blanco Axpe.
Title: Modulación del metabolismo de las ILC3s como posible diana terapéutica para el cáncer colorrectal.
Director: Aranzazu Cruz Adalia and Raquel Castillo González.
Degree: Bioquímica.
University: Universidad Complutense de Madrid.
- **Student:** Juan Mozas Gutiérrez.
Title: Estudio de la NETosis inducida por exosomas tumorales en el modelo de neutrófilos HL-60.
Director: Esther Lafuente Duarte and Raquel Reyes Manzanar.
Degree: Bioquímica.
University: Universidad Complutense de Madrid.

- **Student:** Ana Isabel Romero.
Title: Señalización del receptor C3aR en linfocitos T $\alpha\beta$ y $\gamma\delta$ humanos.
Director: Marín, A.V. and Chacón-Arguedas, D.
Degree: Bioquímica.
University: Universidad Complutense de Madrid.
- **Student:** Claudia del Prado Villaescusa.
Title: Biosensores de depósito de complemento.
Director: Regueiro, J.R. and Megino, R.F.
Degree: Bioquímica.
University: Universidad Complutense de Madrid.

PRIZES AND AWARDS

- Miguel Muñoz Ruiz has received the IV FERRO-ASEICA Grant, valued at 80,000 €, in La Coruña in November 2023.
- Marta Herrero Alonso has been awarded the prize for the best oral communication in the 44th Congress of the Spanish Society of Immunology 2023 in Bilbao for her work "CO-29 Novel monoclonal antibody developed through patient specific approach to treat Sézary syndrome, an ultra-rare cancer of mature T lymphocytes".
- Christian Freund and Miguel Álvaro-Benito were responsible for the organization of the symposium "Connecting basic mechanisms of antigen presentation to translational research", funded by Fritz Thyssen Stiftung & Freie Universität Berlin, which took place at the Freie Universität Berlin on September 6-8, 2023.

STAYS

- Paula Cárdenas Mastrascusa has developed a stay between September 1, 2022 and August 31, 2023 at the Center for Molecular Biology Severo Ochoa (CBMSO-CSIC).
- Virginia García de Yébenes has enjoyed a stay at the National Center for Cardiovascular Research Foundation (CNIC) between September 1, 2023 and August 31, 2024.
- Between January 9 and April 9, 2023, Óscar Aguilar Sopena has made a stay at the Kennedy Institute of Rheumatology.
- Rebeca Fernández Megino was working in the laboratory of Dr. Wolfgang Schamel, at Albert-Ludwigs-University Freiburg (Germany), between September 5 and December 4, 2023.
- Carlos Daniel Chacón has made a stay in the laboratory of Dr. Ana Bloom, at Lund University (Sweden), between September 15 and December 20, 2023.

Immunodeficiencies and Immunology of Transplants

CENTER: Hospital Universitario 12 de Octubre (HU12O).

GROUP LEADER: Paz Artal, Estela (R4).

Alfocea Molina, Ángel - Junior clinical researcher.
Allende Martínez, Luis Miguel - Doctoral researcher (R4).
Almendo Vázquez, Patricia - Predoctoral researcher (R1).
Arroyo Sánchez, Daniel - Junior clinical researcher.
Baro Fernández, María - Junior clinical researcher.
Castro Panete, María José - Senior Clinical Researcher
Chivite Lacaba, Marta - Predoctoral researcher (R1).
Del Rey Cerros, Manuel José - Doctoral researcher (R2).
González Cuadrado, Cecilia - Graduate researcher.
González Granado, Luis Ignacio - Senior Clinical Researcher
Guerra Vales, Juan Manuel - Doctoral researcher.

Laguna Goya, Rocío - Postdoctoral researcher (R2).
Lasa Lázaro, María - Graduate researcher.
López Nevado, Marta - Predoctoral researcher (R1).
Mancebo Sierra, María Esther - Senior Clinical Researcher
Nieto López, Celia - Graduate researcher.
Ruigomez Martin, Carlota - Graduate researcher.
Ruiz Contreras, Jesús - Doctoral researcher.
Salmón Rodríguez, Nerea - Junior clinical researcher.
Talayero Giménez de Azcarate, Paloma - Postdoctoral researcher (R2).
Vivanco Martínez, José Luis - Doctoral researcher.

ACTIVE RESEARCH PROJECTS

Type of funding	Funding body	No. of projects
Competitive	ISCIII	5
Competitive	Sociedad Madrileña de Trasplantes	2
No competitive	Various	7
Total		15

- **Title:** Modulación de la respuesta inmune humoral frente al trasplante renal por células T cooperadoras foliculares (TFH).
Principal investigator: Paz Artal, Estela.
Project No.: PI18/00969.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2019.
End date: 31/12/2021, extended to 30/06/2023.
- **Title:** Mutaciones somáticas en pacientes con inmunodeficiencia variable común (IDVC) y sus implicaciones en el diagnóstico y tratamiento.
Principal investigator: Allende Martínez, Luis Miguel.
Project No.: PI21/01119.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2022.
End date: 31/12/2024.
- **Title:** Characterizing early events driving carcinogenesis in constitutional mismatch repair deficiency (cmmrd) syndrome as a potential strategy for precision surveillance and prevention.
Principal investigator: González Granado, Luis Ignacio.
Project No.: 202028-30-31.
Funding body: Fundació La Marató de TV3.
Start date: 01/05/2021.
End date: 30/04/2024; extended to 31/12/2024.
- **Title:** Puesta a punto de un modelo de organoide de amígdala como plataforma de análisis de la respuesta inmune adaptativa en trasplante de órgano sólido.
Principal investigator: Paz Artal, Estela.
Funding body: Sociedad Madrileña de Trasplantes.
Start date: 30/03/2022.
End date: 29/03/2024.
- **Title:** Desarrollo de organoides como herramienta de estudio y modelo experimental de terapia regenerativa en el trasplante intestinal.
Principal investigator: Talayero Giménez de Azcarate, Paloma.
Funding body: Sociedad Madrileña de Trasplantes.
Start date: 24/05/2021.
End date: 23/05/2023.
- **Title:** Organoides en el trasplante intestinal: herramienta de estudio personalizada y terapia regenerativa en un modelo experimental de rechazo.
Principal investigator: Talayero Giménez de Azcarate, Paloma.
Project No.: PI22/00423.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2023.
End date: 31/12/2025.
- **Title:** Estudio del genoma completo y priorización de variantes por términos HPO en pacientes con inmunodeficiencias primarias sin diagnóstico molecular.
Principal investigator: González Granado, Luis Ignacio.
Project No.: PI21/01642.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2022.
End date: 31/12/2024.

- **Title:** Respuesta de las células T cooperadoras foliculares (TFH) frente a aloantígenos y virus relevantes en pacientes con trasplante renal y en nuevos modelos experimentales.
Principal investigator: Paz Artal, Estela.
Project No.: PI22/00586.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2023.
End date: 31/12/2025.
- **Title:** Caracterización molecular de pacientes con inmunodeficiencia variable común: hacia una medicina personalizada.
Principal investigator: González Granado, Luis Ignacio.
Funding body: Asociación Bomberos Ayudan.
Start date: 21/07/2020.
End date: 20/07/2023.
- **Title:** Ritmo: respuesta inmunitaria tras la administración de la vacuna de MRNA antiSARS-CoV-2 de Pfizer.
Principal investigator: Paz Artal, Estela.
Funding body: Megalab, S.A.
Start date: 18/01/2021.
End date: 17/01/2023.
- **Title:** Examen neonatal de atrofia muscular espinal (AME) por amplificación del GEN SMN1 en la tarjeta GUTHRIE: primer estudio piloto en la Comunidad de Madrid.
Principal investigator: Allende Martínez, Luis Miguel.
Funding body: Novartis Gene Therapies Switzerland GMBH.
Start date: 21/10/2021.
End date: 20/10/2024.

- **Title:** Unraveling genetic etiology of human inborn errors in immunity: from neonatal screening to next generation sequencing.
Principal investigator: Allende Martínez, Luis Miguel.
Funding body: Beckman Coulter S.L.U.
Start date: 11/11/2021.
End date: 10/11/2024.
- **Title:** Efecto de la plitidepsina en poblaciones celulares del sistema inmune humano.
Principal investigator: Paz Artal, Estela.
Funding body: Pharma Mar, S.A.
Start date: 20/10/2022.
End date: 19/10/2023.
- **Title:** Estudio de validación del kit LightMix para la detección de la inmunodeficiencia combinada grave, atrofia muscular espinal y beta talasemia en tarjeta de Guthrie.
Principal investigator: Allende Martínez, Luis Miguel.
Funding body: Roche Diagnostics, S.L.U.
Start date: 07/03/2023.
End date: 06/09/2023.
- **Title:** Clinical study Advia Centaur IL2R.
Principal investigator: Paz Artal, Estela.
Funding body: Biokit Research & Development, S.L.U.
Start date: 09/05/2023.
End date: 08/05/2026.

PUBLICATIONS*

Type of Document	No. of document	Σ IF (JCR 2022)
Articles	21	143,908
Reviews	2	11,2
Editorials	1	2,6
Total	24	157,708
Letters	2	73,9
Total	26	231,608

Articles

- Agulló Ortuño, MT; Mancebo, E; Grau, M; Sobrino, JAN; Paz Ares, L; López Martín, JA; Flández, M. Tryptophan Modulation in Cancer-Associated Cachexia Mouse Models. *Int. J. Mol. Sci.* 2023. 24. (16): 13005. Article.
- Álvarez García, FJ; Cilleruelo Ortega, MJ; Álvarez Aldeán, J; Garcés Sánchez, M; Garrote Llanos, E; Iofrío de Arce, A; Montesdeoca Melián, A et al. Immunisation schedule of the Spanish Association of Paediatrics: 2023 Recommendations. *An Pediatr (Engl Ed)*. 2023. 98. (1): 58.e1-58.e10. Article.
- Andres, AM; Encinas, JL; Sánchez Galán, A; Rodríguez, JS; Estefania, K; Sacristan, RG; Alcolea, A et al. First case report of multivisceral transplant from a deceased cardiac death donor. *Am. J. Transplant.* 2023. 23. (4): p. 577-581. Article.
- Asperti, C; Canarutto, D; Porcellini, S; Sanvito, F; Cecere, F; Vavassori, V; Ferrari, S et al. Scalable GMP-compliant gene correction of CD4+T cells with IDLV template functionally validated in vitro and in vivo. *Mol. Ther.-Methods Clin. Dev.* 2023. 30. p. 546-557. Article.

* Publications: only "Article", "Review", "Editorial Material" and "Letter" have been selected in "Document Type" of ISI Web Of Knowledge. The breakdown of publications includes some not included in the 2022 JCR, which are therefore not taken into account in the final count shown in the table, since they do not have IF.

- Boast, B; Goel, S; Gonzalez Granado, LI; Niemela, J; Stoddard, J; Edwards, ESJ; Seneviratne, S et al. TCF3 haploinsufficiency defined by immune, clinical, gene-dosage, and murine studies. *J. Allergy Clin. Immunol.* 2023. 152. (3): p. 736-747. Article.
- Cabrera Marante, O; Garcinuño, S; Pleguezuelo, DE; Gil Etayo, FJ; Tenica, I; de Frías, ER; Zafra, D et al. Quantification of Antiphospholipid Antibodies: The Importance of Using an Appropriate Methodology for Each Clinical Profile. *Int. J. Mol. Sci.* 2023. 24. (24): 17373. Article.
- Canarutto, D; Asperti, C; Vavassori, V; Porcellini, S; Rovelli, E; Paulis, M; Ferrari, S et al. Unbiased assessment of genome integrity and purging of adverse outcomes at the target locus upon editing of CD4⁺ T-cells for the treatment of Hyper IgM1. *Embo J.* 2023. 42. (23). Article.
- Fernandez Ruiz, M; Almendro Vazquez, P; Redondo, N; Ruiz Merlo, T; Abella, S; Somoza, A; Lopez Medrano, F et al. Cell-mediated and Neutralizing Antibody Responses to the SARS-CoV-2 Omicron BA.4/BA.5-adapted Bivalent Vaccine Booster in Kidney and Liver Transplant Recipients. *Transplant. Direct.* 2023. 9. (10): e1536. Article.
- García, FJA; Ortega, MJC; Aldeán, JA; Garces Sánchez, M; Llanos, EG; de Arce, AI; Melián, AM et al. Immunisation schedule of the Spanish Association of Paediatrics: 2023 Recommendations. *An. Pediatr.* 2023. 98. (1): p. 1-10. Article.
- González Cuadrado, C; Caro Espada, PJ; Chivite Lacaba, M; Utrero Rico, A; Lozano Yuste, C; Gutierrez Solis, E; Morales, E et al. Hemodialysis-Associated Immune Dysregulation in SARS-CoV-2-Infected End-Stage Renal Disease Patients. *Int. J. Mol. Sci.* 2023. 24. (2). Article.
- Herrero Martínez, JM; Trigo, E; Navarro, M; García Alcázar, D; Carrillo, I; Fernández López, T; Calderón Moreno, M et al. 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): p. 912-922. Article.
- Horndler, L; Delgado, P; Romero Pinedo, S; Quesada, M; Balabanov, I; Laguna Goya, R; Almendro Vázquez, P et al. Decreased breadth of the antibody response to the spike protein of SARS-CoV-2 after repeated vaccination. *Front. Immunol.* 2023. 14. 1157263. Article.
- Lasa Lázaro, M; Ramos Boluda, E; Mancebo, E; Castro Panete, MJ; González Sacristán, R; Serradilla, J; Andrés Moreno, AM et al. Antibody-removal therapies for de novo DSA in pediatric intestinal recipients: Why, when, and how? A single-center experience. *Front. Pediatr.* 2023. 10. p. 1074577-1074577. Article.
- Lopez Nevado, M; Ortiz Martin, J; Serrano, C; Perez Saez, MA; Lopez Lorenzo, JL; Gil Etayo, FJ; Rodriguez Frias, E et al. Novel

Reviews

- Almendro Vázquez, P; Laguna Goya, R; Paz Artal, E. Defending against SARS-CoV-2: The T cell perspective. *Front. Immunol.* 2023. 14. p. 1107803-1107803. Review.

- Germline TET2 Mutations in Two Unrelated Patients with Autoimmune Lymphoproliferative Syndrome-Like Phenotype and Hematologic Malignancy. *J. Clin. Immunol.* 2023. 43. (1): p. 165-180. Article.
- López Nevado, M; Sevilla, J; Almendro Vázquez, P; Gil Etayo, FJ; Garcinuño, S; Serrano Hernández, A; Paz Artal, E et al. Inborn Error of STAT2-Dependent IFN-I Immunity in a Patient Presented with Hemophagocytic Lymphohistiocytosis and Multisystem Inflammatory Syndrome in Children. *J. Clin. Immunol.* 2023. 43. (6): p. 1278-1288. Article.
- Lopez Rodriguez, R; Ruiz Hornillos, J; Corton, M; Almoguera, B; Minguez, P; Perez Tomas, ME; Barreda Sanchez, M et al. Androgen receptor polyQ alleles and COVID-19 severity in men: A replication study. *Andrology.* 2023. 11. (1): p. 24-31. Article.
- Maccari, ME; Schneider, P; Smulski, CR; Meinhardt, A; Pinto, F; Gonzalez Granado, LI; Schuetz, C et al. Revisiting autoimmune lymphoproliferative syndrome caused by Fas ligand mutations. *J. Allergy Clin. Immunol.* 2023. 151. (5). Article.
- Martinon Torres, F; de Miguel, AG; Ruiz Contreras, J; Vallejo Aparicio, LA; Garcia, A; Gonzalez Inchausti, MC; de Gomensoro, E et al. Societal Preferences for Meningococcal B Vaccination in Children: A Discrete Choice Experiment in Spain. *Infect Dis Ther.* 2023. 12. (1): p. 157-175. Article.
- Matuozzo, D; Talouarn, E; Marchal, A; Zhang, P; Manry, J; Seeleuthner, Y; Zhang, Y et al. Rare predicted loss-of-function variants of type I IFN immunity genes are associated with life-threatening COVID-19. *Genome Med.* 2023. 15. (1): 22. Article.
- Oftedal, BE; Assing, K; Baris, S; Safgren, SL; Johansen, IS; Jakobsen, MA; Babovic Vuksanovic, D et al. Dominant-negative heterozygous mutations in AIRE confer diverse autoimmune phenotypes. *iScience.* 2023. 26. (6): 106818. Article.
- Ramirez, GA; Gerosa, M; Bellocchi, C; Arroyo Sánchez, D; Asperti, C; Argolini, LM; Gallina, G et al. Efficacy and Safety of Anti-SARS-CoV-2 Antiviral Agents and Monoclonal Antibodies in Patients with SLE: A Case-Control Study. *Biomolecules.* 2023. 13. (9): 1273. Article.
- Serradilla, J; Moreno, AMA; Talayero, P; Burgos, P; Machuca, M; Ortega, OC; Vallejo, MT et al. Preclinical Study of DCD and Normothermic Perfusion for Visceral Transplantation. *Transpl. Int.* 2023. 36. 11518. Article.
- Stringa, P; Dezillio, LEV; Talayero, P; Serradilla, J; Errea, A; Machuca, M; Papa Gobbi, R et al. Experimental Assessment of Intestinal Damage in Controlled Donation After Circulatory Death for Visceral Transplantation. *Transpl. Int.* 2023. 36. 10803. Article.

- Marco, I; García, JCLA; Martín, JG; Sánchez, AS; Carmena, MDGC; Sierra, EM; Bagudá, JD et al. De Novo Donor-Specific Antibodies after Heart Transplantation: A Comprehensive Guide for Clinicians. *J. Clin. Med.* 2023. 12. (23): 7474. Review.

Editorials

- Gennery, AR; Gonzalez Granado, LI; Torgerson, TR. Editorial: Primary immune regulatory disorders: Coming of age. *Front. Pediatr.* 2023. 11. p. 1155785-1155785. Editorial Material.

Letters

- Arroyo Sánchez, D; Luczkowiak, J; Delgado, R; Cabrera Marante, O; Paz Artal, E. Immune Response Against SARS-CoV-2 Infection and Vaccination in a CD8a-Deficient Patient. *J. Clin. Immunol.* 2023. 43. (6): p. 1072-1074. Letter.

- Daly, M; Iwasaki, A; Karjalainen, J; Mehtonen, J; Andrews, SJ; Pirinen, M; Stevens, C et al. A second update on mapping the human genetic architecture of COVID-19. *Nature.* 2023. 621. (7977): p. 7-7. Letter.

THESES DEFENDED OR SUPERVISED WITHIN THE GROUP

- **Doctoral candidate:** Luis I. González Granado.
Thesis title: Caracterización clínica, molecular y funcional de las inmunodeficiencias primarias y sus implicaciones terapéuticas.
University: Universidad Complutense de Madrid.
Date read: 17/06/2023.
Thesis director: Jesús Ruiz Contreras, Jaime de Inocencio Arocena, Luis M. Allende Martínez.
International mention: No.

END GRADUATED INVESTIGATIONS DIRECTED ON THE GROUP

- **Student:** Sara Benavente García.
Title: Inmunidad Entrenada en Pacientes con Enfermedad Renal Crónica.
Director: Estela Paz Artal.
Degree: Biotecnología.
University: Universidad Francisco de Vitoria.

END MASTER INVESTIGATIONS DIRECTED ON THE GROUP

- **Student:** Vanessa Beltrán Pretell.
Title: Efecto de la Plitidepsina en Poblaciones Celulares del Sistema Inmune Humano.
Director: Estela Paz Artal.
Master: Investigación en Inmunología.
University: Universidad Complutense de Madrid.

PRIZES AND AWARDS

- Immunotek Prize to Marta López Nevado for the best work in clinical research for the work "Inborn Error of STAT2-Dependent IFN-I Immunity in a Patient Presented with Hemophagocytic Lymphohistiocytosis and Multisystem Inflammatory Syndrome in Children", awarded at the XI Reunión de la Sociedad de Inmunología de la Comunidad de Madrid 2023.
- Award for the best poster to Patricia Almendro Vázquez for her work "Dynamics of the adaptive response after vaccination against SARS-COV-2 in Naïve individuals and those recovered from COVID-19" in the I Jornadas Junior del Instituto de Investigación Hospital 12 de Octubre, held on May 24 and 25, 2023.

STAYS

- Patricia Almendro Vázquez spent the period between September 15 and November 15, 2023, at the Severo Ochoa Center for Molecular Biology (CBMSO), where she collaborated with the Human Lymphohematopoietic System Development Group.

PATENTS

- **Title:** ARN de interferencia para el tratamiento del síndrome linfoproliferativo autoinmune de tipo 1A.
Number: P201430504.
Type: SPANISH patent.
Inventors: Estela Paz Artal, M.^a Esther Mancebo Sierra.
Titular: Fundación i+12 (100 %).
Priority Date: 04/04/2014.
Status: Granted (07/07/2016).
Full licence OEPM.

COORDINATOR:

Rafael Delgado Vázquez

Molecular Epidemiology of Hospital and Emerging Infections
Translational Research Group on Pediatric Infectious Diseases
Translational Research in Leishmaniasis
Translational Research in Malaria
Infectious Pathologies
Virology and HIV/AIDS

The Infectious Diseases and AIDS Department of the Instituto i+12 covers a spectrum of activity ranging from clinical to translational research and fundamental biology. The department is made up of consolidated groups that work mainly in: (1) infection clinics for immunosuppressed and transplant patients, (2) molecular epidemiology of hospital infection and multi-resistance, (3) HIV and AIDS, (4) translational research in leishmaniasis and (5) host-parasite relationships in malaria.

The Area has the hospitalization facilities of the 12 de Octubre University Hospital, a platform for conducting clinical trials and a laboratory infrastructure that allows complex problems to be addressed with advanced techniques in immunology and molecular, cellular and genomic biology.

Cooperative development objectives set in the area:

Resource indicators

- Number of national projects in competitive calls and overall amount of funding. Indicator: 1 National Plan project (MICINN/ISCIII) per group or year. Degree of achievement: high.
- Number of international projects (European Commission, NIH, FBMG) in competitive calls and overall amount of funding. Indicator: 2 European projects. Degree of achievement: high.
- Participation in 1 European project (all A7). Deadline: January 2024. Annual evaluation. Degree of achievement: low.
- Number of pre- and post-doctoral researchers recruited through HR programs. Indicator: 3 contracts through HR calls (RH, JR, SB, MS, others) (all of A7). Deadline: January 2024. Annual evaluation. Degree of achievement: high.

Performance indicators

- Number of projects requested by various research groups. ≥ 3 projects requested by various groups. Deadline: January 2024. Annual evaluation. Degree of achievement: low.

Performance indicators

- Number of articles signed by various groups with main authorship and global impact factor. Indicator: ≥ 2 publications per year per Q1 group with main authorship. Deadline: January 2024. Annual evaluation. Degree of achievement: high.
- No. of co-directed theses. Indicator: ≥ 2 theses submitted per year (A7). Deadline: January 2024. Annual evaluation. Degree of achievement: low.
- No. of patents developed by several groups. Indicator: 1 patent filed per 3 years (A7). Deadline: January 2026. Evaluation every 3 years. Degree of achievement: low.

List of the 5 most relevant publications in the Area of Infectious Diseases and AIDS during 2023

Below are the 5 most relevant publications in the field of Infectious Diseases and AIDS, selected on the basis of the original articles led by researchers in the field, published in quartile 1 of their subject category in JCR and most frequently cited:

1. Matas Méndez, P; Fuentes Corripio, I; Montoya Matute, A; Bailo Barroso, B; Grande Gómez, R; Apruzzese Rubio, A; Ponce Gordo, F et Mateo Barrientos, M. Prevalence of *Toxoplasma gondii* in Endangered Wild Felines (*Felis silvestris* and *Lynx pardinus*) in Spain. *Animals (Basel)*. 2023. 13. (15): 2488. Article.
2. Forqué, L; Fernández Ruiz, M; Albert, E; Giménez, E; Monzó, C; Chaves, J; Redondo, N; Rodríguez-Goncer, I; Ruiz-Merlo, T; Parra, P; Andrés, A; Aguado, JM; et Navarro, D. Dynamics of Human Anelloviruses in Plasma and Clinical Outcomes Following Kidney Transplantation. *Transplantation*. 2023. 107. (2): p. 511-520. Article.
3. Fernández Ruiz, M; Bodro, M; Gutiérrez Martín, I; Rodríguez Alvarez, R; Ruiz Ruigómez, M; Sabé, N; López Viñau, T; Aguado, JM; et al. Isavuconazole for the Treatment of Invasive Mold Disease in Solid Organ Transplant Recipients: A Multicenter Study on Efficacy and Safety in Real-life Clinical Practice. *Transplantation*. 2023. 107. (3): p. 762-773. Article.

4. García Rubia, A; Lasala, F; Ginex, T; Morales Tenorio, M; Olal, C; Heung, M; Oquist, P; Delgado, R; et al. N⁷-Phenylacetohydrazide Derivatives as Potent Ebola Virus Entry Inhibitors with an Improved Pharmacokinetic Profile. *J. Med. Chem.* 2023. 66. (8): p. 5465-5483. Article.
5. Sánchez Jaut, S; Pérez Benavente, S; Abad, P; Méndez Cuadro, D; Puyet, A; Diez, A; Galicia Poblet, G; Bautista, JM; et al. Protein Susceptibility to Peroxidation by 4-Hydroxynonenal in Hereditary Hemochromatosis. *Int. J. Mol. Sci.* 2023. 24. (3):. 2922. Article.

Molecular Epidemiology of Hospital and Emerging Infections

CENTER: Hospital Universitario 12 de Octubre (HU12O).

GROUP LEADER: Viedma Moreno, Esther (R3).

López Roa, Paula - Postdoctoral researcher (R2).

Lora-Tamayo Morillo-Velarde, Jaime - Doctoral researcher.

Mancheño Losa, Mikel - Predoctoral researcher (R1).

Meléndez Carmona, María Ángeles - Predoctoral researcher (R1).

Muñoz Gallego, Irene - Clinical researcher (R2).

Orellana Miguel, M.ª Ángeles - Doctoral researcher.

Pérez De Ayala Balzola, Ana - Clinical researcher (R3).

Recio Martínez, Raúl - Senior Clinical Researcher.2).

Villa García, Jénifer - Clinical researcher (R3).

ACTIVE RESEARCH PROJECTS

Type of funding	Funding body	No. of projects
Competitive	Commission of the European Communities	1
Competitive	ISCIII	5
Competitive	Sociedad Española de Enfermedades Infecciosas y Microbiología Clínica	1
Total		7

- **Title:** Estudio clínico, farmacológico y microbiológico del tratamiento optimizado con beta-lactámicos en combinación con colistina de la infección osteoarticular con y sin material ortopédico por bacilos gram-negativos resistentes a fluoroquinolonas.
Principal investigator: Lora-Tamayo Morillo-Velarde, Jaime.
Funding body: Sociedad Española de Enfermedades Infecciosas y Microbiología Clínica.
Start date: 01/09/2017.
End date: 01/09/2019; extended to 30/06/2023.
- **Title:** Influencia en el pronóstico de la infección de prótesis articular de las características genotípicas y fenotípicas de los microorganismos responsables: más allá de la especie y el antibiograma.
Principal investigator: Lora-Tamayo Morillo-Velarde, Jaime.
Project No.: PI18/01623.
Funding body: Instituto de Salud Carlos III (ISCIII)
Start date: 01/01/2019
End date: 31/12/2021; extended to 30/06/2023.
- **Title:** Implementación de la tecnología de secuenciación de genomas completos (WGS) en el estudio de bacterias multirresistentes. Impacto en la vigilancia microbiológica y control de la infección.
Principal investigator: Viedma Moreno, Ester.
Project No.: PI19/00571.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2020.
End date: 31/12/2022; extended to 30/06/2024.
- **Title:** WP9-ARTHR-IS COMBACTE-NET project/arthroplasties'infections due to Staphylococcus aureus.
Principal investigator: Lora-Tamayo Morillo-Velarde, Jaime.
Funding body: Commission of the European Communities.
Start date: 08/10/2020.
End date: 09/10/2024.

- **Title:** Mycobacterium abscessus en fibrosis quística: epidemiología, patogenia y sensibilidad antibiótica y sus implicaciones en el tratamiento y pronóstico de los pacientes.
Principal investigator: López Roa, Paula.
Project No.: PI21/01738.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2022
End date: 31/12/2024.
- **Title:** Eficacia del tratamiento y profilaxis antibiótica en la infección asociada a piezas de aleación de titanio de superficie activada mediante recubrimiento con sol-gel o una nanoestructura tubular.
Principal investigator: Lora-Tamayo Morillo-Velarde, Jaime.
Project No.: PI22/01681.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2023.
End date: 31/12/2025.
- **Title:** Papel de la colonización intestinal de enterobacteriales productores de carbapenemasa en el paciente crítico. Bases para reforzar la estrategia de vigilancia microbiológica en los hospitales.
Principal investigator: Viedma Moreno, Esther.
Project No.: PI22/01799.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2023.
End date: 31/12/2025.

EUROPEAN PROJECT APPLICATIONS 2023

- **Call Identifier:** EU4Health Programme (EU4H)
Project title: Consolidation of WGS and RT-PCR activities for SARS-CoV-2 in Spain towards sustainable use and integration of enhanced infrastructure and capacities in the RELECOV network.
Acronym: RELECOV 2.0.
Coordinator: No.
Coordinating Centre: Centro Nacional de Microbiología (ISCIII).
Researcher coordinating the project: Esther Viedma Moreno.
Granted: Yes.

PUBLICATIONS*

Type of Document	No. of document	Σ IF (JCR 2022)
Articles	22	178.3
Reviews	2	21.5
Total	24	199.8
Letters	2	4.4
Total	26	204.2

Articles

- Aguilera Alonso, D; Escosa García, L; Epalza, C; Bravo Llano, B; Olteanu, FC; Cendejas Bueno, E; Orellana, MA et al. Antibiotic resistance in bloodstream isolates from high-complexity paediatric units in Madrid, Spain: 2013-2021. *J. Hosp. Infect.* 2023. 139. p. 33-43. Article.
- Asín, MAPJ; De Castro, M; De Dios, B; Pérez Ayala, A; Lalueza, A; García Reyne, A; Losada, I et al. Enhancing screening adherence for strongyloides infection in latinx inpatients with COVID-19: a local protocol implementation study. *Pathog. Glob. Health.* 2023. Article.
- Badia Cebada, L; Carmezim, J; Pérez Rodríguez, MT; Bereciartua, E; López, LE; Montenegro, MR; Pomar, V et al. Randomized Clinical Trial of the Need for Antibiotic Treatment for Low-Risk Catheter-Related Bloodstream Infection Caused by Coagulase-Negative Staphylococci. *Antibiotics-Basel.* 2023. 12. (5): 839. Article.
- Branas, P; Munoz Gallego, I; Espartosa, E; Moral, N; Abellan, G; Folgueira, L. Dynamics of respiratory viruses other than SARS-CoV-2 during the COVID-19 pandemic in Madrid, Spain. *Influenza Other Respir. Viruses.* 2023. 17. (9): e13199. Article.
- Cañada García, JE; de Arellano, ER; Jiménez Orellana, M; Viedma, E; Sanchez, A; Alhambra, A; Villa, J et al. Carbapenemase-Producing *Klebsiella pneumoniae* in COVID-19 Intensive Care Patients: Identification of IncL-VIM-1 Plasmid in Previously Non-Predominant Sequence Types. *Antibiotics-Basel.* 2023. 12. (1): 107. Article.
- Corbella, L; Fernández Ruiz, M; Ruiz Ruigómez, M; Rodríguez Goncer, I; Silva, JT; Hernández Jiménez, P; López Medrano, F et al. Production of OXA-48 carbapenemase acts as an independent risk factor for poor outcome in *Klebsiella pneumoniae* infection. *Eur. J. Clin. Microbiol. Infect. Dis.* 2023. 42. (12): p. 1485-1497. Article.
- de la Calle, GM; Reyne, AG; Lora Tamayo, J; Miguez, AM; Arnalich Fernandez, F; Perez, JLB; Núñez, JAV et al. 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): p. 281-297. Article.
- Díaz García, J; Machado, M; Alcalá, L; Reigadas, E; Pérez Ayala, A; de la Pedrosa, EGG; González Romo, F et al. Trends in antifungal resistance in *Candida* from a multicenter study conducted in Madrid (CANDIMAD study): fluconazole-resistant *C. parapsilosis* spreading has gained traction in 2022. *Antimicrob. Agents Chemother.* 2023. e00986. Article.
- Díaz García, J; Machado, M; Alcalá, L; Reigadas, E; Sánchez Carrillo, C; Pérez Ayala, A; de la Pedrosa, EGG et al. Antifungal resistance in *Candida* spp within the intra-abdominal cavity: study of resistance acquisition in patients with serial isolates. *Clin. Microbiol. Infect.* 2023. 29. (12). Article.
- Espíndola, R; Vella, V; Benito, N; Mur, I; Tedeschi, S; Zamparini, E; Hendriks, JGE et al. Incidence, associated disease burden and healthcare utilization due to *Staphylococcus aureus* prosthetic joint infection in European hospitals: the COMBACTE-NET ARTHR-IS multi-centre study. *J. Hosp. Infect.* 2023. 142. p. 9-17. Article.
- Herrero Martínez, JM; Trigo, E; Navarro, M; García Alcázar, D; Carrillo, I; Fernández López, T; Calderón Moreno, M et al. 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): p. 912-922. Article.
- Hidalgo Tenorio, C; Pitto Robles, I; García, DA; de Novales, FJM; Morata, L; Mendez, R; de Pablo, OB et al. Cefto Real-Life Study: Real-World Data on the Use of Ceftobiprole in a Multicenter Spanish Cohort. *Antibiotics-Basel.* 2023. 12. (7): 1218. Article.
- Luczkowiak, J; Rivas, G; Labiod, N; Lasala, F; Rolo, M; Lora Tamayo, J; Mancheno Losa, M et al. Cross neutralization of SARS-CoV-2 omicron subvariants after repeated doses of COVID-19 mRNA vaccines. *J. Med. Virol.* 2023. 95. (1): e28268. Article.
- Manzanares, A; Prieto Tato, LM; Escosa García, L; Navarro, M; Guillen, S; Penin, M; Hernanz Lobo, A et al. Increased risk of group B streptococcal sepsis and meningitis in HIV-exposed uninfected infants in a high-income country. *Eur. J. Pediatr.* 2023. 182. (2): p. 575-579. Article.
- Martín Higuera, MC; Rivas, G; Rolo, M; Muñoz Gallego, I; Lopez Roa, P. Xpert MTB/RIF Ultra CT value provides a rapid measure of sputum bacillary burden and predicts smear status in patients with pulmonary tuberculosis. *Sci Rep.* 2023. 13. (1): 1591. Article.
- Muñoz Gallego, I; Carmona, MAM; Higuera, CM; Viedma, E; Delgado, R; Folgueira, MD. Rapid screening of SARS-CoV-2 variants, a key tool for pandemic surveillance. *Sci Rep.* 2023. 13. (1): 11094. Article.
- Nguyen, BT; Marc, A; Suñer, C; Marks, M; Ubals, M; Hernández Rodríguez, A; Melendez, MA et al. Early administration of tecovirimat shortens the time to mpox clearance in a model of human infection. *PLoS. Biol.* 2023. 21. (12): e3002249. Article.
- Ramírez, AM; Argos, LB; Suárez, ML; Rubio, CC; Pérez Ayala, A; Hisam, SR; Rubio, JM. Malaria diagnosis using a combined system of a simple and fast extraction method with a lyophilised Dual-LAMP assay in a non-endemic setting. *Pathog. Glob. Health.* 2023. 118. (1): p. 80-90. Article.
- Retamar Gentil, P; Cantón, R; Abril López de Medrano, V; Barberán, J; Canut Blasco, A; Dueñas Gutiérrez, C; García Vidal, C et al. Antimicrobial resistance in Gram-negative bacilli in Spain: an experts' view. *Rev. Esp. Quim.* 2023. 36. (1): p. 65-81. Article.
- Rivas, G; Labiod, N; Luczkowiak, J; Lasala, F; Rolo, M; Mancheno Losa, M; Rial Crestelo, D et al. Superior neutralizing response after first versus second SARS-CoV-2 infection in fully vaccinated individuals. *J. Med. Virol.* 2023. 95. (11): e29225. Article.
- Rolo, M; González Blanco, B; Reyes, CA; Rosillo, N; López Roa, P. Epidemiology and factors associated with Extra-pulmonary tuberculosis in a Low-prevalence area. *J. Clin. Tuberc. Other Mycobacterial Dis.* 2023. 32. p. 100377-100377. Article.
- San Juan, R; Origen, J; Campion, K; Fernández Ruiz, M; Diaz Pollan, B; Callejas Diaz, A; Candela, G et al. Evaluation of the effectiveness and safety of oral vancomycin versus placebo in the prevention of recurrence of *Clostridioides difficile* infection in patients under systemic antibiotic therapy: a phase III, randomised, double-blind clinical trial. *BMJ OPEN.* 2023. 13. (9): e072121. Article.
- Sastre Femenia, MÀ; Fernández Muñoz, A; Gomis Font, MA; Taltavull, B; López Causapé, C; Arca Suárez, J; Martínez, L et al. *Pseudomonas aeruginosa* antibiotic susceptibility profiles, genomic epidemiology and resistance mechanisms: a nationwide five-year time lapse analysis. *Lancet Reg. Health-Eur.* 2023. 34. p. 100736-100736. Article.
- Suñer, C; Ubals, M; Tarín Vicente, EJ; Mendoza, A; Alemany, A; Hernández Rodríguez, A; Casañ, C et al. Viral dynamics in patients with monkeypox infection: a prospective cohort study in Spain. *Lancet Infect. Dis.* 2023. 23. (4): p. 445-453. Article.

Reviews

- Sendi, P; Lora Tamayo, J; Cortes Penfield, NW; Uçkay, I. Early switch from IV to oral antibiotic treatment in bone and joint infections. *Clin. Microbiol. Infect.* 2023. 29. (9): p. 1133-1138. Review.
- Valiente, M; Sepúlveda, JM; Pérez, A. Emerging targets for cancer treatment: S100A9/RAGE. *ESMO Open.* 2023. 8. (1): p. 100751-100751. Review.

Letters

- Díaz García, J; Gómez, A; Machado, M; Alcalá, L; Reigadas, E; Sánchez Carrillo, C; Pérez Ayala, A et al. Non-*Candida* isolates from blood cultures and intra-abdominal samples: data derived from a multicentre prospective study conducted in Madrid. *Rev. Esp. Quim.* 2023. 36. (5): p. 541-544. Letter.
- Rolo, M; Reyes, A; Torres, JM; Pérez Ayala, A. Unusual microscopic finding in a hepatic abscess content. *Enferm. Infect. Microbiol. Clin.* 2023. 41. (4): p. 254-255. Letter.

THESES DEFENDED OR SUPERVISED WITHIN THE GROUP

- **Doctoral candidate:** María Ángeles Meléndez Carmona.
Thesis title: Aspectos microbiológicos relacionados con las infecciones de prótesis articulares por estafilococos.
University: Universidad Autónoma de Madrid.
Date read: 19/05/2023.
Thesis director: Esther Viedma Moreno, Jaime Lora-Tamayo.
International mention: No.

* Publications: only "Article", "Review", "Editorial Material" and "Letter" have been selected in "Document Type" of ISI Web Of Knowledge. The breakdown of publications includes some not included in the 2022 JCR, which are therefore not taken into account in the final count shown in the table, since they do not have IF.

Translational Research Group on Pediatric Infectious Diseases

CENTER: Hospital Universitario 12 de Octubre (HU12O).

GROUP LEADER: Blázquez Gamero, Daniel (R4).

Domínguez Rodríguez, Sara - Postdoctoral researcher (R2).
Epalza Ibarrodo, Cristina - Predoctoral researcher (R1).
Fernández Cooke, Elisa - Senior Clinical Researcher
González Tomé, María Isabel - Senior Clinical Researcher
Grasa Lozano, Carlos Daniel - Predoctoral researcher (R1).
Moraleda Redecilla, María Cinta - Doctoral researcher.

Pedrero Tomé, Roberto - Predoctoral researcher (R1).
Prieto Tato, Luis Manuel - Senior Clinical Researcher
Rojo Conejo, Pablo - Doctoral researcher (R4).
Soriano Ramos, María - Predoctoral researcher (R1).
Tagarro García, Alfredo - Doctoral researcher (R3).
Villaverde González, Serena - Graduate researcher.

ACTIVE RESEARCH PROJECTS

Type of funding	Funding body	No. of projects
Competitive	Commission of the European Communities	6
Competitive	European Society for Paediatric Infectious Diseases	1
Competitive	Gilead Sciences, S.L.U.	1
Competitive	ISCIII	5
No competitive	Various	2
Total		15

- Title:** Empirical treatment against cytomegalovirus and tuberculosis in severe pneumonia in HIV- infected infants: a randomized controlled clinical trial.
Principal investigator: Rojo Conejo, Pablo.
Project No.: RIA2017MC-2013.
Funding body: Commission of the European Communities.
Start date: 01/02/2019.
End date: 31/01/2024.
- Title:** Diagnosis and management of febrile illness using RNA personalised molecular signature diagnosis - 'DIAMONDS'.
Principal investigator: Rojo Conejo, Pablo.
Funding body: Commission of the European Communities.
Start date: 01/01/2020.
End date: 31/12/2024.
- Title:** Kawa-Gene. Estudio de los factores genéticos asociados a la susceptibilidad para el desarrollo de aneurismas en pacientes con diagnóstico de enfermedad de Kawasaki en España.
Principal investigator: Fernández Cooke, Elisa.
Project No.: PI19/00520.
Funding body: Instituto de Salud Carlos III (ISCIII)
Start date: 01/01/2020
End date: 31/12/2022; extended to 30/06/2024.
- Title:** Susceptibilidad genómica del huésped en la infección congénita por citomegalovirus - Estudio GECKO.
Principal investigator: Blázquez Gamero, Daniel.
Project No.: PI19/01333.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2020.
End date: 31/12/2022; extended to 30/06/2024.
- Title:** Estudio epidemiológico de las infecciones respiratorias por el nuevo coronavirus (SARS-COV.2) en población pediátrica (EPICO).
Principal investigator: Moraleda Redecilla, M.ª Cintia.
Project No.: PI20/00995.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2021.
End date: 31/12/2023; extended to 31/12/2024.
- Title:** Pharmacokinetic and safety studies of new antiretroviral formulations: expediting universal first and second line regimens for all children living with HIV in Africa.
Principal investigator: Rojo Conejo, Pablo.
Project No.: Grant Agreement RIA2019PD-2882.
Funding body: Commission of the European Communities.
Start date: 01/01/2021.
End date: 31/12/2025.
- Title:** European registry of children with congenital cytomegalovirus.
Principal investigator: Blázquez Gamero, Daniel.
Project No.: Grant agreement No. 101016167.
Funding body: Commission of the European Communities.
Start date: 01/06/2021.
End date: 31/12/2023; extended to 30/06/2024.
- Title:** ORCHESTRA - Connecting European Cohorts to Increase Common and Effective Response to SARS-CoV-2 Pandemic.
Principal investigator: Alfredo Tagarro García.
Funding body: Commission of the European Communities.
Start date: 10/06/2021.
End date: 31/12/2023; extended to 30/06/2024.

- Title:** Valoración de la gravedad de la bronquiolitis aguda basada en técnicas asistidas por inteligencia artificial utilizando un smartphone (VIBRA).
Principal investigator: Rojo Conejo, Pablo.
Project No.: PI21/00351.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2022.
End date: 31/12/2024.
- Title:** Acompañando a los niños y adolescentes que crecen con el VIH.
Principal investigator: Prieto Tato, Luis Manuel.
Funding body: Gilead Sciences, S.L.U.
Start date: 01/11/2022.
End date: 31/10/2024.
- Title:** Predicción del riesgo de hipoacusia y epilepsia mediante técnicas de neuroimagen e inteligencia artificial en los niños con citomegalovirus congénito (estudio ARTICO).
Principal investigator: Blázquez Gamero, Daniel.
Project No.: PI22/01540.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2023.
End date: 31/12/2025.
- Title:** Team-coach grant agreement project 101079939.
Principal investigator: Rojo Conejo, Pablo.
Project No.: Grant agreement No. 101079939.
Funding body: Commission of the European Communities.
Start date: 01/01/2023.
End date: 31/12/2025.
- Title:** Verdi SARS-COV2 variants evaluation in pregnancy and paediatrics cohorts.
Principal investigator: Rojo Conejo, Pablo.
Project No.: Grant agreement No. 101079939.
Funding body: Commission of the European Communities.
Start date: 01/01/2023.
End date: 31/12/2025.
- Title:** RAAS - Realidad aumentada para aplicaciones sectoriales.
Principal investigator: Rojo Conejo, Pablo.
Funding body: Nokia Spain, S.A.
Start date: 15/04/2020.
End date: 14/04/2023.
- Title:** Novel strategies to obtain long-term viral remission in early treated HIV infected children - EPIICAL 2020-2024.
Principal investigator: Rojo Conejo, Pablo.
Funding body: Fondazione Penta Ets.
Start date: 01/09/2020.
End date: 28/02/2022; extended to 31/08/2024.

PUBLICATIONS*

Type of Document	No. of document	Σ IF (JCR 2022)
Articles	28	285.5
Reviews	1	2.6
Editorials	2	8.1
Total	31	296.2
Letters	1	82.9
Total	32	379.1

Articles

- Aguilera Alonso, D; Escosa García, L; Epalza, C; Bravo Llano, B; Olteanu, FC; Cendejas Bueno, E; Orellana, MA et al. Antibiotic resistance in bloodstream isolates from high-complexity paediatric units in Madrid, Spain: 2013-2021. J. Hosp. Infect. 2023. 139. p. 33-43. Article.
- Berzosa, A; Guillen, S; Epalza, C; Escosa, L; Navarro, ML; Prieto, LM; Sainz, T et al. Immunogenicity of the Conjugate Meningococcal ACWY-TT Vaccine in Children and Adolescents Living with HIV. Microorganisms. 2023. 12. (1): 30. Article.
- Calzada Hernández, J; Anton, J; Martín de Carpi, J; López Montesinos, B; Calvo, I; Donat, E; Núñez, E et al. Dual latent tuberculosis screening with tuberculin skin tests and QuantiFERON-TB assays before TNF-α inhibitor initiation in children in Spain. Eur. J. Pediatr. 2023. 182. (1): p. 307-317. Article.

* Publications: only "Article", "Review", "Editorial Material" and "Letter" have been selected in "Document Type" of ISI Web Of Knowledge. The breakdown of publications includes some not included in the 2022 JCR, which are therefore not taken into account in the final count shown in the table, since they do not have IF.

- Cobo Vázquez, E; Aguilera Alonso, D; Carbsyo, T; Figueroa Ospina, LM; Sanz Santaefemia, F; Baquero Artigao, F; Vázquez Ordoñez, C et al. Epidemiology and clinical features of Streptococcus pyogenes bloodstream infections in children in Madrid, Spain. *Eur. J. Pediatr.* 2023. 182. (7): p. 3057-3062. Article.
- Colom, JC; Manzanares, A; Gómez, AA; Escribano, IS; Esquivel, E; Pérez Rivilla, A; Moral Pumarega, MT et al. Clinical outcomes and antibody transfer in a cohort of infants with in utero or perinatal exposure to SARS-CoV-2 (Coronascope Study). *Eur. J. Pediatr.* 2023. 182. (10): p. 4647-4654. Article.
- Compagnucci, A; Chan, MK; Saïdi, Y; Cressey, TR; Bamford, A; Riault, Y; Coelho, A et al. Nucleoside/nucleotide reverse transcriptase inhibitor sparing regimen with once daily integrase inhibitor plus boosted darunavir is non-inferior to standard of care in virologically-suppressed children and adolescents living with HIV-Week 48 results of the randomised SMILE Penta-17-ANRS 152 clinical trial. *EClinicalMedicine.* 2023. 60. 102025. Article.
- Das, R; Blázquez Gamero, D; Bernstein, D; Gantt, S; Bautista, O; Beck, K; Conlon, A et al. Safety, efficacy, and immunogenicity of a replication-defective human cytomegalovirus vaccine, V160, in cytomegalovirus-seronegative women: a double-blind, randomised, placebo-controlled, phase 2b trial. *Lancet Infect. Dis.* 2023. 23. (12): p. 1383-1394. Article.
- Domínguez Rodríguez, S; Liz López, H; Panizo Lledot, A; Ballesteros, A; Dagan, R; Greenberg, D; Gutiérrez, L et al. Testing the performance, adequacy, and applicability of an artificial intelligence model for pediatric pneumonia diagnosis. *Comput. Meth. Programs Biomed.* 2023. 242. 107765. Article.
- Francisco, L; Cruz Cañete, M; Pérez, C; Couceiro, J; Otheo, E; Launes, C; Rodrigo, C et al. Nirsevimab for the prevention of respiratory syncytial virus disease in children: Statement of the Spanish Society of Paediatric Infectious Disease (SEIP). *An. Pediatr.* 2023. 99. (4): p. 257-263. Article.
- Garulo, DC; Núñez Cuadros, E; Lovillo, M; Calzada Hernández, J; Martín, S; Silveira, L; Cruz, MJ et al. Position statement on infection screening, prophylaxis, and vaccination in pediatric patients with rheumatic diseases and immunosuppressive therapies, part 2: infection prophylaxis. *Eur. J. Pediatr.* 2023. 182. (9): p. 4271-4284. Article.
- Gaschignard, J; Koehl, B; Rees, DC; Rincón López, E; Vanderfaillie, A; Pascual, A; Allali, S et al. Invasive Bacterial Infections in Children With Sickle Cell Disease: 2014-2019. *Pediatrics.* 2023. 152. (4): e2022061061. Article.
- Huguet, B; Lasheras, M; Fernandez, MF; Rivilla, AP; Gomez Grande, A; Tato, LP; Fernandez Cooke, E. Prolonged Fever in a Child With Congenital Heart Disease and a Prosthetic Valve. *Pediatr. Infect. Dis. J.* 2023. 42. (4): p. 350-352. Article.
- Jacobs, TG; Mumbiro, V; Cassia, U; Zimba, K; Nalwanga, D; Ballesteros, A; Domínguez Rodríguez, S et al. Twice-Daily Dosing of Dolutegravir in Infants on Rifampicin Treatment: A Pharmacokinetic Substudy of the EMPIRICAL Trial. *Clin. Infect. Dis.* 2023. Article.
- Jacobs, TG; Mumbiro, V; Chitsamatanga, M; Namuzi, N; Passanduca, A; Dominguez Rodriguez, S; Tagarro, A et al. Brief Report: Suboptimal Lopinavir Exposure in Infants on Rifampicin Treatment Receiving Double-dosed or Semisuperboosted Lopinavir/Ritonavir: Time for a Change. *JAIDS.* 2023. 93. (1): p. 42-46. Article.
- López Medrano, F; Alfayate, S; Carratalà, J; Chamorro Camazón, J; Cordero, E; Cruz Cañete, M; Fernández Prada, M et al. Executive summary-- Diagnosis, treatment and prophylaxis of influenza virus infection-- Consensus statement of the Spanish Society of Infectious Diseases and Clinical Microbiology (SEIMC), the Spanish Society of Pediatric Infectious Diseases (SEIP), the Spanish Association of Vaccinology (AEV), the Spanish Society of Family and Community Medicine (SEMFYC) and the Spanish Society of Preventive Medicine, Public Health and Health Management (SEMPSPGS). *Aten. Prim.* 2023. 55. (6): 102629. Article.
- López Medrano, F; Alfayate, S; Carratalà, J; Chamorro Camazón, J; Cordero, E; Cruz Cañete, M; Fernández Prada, M et al. Executive summary. Diagnosis, treatment and prophylaxis of influenza virus infection. Consensus statement of the Spanish Society of Infectious Diseases and Clinical Microbiology (SEIMC), the Spanish Society of Pediatric Infectious Diseases (SEIP), the Spanish Association of Vaccinology (AEV), the Spanish Society of Family and Community Medicine (SEMFYC) and the Spanish Society of Preventive Medicine, Public Health and Health Management (SEMPSPGS). *Enferm. Infect. Microbiol. Clin.* 2023. 41. (2): p. 111-122. Article.
- López Ramos, MG; Vinent, J; Aarnoutse, R; Colbers, A; Velasco Arnaiz, E; Martorell, L; Falcón Neyra, L et al. 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.
- Manzanares, A; Prieto Tato, LM; Escosa Garcia, L; Navarro, M; Guillen, S; Penin, M; Hernanz Lobo, A et al. Increased risk of group B streptococcal sepsis and meningitis in HIV-exposed uninfected infants in a high-income country. *Eur. J. Pediatr.* 2023. 182. (2): p. 575-579. Article.
- Morfopoulou, S; Buddle, S; Montaguth, OET; Atkinson, L; Guerra Assunção, JA; Chiozzi, RZ; Storey, N et al. Genomic investigations of unexplained acute hepatitis in children. *Nature.* 2023. 617. (7961): p. 564-564. Article.
- Nguyen, AN; Plotkin, AL; Odumade, OA; De Armas, L; Pahwa, S; Morrochi, E; Cotugno, N et al. Effective early antiretroviral therapy in perinatal-HIV infection reduces subsequent plasma inflammatory profile. *Pediatr. Res.* 2023. 94. (5): p. 1667-1674. Article.
- Petrunin, Y; Payne, H; Blázquez Gamero, D; Buxmann, H; Drysdale, SB; Gkentzi, D; Papaevangelou, V et al. Discrepancies in Management of Congenital Cytomegalovirus in Preterm Infants: An International Survey. *Pediatr. Infect. Dis. J.* 2023. 42. (9): p. 801-803. Article.
- Soriano Ramos, M; Esquivel De la Fuente, E; Vicent, EA; de la Calle, M; Baquero Artigao, F; Domínguez Rodríguez, S; Cabanes, M et al. The role of the T-cell mediated immune response to Cytomegalovirus infection in intrauterine transmission. *PLoS One.* 2023. 18. (2): e0281341. Article.

- Sperotto, F; Gutiérrez Sacristán, A; Makwana, S; Li, XD; Rofeberg, VN; Cai, TX; Bourgeois, FT et al. Clinical phenotypes and outcomes in children with multisystem inflammatory syndrome across SARS-CoV-2 variant eras: a multinational study from the 4CE consortium. *EClinicalMedicine.* 2023. 64. 102212. Article.
- Tagarro, A; Domínguez Rodríguez, S; Mesa, JM; Epalza, C; Grasa, C; Iglesias Bouzas, MI; Fernández Cooke, E et al. Treatments for multi-system inflammatory syndrome in children - discharge, fever, and second-line therapies. *Eur. J. Pediatr.* 2023. 182. (1): p. 461-466. Article.
- Tarancon Diez, L; Péraire, J; de Ory, SJ; Guirro, M; Escosa, L; Tato, LMP; Antón, MP et al. 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): p. 143-151. Article.
- Turkova, A; White, E; Kekitiinwa, AR; Mumbiro, V; Kaudha, E; Liberty, A; Ahimbisibwe, GM et al. Neuropsychiatric manifestations and sleep disturbances with dolutegravir-based antiretroviral therapy versus standard of care in children and adolescents: a secondary analysis of the ODYSSEY trial. *Lancet Child. Adolesc. Health.* 2023. 7. (10): p. 718-727. Article.
- Villaverde, S; Carbonell Sahuquillo, S; López Fernández, E; Belda Hofheinz, S; Ramos Casado, V; García Torres, E; Montañés, E et al. MEDIASTINITIS AFTER CONGENITAL HEART SURGERY: EPIDEMIOLOGY, CLINICAL FEATURES AND OUTCOMES. *Pediatr. Infect. Dis. J.* 2023. 42. (7): p. 250-253. Article.
- Villaverde, S; Caro, JM; Rodríguez, SD; Orellanad, MA; Rojo, P; Epalza, C; Blázquez Gamero, D. PACTA-Ped: Antimicrobial stewardship programme in a tertiary care hospital in Spain. *An. Pediatr.* 2023. 99. (5): p. 312-320. Article.

Reviews

- Salomè, S; Corrado, FR; Mazzarelli, LL; Maruotti, GM; Capasso, L; Blázquez Gamero, D; Raimondi, F. Congenital cytomegalovirus infection: the state of the art and future perspectives. *Front. Pediatr.* 2023. 11. 1276912. Review.

Editorials

- Frigati, LJ; Gibb, D; Harwell, J; Kose, J; Musiime, V; Rabie, H; Rangaraj, A et al. The hard part we often forget: providing care to children and adolescents with advanced HIV disease. *J. Int. AIDS Soc.* 2023. 26. (3): e26041. Editorial Material.

Letters

- Honerlaw, JP; Maripuri, M; Beaulieu Jones, BR; Baig, HS; Panickan, VA; Liao, KP; Muralidhar, S et al. Potential pitfalls in the use of real-world data for studying long COVID. *Nat. Med.* 2023. 29. (5): p. 1040-1043. Letter.

END MASTER INVESTIGATIONS DIRECTED ON THE GROUP

- **Student:** Andrés Arias-Sánchez.
Title: Caracterización de neonatos con exposición al VIH neonatal, experiencia multicéntrica colombiana.
Director: Luis M. Prieto.
Master: Máster sobre infección VIH - ESTHER.
University: Universidad Rey Juan Carlos.
- **Student:** Mariana Stanchieri.
Title: Tuberculosis en pacientes pediátricos con infección por VIH.
Director: Luis M. Prieto.

- Master:** Máster sobre infección VIH - ESTHER.
University: Universidad Rey Juan Carlos.
- **Student:** María Fernanda Ramírez.
Title: Caracterización sociodemográfica, clínica y georreferenciación de paciente con infección por VIH en una ciudad de Colombia desde el año 2017 al 2023.
Director: Luis M. Prieto.
Master: Máster sobre infección VIH - ESTHER.
University: Universidad Rey Juan Carlos.

END GRADUATED INVESTIGATIONS DIRECTED ON THE GROUP

- **Student:** Paula Mato Amado.
Title: Transmisión vertical de VIH y prematuridad según el tiempo de exposición al TAR en la gestación.
Director: Luis M. Prieto.
Degree: Medicina.
University: Universidad Complutense de Madrid.
- **Student:** Raquel Lara Tomé and Noelia Medina Hernández.
Title: Desarrollo neurocognitivo de los niños con infección congénita por CMV.
Director: Daniel Blázquez Gamero.
Degree: Medicina.
University: Universidad Complutense de Madrid.

Translational Research in Leishmaniasis

CENTER: Universidad Complutense de Madrid (UCM).

GROUP LEADER: Alunda Rodríguez, José M.^a (R4).

Carrión Herrero, Francisco Javier - Doctoral researcher (R3).
Cuquerella Ayensa, Montserrat - Doctoral researcher.
Gómez Muñoz, María Teresa - Doctoral researcher (R3).
Martínez Sainz, María del Pilar - Doctoral researcher (R3).

Mateo Barrientos, Marta - Doctoral researcher (R2).
Ordoñez Gutiérrez, Lara - Doctoral researcher (R2).
Torrado Duran, Juan José - Doctoral researcher (R4).

OTHER ACTIVE PROJECTS OF THE RESEARCH GROUP NOT MANAGED BY THE FUNDACIÓN PARA LA INVESTIGACIÓN BIOMÉDICA DEL HOSPITAL 12 DE OCTUBRE (FIBH12O):

- **Title:** Inmunomodulación mediante nanopartículas PLGA cargadas con quimeras peptídicas multiepitópicas para la profilaxis y el tratamiento de la leishmaniosis visceral.
Principal investigator: Fco. Javier Carrión Herrero.
Project No.: PID2019-106487RB-I00.
Funding body: Ministerio de Ciencia e Innovación.
Start date: 06/01/2020.
End date: 31/03/2024.
- **Title:** Resistencia a fármacos en protozoos flagelados de mucosas y alternativas terapéuticas de origen natural (NATURE REPAIRS).
Principal investigator: María Teresa Gómez Muñoz.
Project No.: PID2020-114207RB-I00.
Funding body: Ministerio de Ciencia e Innovación.
Start date: 01/09/2021.
End date: 31/08/2024.

PUBLICATIONS*

Type of Document	No. of document	Σ IF (JCR 2022)
Articles	6	23.9
Reviews	1	3.7
Editorials	1	4.5
Total	8	32.1

Articles

- Arroyo Díaz, JE; Gómez Muñoz, MT; Martínez Díaz, RA; González Coloma A. Adaptación del ensayo colorimétrico del MTT para la evaluación de la actividad frente a Giardia duodenalis. Rev. Arg. Parasitol. 2023. 12 (2). Article.
- Azami Conesa, I; Pérez Moreno, P; Matas Méndez, P; Sansano Maestre, J; González, F; Mateo Barrientos, M; Gómez Muñoz, MT. Occurrence of Leishmania infantum in Wild Mammals Admitted to Recovery Centers in Spain. Pathogens. 2023. 12. (8): 1048. Article.
- Carrero, L; Antequera, D; Alcalde, I; Megias, D; Ordoñez Gutiérrez, L; Gutiérrez, C; Merayo Lloves, J et al. Altered Clock Gene Expression in Female APP/PS1 Mice and Aquaporin-Dependent Amyloid Accumulation in the Retina. Int. J. Mol. Sci. 2023. 24. (21): 15679. Article.
- Matas Méndez, P; Fuentes Corripio, I; Montoya Matute, A; Bailo Barroso, B; Grande Gómez, R; Apruzzese Rubio, A; Ponce Gordo, F et al. Prevalence of Toxoplasma gondii in Endangered Wild Felines (Felis silvestris and Lynx pardinus) in Spain. Animals (Basel). 2023. 13. (15): 2488. Article.
- Mateo, M; Montoya, A; Bailo, B; Köster, PC; Dashti, A; Hernández Castro, C; Saugar, JM et al. Prevalence and public health relevance of enteric parasites in domestic dogs and cats in the region of Madrid (Spain) with an emphasis on Giardia duodenalis and Cryptosporidium sp. Vet Med Sci. 2023. 9. (6): p. 2542-2558. Article.
- Olías Molero, AI; Botías, P; Cuquerella, M; García Cantalejo, J; Barcia, E; Torrado, S; Torrado, JJ et al. Effect of Clindamycin on Intestinal Microbiome and Miltefosine Pharmacology in Hamsters Infected with Leishmania infantum. Antibiotics (Basel). 2023. 12. (2): 362. Article.
- Roussaki, M; Magoulas, GE; Fotopoulou, T; Santarem, N; Barrias, E; Pöhner, I; Luelmo, S et al. Design, synthesis and biological evaluation of antiparasitic dinitroaniline-ether phospholipid hybrids. BIOORG CHEM. 2023. 138. p. 106615-106615. Article.

* Publications: only "Article", "Review", "Editorial Material" and "Letter" have been selected in "Document Type" of ISI Web Of Knowledge. The breakdown of publications includes some not included in the 2022 JCR, which are therefore not taken into account in the final count shown in the table, since they do not have IF.

Reviews

- Robledo, SM; Pérez Silanes, S; Fernández Rubio, C; Poveda, A; Monzote, L; González, VM; Alonso Collado, P et al. Neglected Zoonotic Diseases: Advances in the Development of Cell-Penetrating and Antimicrobial Peptides against Leishmaniosis and Chagas Disease. Pathogens. 2023. 12. (7): 939. Review.

Editorials

- Alunda, JM. Antileishmanial and Antitrypanosomes Drugs for the Current Century. Microorganisms. 2023. 12. (1): 43. Editorial Material.

Translational Research in Malaria

CENTER: Universidad Complutense de Madrid (UCM).

GROUP LEADER: Bautista Santa Cruz, José Manuel (R4).

Abad González, Paloma - Predoctoral researcher (R1).
Diez Martín, Amalia - Doctoral researcher (R3).
Filice, Marco - Doctoral researcher.
González Azcarate, Isabel - Doctoral researcher (R3).
Marciello, Marzia - Doctoral researcher.

Marín García, Patricia - Doctoral researcher (R4).
Pérez Luz, Sara - Doctoral researcher (R3).
Puyet Catalina, Antonio - Doctoral researcher (R4).
Reyes Palomares, Armando - Doctoral researcher.
Sánchez Jaut, Sandra - Predoctoral researcher (R1).

PUBLICATIONS*

Type of Document	No. of document	Σ IF (JCR 2022)
Articles	3	15.508
Total	3	15.508

Articles

- Cabrera Muñoz, A; Sierra Gómez, Y; Covalada Cortés, G; Reytor, ML; González, Y; Bautista, JM; Avilés, FX et al. Isolation and Characterization of NpCl, a New Metalloprotease Inhibitor from the Marine Snail Nerita peloronta with Anti-Plasmodium falciparum Activity. Mar. Drugs. 2023. 21. (2):. 94. Article.
- Helegbe, GK; Wemakor, A; Ameade, EPK; Anabire, NG; Anaba, F; Bautista, JM; Zorn, BG. Co-Occurrence of G6PD Deficiency and SCT among Pregnant Women Exposed to Infectious Diseases. J. Clin. Med. 2023. 12. (15):. 5085. Article.
- Kamali, AN; Bautista, JM; Eisenhut, M; Hamedifar, H. Immune checkpoints and cancer immunotherapies: insights into newly potential receptors and ligands. Ther Adv Vaccines Immunother. 2023. 11. 25151355231192043. Article.
- Sánchez Jaut, S; Pérez Benavente, S; Abad, P; Méndez Cuadro, D; Puyet, A; Díez, A; Galicia Poblet, G et al. Protein Susceptibility to Peroxidation by 4-Hydroxynonenal in Hereditary Hemochromatosis. Int. J. Mol. Sci. 2023. 24. (3):. 2922. Article.

* Publications: only "Article", "Review", "Editorial Material" and "Letter" have been selected in "Document Type" of ISI Web Of Knowledge. The breakdown of publications includes some not included in the 2022 JCR, which are therefore not taken into account in the final count shown in the table, since they do not have IF.

Infectious Pathologies

CENTER: Hospital Universitario 12 de Octubre (HU12O).

GROUP LEADER: Aguado García, José M.ª (R4).

Caso Laviana, José María - Junior clinical researcher.
Fayos Pérez, Marina - Predoctoral researcher (R1).
Fernández Ruiz, Mario - Doctoral researcher (R3).
Lizasoain Hernández, Manuel - Senior Clinical Researcher
López-Medrano Pérez, Francisco - Doctoral researcher (R3).

Redondo Sevillano, Natalia - Doctoral researcher (R2).
Rodríguez Góncer, Isabel - Postdoctoral researcher (R2).
Ruiz Merlo, Tamara - Support nurse.
San Juan Garrido, Rafael - Postdoctoral researcher (R2).
Sequeira Lopes da Silva, José Tiago - Junior clinical researcher.

ACTIVE RESEARCH PROJECTS

Type of funding	Funding body	No. of projects
Competitive	ISCIII	4
No competitive	Various	1
Total		5

- **Title:** Evaluación de una estrategia individualizada de profilaxis frente a citomegalovirus basada en la inmunidad celular específica en receptores de trasplante renal de riesgo intermedio.
Principal investigator: López Medrano, Francisco.
Project No.: PI19/01300.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2020.
End date: 31/12/2022; extended to 30/06/2024.
- **Title:** Clinical impact of innate and adaptive host immune responses on the outcome of Staphylococcus aureus bacteriemia.
Principal investigator: Fernández Ruiz, Mario.
Project No.: PI20/01084.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2021.
End date: 31/12/2023; extended to 30/06/2025.
- **Title:** Eficacia de una consulta enfermera para mejorar el grado de adherencia terapéutica y de conocimiento de medidas de prevención y promoción de la salud en receptores de trasplante renal.
Principal investigator: San Juan Garrido, Rafael.
Project No.: PI22/01062.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2023.
End date: 31/12/2025.
- **Title:** Papel de la inmunidad celular específica frente a citomegalovirus en receptores de trasplante alogénico de progenitores hematopoyéticos tratados con ciclofosfamida posttrasplante.
Principal investigator: Aguado García, José María.
Project No.: PI22/01848.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2023.
End date: 31/12/2025.
- **Title:** Estudio de la cinética y reactividad de los anticuerpos neutralizantes en pacientes recuperados de COVID-19.
Principal investigator: Aguado García, José María.
Funding body: Fundación de Investigación Médica Mutua Madrileña (FMM).
Start date: 16/06/2020.
End date: 15/06/2022; extended to 30/09/2023.

PUBLICATIONS*

Type of Document	No. of document	Σ IF (JCR 2022)
Articles	29	223.4
Reviews	6	28.1
Editorials	3	20.8
Total	38	272.3
Letters	3	71.8
Total	41	344.1

Articles

- Asín, MAPJ; De Castro, M; De Dios, B; Pérez Ayala, A; Lalueza, A; García Reyne, A; Losada, I et al. Enhancing screening adherence for strongyloides infection in latinx inpatients with COVID-19: a local protocol implementation study. *Pathog. Glob. Health.* 2023. Article.
- Balsa, A; Fontecha, PDD; Fernandez, LS; Martín, JV; Martínez, VN; Vazquez, FL; Hernandez, MVH et al. Recommendations by the Spanish Society of Rheumatology on risk management of biological treatment and JAK inhibitors in patients with rheumatoid arthritis. *Reumatol. Clin.* 2023. 19. (10): p. 533-548. Article.
- Bruminhent, J; López Medrano, F; Pogatchnik, BP; Nascimento, E; Namsiripongpun, W; Yingchoncharoen, T; Ngodnganthaweesuk, M et al. Lung abscess and empyema in a heart transplant recipient from Thailand. *Transpl. Infect. Dis.* 2023. 25. (1): e13984. Article.
- Caravaca Fontan, F; Polanco, N; Villacorta, B; Buxeda, A; Coca, A; Avila, A; Martínez Gallardo, R et al. Recurrence of immune complex and complement-mediated membranoproliferative glomerulonephritis in kidney transplantation. *Nephrol Dial Transplant.* 2023. 38. (1): p. 222-235. Article.
- Caso, JM; Fernández Ruiz, M; López Medrano, F; Caro Teller, JM; Lizasoain, M; San Juan, R; Pérez, MF et al. Nirmatrelvir/ritonavir for the treatment of immunocompromised adult patients with early-stage symptomatic COVID-19: A real-life experience. *J. Med. Virol.* 2023. 95. (9): e29082. Article.
- Corbella, L; Fernández Ruiz, M; Ruiz Ruigómez, M; Rodríguez Goncer, I; Silva, JT; Hernández Jiménez, P; López Medrano, F et al. Production of OXA-48 carbapenemase acts as an independent risk factor for poor outcome in Klebsiella pneumoniae infection. *Eur. J. Clin. Microbiol. Infect. Dis.* 2023. 42. (12): p. 1485-1497. Article.
- de Dios García, B; Maestro, G; Díaz Pedroche, C; Parra, W; Campos, O; Orellana, MA; Caro, JM et al. Bacteremia in Patients with Solid Organ Cancer: Insights into Epidemiology and Antibiotic Consumption. *Cancers.* 2023. 15. (23): 5561. Article.
- de Dios, B; Pérez Jacoiste, A; Lalueza, A; Maestro, G; García Reyne, A; Lizasoain, M; Lumbreras, C. Disparities between Latinx migrants and Spanish natives in COVID-19 outcome in Madrid. *Pathog. Glob. Health.* 2023. p. 1-6. Article.
- de Mendoza, Carmen; Rando, Ariadna; Miro, Elisenda; Pena, Maria Jose; Rodriguez Avial, Iciar; Ortega, Diego; Gonzalez Praetorius, Alejandro et al. Adult T-cell leukemia/lymphoma in HTLV-1 non-endemic regions. *J Clin Virol.* 2023. 167. 105578. Article.
- Fernandez Ruiz, M; Almendro Vazquez, P; Redondo, N; Ruiz Merlo, T; Abella, S; Somoza, A; Lopez Medrano, F et al. Cell-mediated and Neutralizing Antibody Responses to the SARS-CoV-2 Omicron BA.4/BA.5-adapted Bivalent Vaccine Booster in Kidney and Liver Transplant Recipients. *Transplant. Direct.* 2023. 9. (10): e1536. Article.
- Fernández Ruiz, M; Bodro, M; Gutiérrez Martín, I; Rodríguez Alvarez, R; Ruiz Ruigómez, M; Sabé, N; López Viñau, T et al. Isavuconazole for the Treatment of Invasive Mold Disease in Solid Organ Transplant Recipients: A Multicenter Study on Efficacy and Safety in Real-life Clinical Practice. *Transplantation.* 2023. 107. (3): p. 762-773. Article.
- Fernández Ruiz, M; García Ríos, E; Redondo, N; Rodríguez Goncer, I; Ruiz Merlo, T; Parra, P; Sardonis, V et al. Dynamics and Clinical Significance of Cytomegalovirus-Specific Neutralizing Antibodies in Kidney Transplant Recipients Treated with T-Cell-Depleting Agents. *J. Infect. Dis.* 2023. Article.
- Fernández Ruiz, M; Moreno, BS; Almeda, JS; Rodríguez Goncer, I; Ruiz Merlo, T; Redondo, N; López Medrano, F et al. Previous use of statins does not improve the outcome of bloodstream infection after kidney transplantation. *Transpl. Infect. Dis.* 2023. 25. (5). Article.
- Fernández Ruiz, M; Redondo, N; Parra, P; Ruiz Merlo, T; Rodríguez Goncer, I; Polanco, N; González, E et al. Comparison of intracellular cytokine staining versus an ELISA-based assay to assess CMV-specific cell-mediated immunity in high-risk kidney transplant recipients. *J. Med. Virol.* 2023. 95. (4). Article.
- Forqué, L; Fernández Ruiz, M; Albert, E; Giménez, E; Monzó, C; Chaves, J; Redondo, N et al. Dynamics of Human Anelloviruses in Plasma and Clinical Outcomes Following Kidney Transplantation. *Transplantation.* 2023. 107. (2): p. 511-520. Article.
- Gil Mosquera, M; Fernández Ruiz, M. Reply. *Med Clin (Engl Ed).* 2023. 160. (9): p. 417-418. Article.

- Gómez Rojas, S; Segura, GP; Ollé, J; Gómez Tarragona, GC; Medina, JG; Aguado, JM; Guerrero, EV et al. A machine learning tool for the diagnosis of SARS-CoV-2 infection from hemogram parameters. *J. Cell. Mol. Med.* 2023. 27. (22): p. 3423-3430. Article.
- Grillo, S; Pujol, M; Miró, JM; López Contreras, J; Euba, G; Gasch, O; Boix Palop, L et al. Cloxacillin plus fosfomycin versus cloxacillin alone for methicillin-susceptible Staphylococcus aureus bacteremia: a randomized trial. *Nat. Med.* 2023. 29. (10): p. 2518-2518. Article.
- Herrero Martínez, JM; Trigo, E; Navarro, M; García Alcázar, D; Carrillo, I; Fernández López, T; Calderón Moreno, M et al. 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): p. 912-922. Article.
- Jiménez Romero, C; Marcacuzco, A; Caso, O; Lechuga, I; Manrique, A; García Sesma, A; Calvo, J et al. Pyogenic liver abscesses in liver transplant recipients versus non-transplant population. Outcome and risk factors of patient survival. *Clin. Transplant.* 2023. 37. (6). Article.
- Justo, I; Vega, V; Marcacuzco, A; Caso, O; García Conde, M; Manrique, A; Calvo, J et al. Risk factors indicating the need for surgical therapy in patients with pyogenic liver abscesses. *Langenbecks Arch. Surg.* 2023. 408. (1): 97. Article.
- López Ayllón, BD; de Lucas Rius, A; Mendoza García, L; García, T; Fernández Rodríguez, R; Suárez Cárdenas, JM; Santos, FM et al. SARS-CoV-2 accessory proteins involvement in inflammatory and profibrotic processes through IL11 signaling. *Front. Immunol.* 2023. 14. 1220306. Article.
- López Medrano, F; Alfayate, S; Carratala, J; Chamorro Camazón, J; Cordero, E; Cruz Cañete, M; Fernández Prada, M et al. Executive summary - Diagnosis, treatment and prophylaxis of influenza virus infection - Consensus statement of the Spanish Society of Infectious Diseases and Clinical Microbiology (SEIMC), the Spanish Society of Pediatric Infectious Diseases (SEIP), the Spanish Association of Vaccinology (AEV), the Spanish Society of Family and Community Medicine (SEMFYC) and the Spanish Society of Preventive Medicine, Public Health and Health Management (SEMPSPGS). *An. Pediatr.* 2023. 98. (3): p. 213-227. Article.
- López Medrano, F; Alfayate, S; Carratalà, J; Chamorro Camazón, J; Cordero, E; Cruz Cañete, M; Fernández Prada, M et al. Executive summary-- Diagnosis, treatment and prophylaxis of influenza virus infection-- Consensus statement of the Spanish Society of Infectious Diseases and Clinical Microbiology (SEIMC), the Spanish Society of Pediatric Infectious Diseases (SEIP), the Spanish Association of Vaccinology (AEV), the Spanish Society of Family and Community Medicine (SEMFYC) and the Spanish Society of Preventive Medicine, Public Health and Health Management (SEMPSPGS). *Aten. Prim.* 2023. 55. (6): 102629. Article.
- López Medrano, F; Alfayate, S; Carratala, J; Chamorro Camazón, J; Cordero, E; Cruz Cañete, M; Fernández Prada, M et al. Executive summary. Diagnosis, treatment and prophylaxis of influenza virus infection. Consensus statement of the Spanish Society of Infectious Diseases and Clinical Microbiology (SEIMC), the Spanish Society of Pediatric Infectious Diseases (SEIP), the Spanish Association of Vaccinology (AEV), the Spanish Society of Family and Community Medicine (SEMFYC) and the Spanish Society of Preventive Medicine, Public Health and Health Management (SEMPSPGS). *Enferm. Infec. Microbiol. Clin.* 2023. 41. (2): p. 111-122. Article.
- López Medrano, F; Ruiz Merlo, T; Rivas, G; Parra, P; Fernández Ruiz, M; Aguado, JM. Proof of concept of a new device for the insertion of peripheral venous catheters in aseptic conditions. *Proc. Inst. Mech. Eng. Part H-J. Eng. Med.* 2023. 237. (5): p. 552-556. Article.
- Montiel Villalonga, Patricia; Martínez Alpuente, I; Fernández Ruiz, M; Len, O; Bodro, M; Los Arcos, I; Moya, J et al. Transplantation of organs from SARS-CoV-2-positive donors: Preliminary experience from Spain. *Transpl. Infect. Dis.* 2023. 25. (1): p. 14008-14008. Article.
- Paredes Ruiz, D; López, F; Núñez Sobrino, JA; Gómez Martín, C; Díaz Pedroche, C; Lizasoain, M. Cytomegalovirus reactivation in patients with immune-mediated gastritis. *Enferm. Infec. Microbiol. Clin.* 2023. 41. (5): p. 298-300. Article.
- Peçanha Pietrobon, PM; Truda, VSS; Fernández Ruiz, M; Gutiérrez, MG; Sukiennik, TCT; Santos, DW; Valerio, M et al. Natural history and prognostic factors of candidemia in kidney transplant recipients: A retrospective, multinational study. *Mycoses.* 2023. 67. (1). Article.
- Pérez Nadales, E; Fernández Ruiz, M; Natera, AM; Gutiérrez, B; Mularoni, A; Russell, G; Pierrotti, LC et al. Efficacy of ceftazidime-avibactam in solid organ transplant recipients with bloodstream infections caused by carbapenemase-producing Klebsiella pneumoniae. *Am. J. Transplant.* 2023. 23. (7): p. 1022-1034. Article.
- Pérez Nadales, E; Fernández Ruiz, M; Natera, AM; Gutiérrez, B; Mularoni, A; Russell, G; Pierrotti, LC et al. Efficacy of ceftazidime-avibactam in solid organ transplant recipients with bloodstream infections caused by carbapenemase-producing Klebsiella pneumoniae. *Am. J. Transplant.* 2023. 23. (7): p. 1022-1034. Article.
- San Juan, R; Origen, J; Campion, K; Fernández Ruiz, M; Diaz Pollan, B; Callejas Díaz, A; Candela, G et al. Evaluation of the effectiveness and safety of oral vancomycin versus placebo in the prevention of recurrence of Clostridioides difficile infection in patients under systemic antibiotic therapy: a phase III, randomised, double-blind clinical trial. *BMJ OPEN.* 2023. 13. (9): e072121. Article.
- San Juan, R; Sanz Prieto, A; Contreras Mora, J; Fojo Suárez, I; Caso Laviana, JM; Fernández Ruiz, M; López Medrano, F et al. Comprehensive analysis of current epidemiology, clinical features and prognostic factors of puerperal endometritis: A retrospective cohort analysis. *Eur. J. Obstet. Gynecol. Reprod. Biol.-X.* 2023. 18. 100199. Article.
- Silva, JT; Montoro, J; Asin, MAPJ; Fernandez Ruiz, M; Polanco, N; Gonzalez, E; Caro Teller, JM et al. A joint program of antimicrobial stewardship and hospital-acquired infection control to reduce healthcare-associated infections after kidney transplantation: The Hipomenes study. *Am. J. Transplant.* 2023. 23. (12): p. 1949-1960. Article.

* Publications: only "Article", "Review", "Editorial Material" and "Letter" have been selected in "Document Type" of ISI Web Of Knowledge. The breakdown of publications includes some not included in the 2022 JCR, which are therefore not taken into account in the final count shown in the table, since they do not have IF.

Reviews

- Azanza, JR; Mensa, J; Barberán, J; Vázquez, L; de Oteyza, JP; Kwon, M; Yáñez, L et al. Recommendations on the use of azole antifungals in hematology-oncology patients. *Rev. Esp. Quim.* 2023. 36. (3): p. 236-258. Review.
- Bestard, O; Kaminski, H; Couzi, L; Fernández Ruiz, M; Manuel, O. Cytomegalovirus Cell-Mediated Immunity: Ready for Routine Use? *Transpl. Int.* 2023. 36. 11963. Review.
- Candel, FJ; Barreiro, P; Salavert, M; Cabello, A; Fernández Ruiz, M; Pérez Segura, P; San Román, J et al. Expert Consensus: Main Risk Factors for Poor Prognosis in COVID-19 and the Implications for Targeted Measures against SARS-CoV-2. *Viruses-Basel.* 2023. 15. (7): 1449. Review.
- de Mendoza, C; Carrizo, P; Sauleda, S; Richart, A; Rando, A; Miró, E; Benito, R et al. The slowdown of new infections by human retroviruses has reached a plateau in Spain. *J. Med. Virol.* 2023. 95. (5): e28779. Review.
- Melenotte, C; Aimananda, V; Slavin, M; Aguado, JM; Armstrong James, D; Chen, YC; Husain, S et al. Invasive aspergillosis in liver transplant recipients. *Transpl. Infect. Dis.* 2023. 25. (3): e14049. Review.
- Silva, JT; Husain, S; Aguado, JM. Isavuconazole for Treating Invasive Mould Disease in Solid Organ Transplant Recipients. *Transpl. Int.* 2023. 36. 11845. Review.

Editorials

- Fernández Ruiz, M; Aguado, JM. Which trial do we need? Elective early surgical treatment of left-sided infective endocarditis. *Clin. Microbiol. Infect.* 2023. 29. (9): p. 1103-1106.: Editorial Material.
- Herrera, S; Aguado, JM; Candel, FJ; Cordero, E; Domínguez Gil, B; Fernández Ruiz, M; Los Arcos, I et al. Executive summary of the consensus statement of the group for the study of infection in transplantation and other immunocompromised host (GESITRA-IC) of the Spanish Society of Infectious Diseases and Clinical Microbiology (SEIMC) on the treatment of SARS-CoV-2 infection in solid organ transplant recipients. *Transplant. Rev.* 2023. 37. (4): 100788. Editorial Material.
- San Juan, R; Aguado, JM. Mortality due to carbapenemase-producing GNB in transplantation: Are risk scores useful? *Transpl. Infect. Dis.* 2023. 25. (2): e14035. Editorial Material.

Letters

- Daly, M; Iwasaki, A; Karjalainen, J; Mehtonen, J; Andrews, SJ; Pirinen, M; Stevens, C et al. A second update on mapping the human genetic architecture of COVID-19. *Nature.* 2023. 621. (7977): p. 7-7. Letter.
- Fernández Ruiz, M; Parra, P; Ruiz Merlo, T; Redondo, N; Rodríguez Goncer, I; Andres, A; Aguado, JM. Cytokine and Chemokine Secretome and Risk of CMV Infection Following Discontinuation of Valganciclovir Prophylaxis. *Transpl. Int.* 2023. 36. p. 10979-10979. Letter.
- Gil Mosquera, M; Fernández Ruiz, M. Reply. *Med. Clin.* 2023. 160. (9): p. 417-418. Letter.
- Mosquera, MG; Fernández Ruiz, M. Reply. *Med. Clin.* 2023. 160. (9): p. 417-418. Letter.

END MASTER INVESTIGATIONS DIRECTED ON THE GROUP

- **Student:** Beatriz García Jiménez.
Title: Activación linfocitaria e inmunosenescencia en la bacteriemia estafilocócica: aplicación del inmunofenotipado a un problema de Salud Pública.
Director: Mario Fernández Ruiz.
Master: Microbiología Aplicada a la Salud Pública e Investigación en Enfermedades Infecciosas.
University: Universidad de Alcalá de Henares.
- **Student:** Ángela López García.
Title: Perfil de microRNA como biomarcador de infección tardía por CMV en el paciente trasplantado renal.
Director: Natalia Redondo Sevillano.
Master: Microbiología (Itinerario Biosanitario).
University: Universidad Autónoma de Madrid.

END GRADUATED INVESTIGATIONS DIRECTED ON THE GROUP

- **Student:** Javier Santiago Almeda and Beatriz Sánchez Moreno
Title: Factores pronósticos de bacteriemia en el receptor de trasplante renal.
Director: Mario Fernández Ruiz.
Master: Medicina.
University: Universidad Complutense de Madrid.
- **Student:** Javier Iglesias Varea.
Title: Análisis del impacto de un comité monográfico en el manejo y en la evolución de los pacientes con endocarditis infecciosa diagnosticados en un hospital de tercer nivel.
Director: Mario Fernández Ruiz, Francisco López Medrano and Laura Domínguez Pérez.
Master: Medicina.
University: Universidad Complutense de Madrid.
- **Student:** Andrea Manso Valverde.
Title: Búsqueda de biomarcadores predictores de infección en el paciente inmunocomprometido.
Director: Natalia Redondo Sevillano.
Master: Biología (Mención en Biología Sanitaria).
University: Universidad Autónoma de Madrid.

PATENTS

- **Title:** Applicator for a catheter and method of use.
Number: US17842084.
Type: Entry into national phases of the PCT/ES2016/070403 - UNITED STATES.
Inventor: Francisco López Medrano.
Titular: Fundación i+12 (100 %).
EFFNN Date: 16/06/2022.
Priority data: P201931127 (18/12/2019).
Status: In process.
- **Title:** Aplicador para catéter y método de uso.
Number: P201931127.
Type: SPANISH patent.
Inventors: Francisco López Medrano.
Owners: Fundación i+12 (100 %).
Date of application: 18/12/2019.
Status: Granted (14/10/2022).
- **Title:** Applicator for a catheter and method of use.
Number: EP20903291.
Type: Entry into national phases of the PCT/ES2016/070403 - EUROPEAN Patent.
Inventor: Francisco López Medrano.
Titular: Fundación i+12 (100 %).
EFFNN Date: 29/06/2022.
Priority data: P201931127 (18/12/2019).
Status: In process.

Virology and HIV/AIDS

CENTER: Hospital Universitario 12 de Octubre (HU12O).

GROUP LEADER: Rafael Delgado Vázquez.

Aranguren Rivas, Paula - Researcher.
Bermejo Plaza, Laura - Graduate researcher.
Bisbal Pardo, Otilia - Postdoctoral researcher (R2).
De Lagarde Sebastián, María - Postdoctoral researcher (R2).
Domínguez Domínguez, Lourdes - Predoctoral researcher (R1).
Folgueira López, María Dolores - Doctoral researcher (R3).
Gutiérrez Cueto, Francisca - Support technician.
Labiod Becerro, Nuria - Postdoctoral researcher (R2).
Lasala Sánchez, Fátima - Postdoctoral researcher (R2).
Luczkowiak, Joanna Aleksandra - Doctoral researcher (R3).

Navarro Soler, Roser - Junior clinical researcher.
Pérez Rivilla, José Alfredo - Junior clinical researcher.
Pinto Martínez, Adriana - Junior clinical researcher.
Pulido Ortega, Federico - Doctoral researcher (R3).
Rial Crestelo, David - Postdoctoral researcher (R2).
Rubio García, Rafael - Senior Clinical Researcher
Santacreu Guerrero, Mireia - Support nurse.
Taravillo Cañete, Irene - Predoctoral researcher (R1).
Zurita Salas, María del Sagrario - Support technician.

ACTIVE RESEARCH PROJECTS

Type of funding	Funding body	No. of projects
Competitive	Commission of the European Communities	2
Competitive	Comunidad de Madrid	1
Competitive	Consejo Superior de Investigaciones Científicas (CSIC)	1
Competitive	ISCIII	4
No competitive	Various	1
Total		9

- **Title:** Citomegalovirus congénito: aspectos diagnósticos y pronósticos.
Principal investigator: Folgueira López, M.ª Dolores.
Project No.: PI18/00740.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2019.
End date: 31/12/2021; extended to 30/06/2023.
- **Title:** Relevancia biológica de la interacción del virus ébola con el receptor DC-SIGN.
Principal investigator: Delgado Vázquez, Rafael.
Project No.: PI18/01007.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2019.
End date: 31/12/2021; extended to 30/06/2023.
- **Title:** HR18-00469 - Locking cells against ebola virus.
Principal investigator: Delgado Vázquez, Rafael.
Project No.: HR18-00469.
Funding body: Consejo Superior de Investigaciones Científicas (CSIC).
Start date: 15/09/2019.
End date: 15/09/2022; extended to 31/01/2024.
- **Title:** EPIC-CROWN-2 equine polyclonal antibodies immunotherapy against COVID-19/SARS-CoV2-VOC.
Principal investigator: Delgado Vázquez, Rafael.
Project No.: EPIC-CROWN-2. Grant agreement: 101046084.
Funding body: Commission of the European Communities.
Start date: 01/06/2021.
End date: 31/05/2023.
- **Title:** Estudio longitudinal prospectivo de inmunidad humoral y celular frente a variantes de SARS-CoV-2 en convalecientes y vacunados de COVID-19.
Principal investigator: Delgado Vázquez, Rafael.
Project No.: PI21/00989.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2022.
End date: 31/12/2024.
- **Title:** Factors determining the viability of SARS-CoV-2 in respiratory samples.
Principal investigator: Folgueira López, María Dolores.
Project No.: PI21/01892.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2022.
End date: 31/12/2024.
- **Title:** P2022/BMD-7274 - Reprogramación de macrófagos como estrategia terapéutica frente a COVID-19 severo.
Principal investigator: Delgado Vázquez, Rafael.
Project No.: P2022/BMD-7274.
Funding body: Comunidad de Madrid.
Start date: 01/01/2023.
End date: 31/12/2026.

- **Title:** Enhanced manufacturing of broadly potent equine polyclonal fab with a rationale immunization strategy against coronaviruses.
Principal investigator: Delgado Vázquez, Rafael.
Project No.: 101137157.
Funding body: Commission of the European Communities.
Start date: 01/12/2023.
End date: 30/11/2027.
- **Title:** Eficacia virológica de dolutegravir/lamivudina en personas

virológicamente suprimidas con resistencia confirmada o sospechada a la lamivudina. "Estudio Volver".
Principal investigator: Delgado Vázquez, Rafael.
Funding body: Fundación SEIMC-GESIDA.
Start date: 29/09/2021.
End date: 28/09/2024.

OTHER ACTIVE PROJECTS OF THE RESEARCH GROUP NOT MANAGED BY THE FUNDACIÓN PARA LA INVESTIGACIÓN BIOMÉDICA DEL HOSPITAL 12 DE OCTUBRE (FIBH12O):

- **Title:** Virologic Outcomes of Lamivudine/Dolutegravir in Virologically suppressed subjects with Expected or confirmed Resistance to Lamivudine (VOLVER Study).
Principal investigator: Federico Pulido and José Ramón Arribas.
Project No.: EUDRACT 2021-000290-84.
Funding body: ViV Healthcare UK.
Start date: 27/04/2021.
End date: 27/04/2025.

EUROPEAN PROJECT APPLICATIONS 2023

- **Call Identifier:** HORIZON-HLTH-2023-DISEASE-03-04.
Project title: Enhanced manufacturing of broadly potent equine polyclonal Fab with a Rational Immunization strategy against Coronaviruses.
Acronym: e-FabRIC.
Coordinator: No.
Coordinating Centre: FABENTECH (France).
Researcher coordinating the project: Anaïs Belledant.
IG researcher participating in the project: Rafael Delgado Vázquez.
Granted: Yes.

PUBLICATIONS*

Type of Document	No. of document	Σ IF (JCR 2022)
Articles	34	308.8
Reviews	4	15.5
Total	38	324.3
Letters	2	12.7
Total	40	337

Articles

- Abdelnabi, R; Pérez, P; Astorgano, D; Albericio, G; Kerstens, W; Thibaut, HJ; Coelmont, L et al. Optimized vaccine candidate MVA-S(3P) fully protects against SARS-CoV-2 infection in hamsters. *Front. Immunol.* 2023. 14. 1163159. Article.
- Aguilera, A; Fuentes, A; Cea, M; Carracedo, R; Viñuela, L; Ordóñez, P; López Fabal, F et al. Real-life validation of a sample pooling strategy for screening of hepatitis C. *Clin. Microbiol. Infect.* 2023. 29. (1): 112.e1-112.e4. Article.

* Publications: only "Article", "Review", "Editorial Material" and "Letter" have been selected in "Document Type" of ISI Web Of Knowledge. The breakdown of publications includes some not included in the 2022 JCR, which are therefore not taken into account in the final count shown in the table, since they do not have IF.

- Branas, P; Munoz Gallego, I; Espartosa, E; Moral, N; Abellan, G; Folgueira, L. Dynamics of respiratory viruses other than SARS-CoV-2 during the COVID-19 pandemic in Madrid, Spain. *Influenza Other Respir. Viruses*. 2023. 17. (9): e13199. Article.
- Cairolí, V; Valle Millares, D; Terrón Orellano, MC; Luque, D; Ryan, P; Dominguez, L; Martín Carbonero, L et al. MicroRNA signature from extracellular vesicles of HCV/HIV co-infected individuals differs from HCV mono-infected. *J. Mol. Med.* 2023. 101. (11): p. 1409-1420. Article.
- Colom, JC; Manzanares, A; Gómez, AA; Escribano, IS; Esquivel, E; Pérez Rivilla, A; Moral Pumarega, MT et al. Clinical outcomes and antibody transfer in a cohort of infants with in utero or perinatal exposure to SARS-CoV-2 (Coronascope Study). *Eur. J. Pediatr.* 2023. 182. (10): p. 4647-4654. Article.
- Cudós, ES; Sotomayor, C; Canuto, MM; Cabello, A; Curran, A; Ocampo, A; Rava, M et al. Incidence of Anal Cancer and Related Risk Factors in HIV-Infected Patients Enrolled in the National Prospective Spanish Cohort CoRIS. *Dis. Colon Rectum*. 2023. 66. (12): p. 1186-1194. Article.
- Galar, A; Juárez, M; Sousa Casanovas, I; Catalán, P; Valerio, M; Antunez Muiños, P; Barbeito Castiñeiras, G et al. Systematic influenza screening in cardiac intensive care units during the influenza season: A prospective study in Spain. *Int. J. Infect. Dis.* 2023. 136. p. 37-42. Article.
- García Rubia, A; Lasala, F; Ginex, T; Morales Tenorio, M; Olal, C; Heung, M; Oquist, P et al. N?-Phenylacetohydrazide Derivatives as Potent Ebola Virus Entry Inhibitors with an Improved Pharmacokinetic Profile. *J. Med. Chem.* 2023. 66. (8): p. 5465-5483. Article.
- Huguet, B; Lasheras, M; Fernandez, MF; Rivilla, AP; Gomez Grande, A; Tato, LP; Fernandez Cooke, E. Prolonged Fever in a Child With Congenital Heart Disease and a Prosthetic Valve. *Pediatr. Infect. Dis. J.* 2023. 42. (4): p. 350-352. Article.
- Izquierdo, R; Rava, M; Moreno García, E; Blanco, JR; Asensi, V; Cervero, M; Curran, A et al. HIV medical care interruption among people living with HIV in Spain, 2004-2020. *Aids*. 2023. 37. (8): p. 1277-1284. Article.
- Labiod, N; Luczkowiak, J; Tapia, MM; Lasala, F; Delgado, R. The role of DC-SIGN as a trans-receptor in infection by MERS-CoV. *Front. Cell. Infect. Microbiol.* 2023. 13. 1177270. Article.
- Lara Aguilar, V; Crespo Bermejo, C; Llamas Adán, M; Grande García, S; Cortijo Alfonso, ME; Martín Carbonero, L; Domínguez, L et al. HCV spontaneous clearers showed low senescence profile in people living with HIV under long ART. *J. Med. Virol.* 2023. 95. (7). Article.
- Lara Aguilar, V; Valle Millares, D; Crespo Bermejo, C; Grande García, S; Llamas Adán, M; Cortijo Alfonso, ME; Martín Carbonero, L et al. Dynamics of cellular senescence markers after HCV elimination spontaneously or by DAAs in people living with HIV. *Biomed. Pharmacother.* 2023. 162. 114664. Article.
- Lázaro Gorines, R; Pérez, P; Heras Murillo, I; Adán Barrientos, I; Albericio, G; Astorgano, D; Flores, S et al. Dendritic Cell-Mediated Cross-Priming by a Bispecific Neutralizing Antibody Boosts Cytotoxic T Cell Responses and Protects Mice against SARS-CoV-2. *Adv. Sci.* 2023. 10. (34). Article.
- Luczkowiak, J; Rivas, G; Labiod, N; Lasala, F; Rolo, M; Lora Tamayo, J; Mancheno Losa, M et al. Cross neutralization of SARS-CoV-2 omicron subvariants after repeated doses of COVID-19 mRNA vaccines. *J. Med. Virol.* 2023. 95. (1): e28268. Article.
- Maggiolo, F; Rizzardini, G; Molina, JM; Pulido, F; De Wit, S; Vandekerckhove, L; Berenguer, J et al. Bictegravir/emtricitabine/tenofovir alafenamide in older individuals with HIV: Results of a 96-week, phase 3b, open-label, switch trial in virologically suppressed people >= 65 years of age. *HIV Med.* 2023. 24. (1): p. 27-36. Article.
- Muñoz Gallego, I; Carmona, MAM; Higuera, CM; Viedma, E; Delgado, R; Folgueira, MD. Rapid screening of SARS-CoV-2 variants, a key tool for pandemic surveillance. *Sci Rep.* 2023. 13. (1): 11094. Article.
- Palacios, R; Gómez Ayerbe, C; Casado, JL; Tejerina, F; Montes, ML; Castaño, M; Ocampo, A et al. Efficacy and safety of dolutegravir/rilpivirine in real-world clinical practice. *GeSIDA study 1119. HIV Med.* 2023. 24. (8): p. 933-937. Article.
- Patino Alonso, J; Cabrera González, J; Merino, J; Nieto Ortiz, G; Lasala, F; Katati, J; da Cruz, CHB et al. C₆₀-based Multivalent Glycoporphyrins Inhibit SARS-CoV-2 Specific Interaction with the DC-SIGN Transmembrane Receptor. *Small*. 2023. Article.
- Pérez, P; Albericio, G; Astorgano, D; Flores, S; Sánchez Corzo, C; Sanchez Cordón, PJ; Luczkowiak, J et al. Preclinical immune efficacy against SARS-CoV-2 beta B.1.351 variant by MVA-based vaccine candidates. *Front. Immunol.* 2023. 14. 1264323. Article.
- Piñana, M; González Sánchez, A; Andrés, C; Abanto, M; Vila, J; Esperalba, J; Moral, N et al. The emergence, impact, and evolution of human metapneumovirus variants from 2014 to 2021 in Spain. *J. Infect.* 2023. 87. (2): p. 103-110. Article.
- Polo, R; García Albéniz, X; Terán, C; Morales, M; Rial Crestelo, D; Garcinuño, MA; García Del Toro, M et al. Daily tenofovir disoproxil fumarate/emtricitabine and hydroxychloroquine for pre-exposure prophylaxis of COVID-19: a double-blind placebo-controlled randomized trial in healthcare workers. *Clin. Microbiol. Infect.* 2023. 29. (1): p. 85-93. Article.
- Quirós González, V; Rubio, R; Pulido, F; Rial Crestelo, D; Martín Jurado, C; Hernández Ros, MA; Jiménez, EAL et al. Healthcare Outcomes In Patients With Hiv Infection At A Tertiary Hospital During The COVID-19 Pandemic. *Enferm. Infect. Microbiol. Clin.* 2023. 41. (3): p. 149-154. Article.
- Rivas, G; Labiod, N; Luczkowiak, J; Lasala, F; Rolo, M; Mancheño Losa, M; Rial Crestelo, D et al. Superior neutralizing response after first versus second SARS-CoV-2 infection in fully vaccinated individuals. *J. Med. Virol.* 2023. 95. (11): e29225. Article.
- Ruiz Cáceres, I; Romero, TH; Merino, IG; Zapirain, JP; Pérez Mies, B; Sánchez Conde, M; Riaño, MA et al. Post-mortem findings in Spanish patients with COVID-19; a special focus on superinfections. *Front. Med.* 2023. 10. 1151843. Article.
- Ryan, P; Dolengevich Segal, H; Ramos Ruperto, L; Cabello, A; Sanchez Conde, M; Vergas, J; Valencia, J et al. Patterns of Sexualized Drug Use among Gay, Bisexual, and Other Men Who Have Sex with Men Living with HIV: Insights from a Comprehensive Study-The U-SEX-2 GESIDA 9416 Study. *J. Clin. Med.* 2023. 12. (23): 7293. Article.
- Simón Fuentes, M; Herrero, C; Acero Riaguas, L; Nieto, C; Lasala, F; Labiod, N; Luczkowiak, J et al. TLR7 Activation in M-CSF-

- Dependent Monocyte-Derived Human Macrophages Potentiates Inflammatory Responses and Prompts Neutrophil Recruitment. *J. Innate Immun.* 2023. 15. (1): p. 517-530. Article.
- Simon Fuentes, M; Rios, I; Herrero, C; Lasala, F; Labiod, N; Luczkowiak, J; Roy Vallejo, E et al. MAFB shapes human monocyte-derived macrophage response to SARS-CoV-2 and controls severe COVID-19 biomarker expression. *JCI Insight.* 2023. 8. (24): e172862. Article.
- Soriano Ramos, M; Esquivel De la Fuente, E; Vicent, EA; de la Calle, M; Baquero Artigao, F; Domínguez Rodríguez, S; Cabanes, M et al. The role of the T-cell mediated immune response to Cytomegalovirus infection in intrauterine transmission. *PLoS One.* 2023. 18. (2): e0281341. Article.
- Suárez García, I; Alejos, B; Hernando, V; Viñuela, L; Vera García, M; Rial Crestelo, D; Pérez Elías, MJ et al. Effectiveness and tolerability of dolutegravir/lamivudine for the treatment of HIV-1 infection in clinical practice. *J. Antimicrob. Chemother.* 2023. 78. (6): p. 1423-1432. Article.
- Suñer, C; Ubals, M; Tarín Vicente, EJ; Mendoza, A; Alemany, A; Hernández Rodríguez, A; Casañ, C et al. Viral dynamics in patients with monkeypox infection: a prospective cohort study in Spain. *Lancet Infect. Dis.* 2023. 23. (4): p. 445-453. Article.
- Tarancon Diez, L; Carrasco, I; Ory, SJD; Sánchez, AB; Hernanz Lobo, A; Montero Alonso, M; Laguno, M et al. Long-term evolution in liver disease markers and immune and lipid profiles in vertically HIV/HCV-coinfected youths with sustained viral response after direct-acting antivirals therapy. *Biomed. Pharmacother.* 2023. 162. 114587. Article.
- Vázquez Morón, S; Iglesias Caballero, M; Lepe, JA; Garcia, F; Melón, S; Marimon, JM; de Viedma, DG et al. Enhancing SARS-CoV-2 Surveillance through Regular Genomic Sequencing in Spain: The RELECOV Network. *Int. J. Mol. Sci.* 2023. 24. (10): 8573. Article.
- Wang, L; Guzman, M; Muñoz Santos, D; Honrubia, JM; Ripoll Gomez, J; Delgado, R; Sola, I et al. Cell type dependent stability and virulence of a recombinant SARS-CoV-2, and engineering of a propagation deficient RNA replicon to analyze virus RNA synthesis. *Front. Cell. Infect. Microbiol.* 2023. 13. 1268227. Article.
- Guijarro, AB; Bailén, M; Hernando, A. Analysis of medication adherence using electronic prescriptions in a community pharmacy: 'REACT' study. *Farm. Comunitarios.* 2023. 15. (1): p. 41-55. Article.
- Wu, Y; Levis, B; Daray, FM; Ioannidis, JPA; Patten, SB; Cuijpers, P; Ziegelstein, RC et al. Comparison of the Accuracy of the 7-Item HADS Depression Subscale and 14-Item Total HADS for Screening for Major Depression: A Systematic Review and Individual Participant Data Meta-Analysis. *Psychol. Assess.* 2023. 35. (2): p. 95-114. Review.

Reviews

- Candel, FJ; Barreiro, P; Salavert, M; Cabello, A; Fernández Ruiz, M; Pérez Segura, P; San Román, J et al. Expert Consensus: Main Risk Factors for Poor Prognosis in COVID-19 and the Implications for Targeted Measures against SARS-CoV-2. *Viruses-Basel.* 2023. 15. (7): 1449. Review.
- Fitzgerald, N; Coltart, H; Dominguez, L; Flanagan, K; Gilleece, Y. PrEP for women in Europe: a systematic literature review. *HIV Med.* 2023. 24. (7): p. 765-776. Review.
- Kabra, M; Barber, TJ; Allavena, C; Marcellin, AG; Di Giambenedetto, S; Pasquau, J; Gianotti, N et al. Virologic Response to Dolutegravir Plus Lamivudine in People With Suppressed Human Immunodeficiency Virus Type 1 and Historical M184V/I: A Systematic Literature Review and Meta-analysis. *Open Forum Infect. Dis.* 2023. 10. (11): ofad526. Review.

Letters

- Arroyo Sánchez, D; Luczkowiak, J; Delgado, R; Cabrera Marante, O; Paz Artal, E. Immune Response Against SARS-CoV-2 Infection and Vaccination in a CD8a-Deficient Patient. *J. Clin. Immunol.* 2023. 43. (6): p. 1072-1074. Letter.

THESES DEFENDED OR SUPERVISED WITHIN THE GROUP

- **Doctoral candidate:** Nuria Labiod Becerro.
Thesis title: Interacción y relevancia biológica de la lectina DC-SIGN con la envuelta del virus emergente SARS-CoV-2.
University: Universidad Complutense de Madrid.
Date read: 06/03/2023.
Thesis director: Rafael Delgado, Joanna Luczkowiak, Fátima Lasala.
International mention: No.

PATENTS

- Title:** Compuestos derivados de tiofeno como agentes antivirales.
Number: P202231005.
Type: SPANISH patent.
Inventors: Carmen Gil Ayuso-Gontán, Ana Martínez Gil, Alfonso García Rubia, Marcos Morales Tenorio, Covadonga Alonso Martí, Inmaculada Galindo Barreales, Isabel García-Dorival, Rafael Delgado Vázquez and Fátima Lasala Sánchez.
Owners: CSIC (75 %), Fundación i+12 (25 %).
Date of application: 22/11/2022.
Status: In process.
- Title:** Thiophene derivative compounds as antiviral agents.
Number: PCT/ES2023/070691.
Type: PCT.
Inventors: Carmen Gil Ayuso-Gontán, Ana Martínez Gil, Alfonso García Rubia, Marcos Morales Tenorio, Covadonga Alonso Martí, Inmaculada Galindo Barreales, Isabel García-Dorival, Rafael Delgado Vázquez and Fátima Lasala Sánchez.
Owners: CSIC (75 %), Fundación i+12 (25 %).
International application date: 20/11/2023.
Priority data: P202231005 (22/11/2022).
Status: In process.

COORDINATOR:

Gabriel Rubio Valladolid

Addictions and Comorbidity
 Cognition and Psychosis
 Neurodegenerative Diseases
 Applied Behavioural Neuropharmacology
 Neurotraumatology and Subarachnoid Hemorrhage
 Neurovascular
 Translational Psychiatry

The Neuroscience and Mental Health Area is made up of 3 mixed groups of researchers from the Hospital Universitario 12 de Octubre (H12O) and for the Universidad Complutense de Madrid (UCM), 1 mixed group made up of researchers from H12O, the Facultad de Psicología de la UCM and the Facultad de Psicología de la Universidad Autónoma de Madrid (UAM), Two groups made up exclusively of H12O researchers and, finally, one group from the Facultad de Medicina de la Universidad Complutense de Madrid (UCM).

Cooperative development objectives set in the area:

Resource indicators

- Plan quarterly meetings of the Neuroscience Department to report on the progress of the different projects and the biological samples made available by the research groups. 3 meetings/year. Degree of achievement: high.
- To implement a neuroscience biobank project where clinical samples from the different studies carried out by researchers could be stored so that they can be used by other groups.
 - Creation of the neuroscience biobank, making use of the collections of biological samples included in the i+12. Degree of achievement: low.
 - Encourage the use of samples for complementary analysis by at least two Area 8 groups during the period 2023-27. Degree of achievement: low.
- To favor studies with public or private funding that include groups from area 8 in collaboration with other national or international groups, with other CIBER groups or Carlos III Networks or between i+12 groups.
 - Inter-ISCIII collaborative projects: number of publicly or privately funded projects by any of the groups in Area 8 with other research groups from the Instituto de Salud Carlos III (CIBER and/or Networks). $\geq 3/5$ years. Degree of achievement: medium.
 - Inter-i+12 collaborative projects: number of publicly or privately funded projects involving any of the groups in Area 8 and other groups in i+12. $\geq 2/5$ years. Degree of achievement: medium.
 - Intra-area 8 collaborative projects: number of publicly or privately funded projects involving any of the groups in Area 8 and others in the same area. $\geq 4/5$ years. Degree of achievement: medium.
 - Inter-ISCIII collaborative articles 1Q: articles published in first quartile journals where some of the groups from Area 8 are included with other groups from the Instituto de Salud Carlos III (CIBER or Networks). $\geq 10/5$ years. Degree of achievement: high.
 - Inter-ISCIII collaborative articles 2Q: articles published in second quartile journals where some of the groups from Area 8 are included with any of the groups from the Instituto de Salud Carlos III (CIBER or Networks). $\geq 20/5$ years. Degree of achievement: medium..
- To consolidate the collaboration with the company B-40518169 (PERSONA BIOMED SPAIN S.L.) to develop research projects in pathologies related to the Area of Neurosciences. Number of publicly or privately funded projects developed by Area 8 groups, over the 2023-27 period, in collaboration with the company B-40518169 for the study of blood-brain-barrier biomarkers. $\geq 1/5$ years. Degree of achievement: high.
- Support the creation of a research group in child neuropsychiatry that includes professionals from the departments of Psychiatry, Neurology, Pediatrics and Neonatology in order to longitudinally study cohorts of child-adolescents with mental disorders throughout their lives.
 - Proposal from a research group in child psychiatry/neuropsychiatry / 5 years. Degree of achievement: medium.
 - Number of research projects with public or private funding, developed partially or totally by the members of the group in child and adolescent populations. ≥ 1 application or award / 5 years. Degree of achievement: low.
- Increase the participation of pharmaceutical companies in the development of studies involving researchers from the groups included in Area 8. ≥ 2 SC / 5 years by researchers from the Neuroscience Area. Degree of achievement: high.
- Develop clinical guidelines for neuropsychiatric disorders in which i+12 researchers are experts. ≥ 2 clinical guidelines / 5 years: 1 in the field of psychiatry and 1 in the field of neurology. Degree of achievement: low.

List of the 5 most relevant publications of the Neurosciences and Mental Health Area during 2023

Below are the 5 most relevant publications in the area of Neuroscience and Mental Health selected on the basis of the original articles led by researchers in the area, published in the top 10% of their subject category in JCR and most frequently cited:

1. **Malan Müller, S;** Valles Colomer, M; **Palomo, T; Leza, JC.** The gut-microbiota-brain axis in a Spanish population in the aftermath of the COVID-19 pandemic: microbiota composition linked to anxiety, trauma, and depression profiles. *Gut Microbes.* 2023. 15. (1): 2162306. Article.
2. **Torres López, C; Cuartero, MI; García Culebras, A;** de la Parra, J; Fernández Valle, ME; Benito, M; Vázquez Reyes, S; Jareño-Flores, T; de Castro-Millán, FJ; Hurtado, O; Buckwalter, MS; García-Segura, JM; **Lizasoain, I; et Moro, MA.** Ipsilesional Hippocampal GABA Is Elevated and Correlates With Cognitive Impairment and Maladaptive Neurogenesis After Cortical Stroke in Mice. *Stroke.* 2023. 54. (10): p. 2652-2665. Article.
3. Olivencia, MA; de Biedma Elduayen, LG; Giménez Gómez, P; Barreira, B; Fernández, A; Angulo, J; **Colado, MI; O'Shea, E;** et Perez-Vizcaino, F. Oxidized soluble guanylyl cyclase causes erectile dysfunction in alcoholic mice. *Br. J. Pharmacol.* 2023. 180. (18): p. 2361-2376. Article.
4. **Rodríguez Perrián, G;** de la Encarnación, A; Moreno, F; de Munain, AL; Martínez, A; Martín Requero, A; **Alquézar, C; et Bartolomé, F.** Progranulin Deficiency Induces Mitochondrial Dysfunction in Frontotemporal Lobar Degeneration with TDP-43 Inclusions. *Antioxidants.* 2023. 12. (3). 581. Article.
5. **Martín Hernández, D;** Martínez, M; **Robledo Montaña, J; Muñoz López, M;** Virto, L; Ambrosio, N; Marín, MJ; Montero, E; Herrera, D; Sanz, M; **Leza, JC;** Figuero, E; et **García-Bueno, B.** Neuroinflammation related to the blood-brain barrier and sphingosine-1-phosphate in a pre-clinical model of periodontal diseases and depression in rats. *J. Clin. Periodontol.* 2023. 50. (5): p. 642-656. Article.

Addictions and Comorbidity

CENTER: Hospital Universitario 12 de Octubre (HU12O) and Universidad Complutense de Madrid (UCM).

GROUP LEADERS: Colado Megía, M.^a Isabel (R4) and Rubio Valladolid, Gabriel (R4).

Arias Horcajadas, Francisco - Doctoral researcher (R3).
Armada Lechuga, Víctor - Graduate researcher.
Careaga Heres, Lluna - Predoctoral researcher (R1).
Del Río García, Álvaro - Predoctoral researcher (R1).
Esteban Rodríguez, Laura - Predoctoral researcher (R1).
Gómez Núñez, María del Carmen - Support technician.
Gutiérrez López, M.^a Dolores - Doctoral researcher (R3).
Jurado Barba, María Rosa - Researcher.

Maldonado Sánchez, Daniel Eduardo - Predoctoral researcher (R1).
Marín Mayor, Marta - Postdoctoral researcher (R2).
Martínez Maldonado, Andrés - Predoctoral researcher (R1).
Núñez de la Calle, Carlos - Predoctoral researcher (R1).
O'Shea Gaya, Esther - Doctoral researcher (R3).
Sion, Ana María Alexandra - Predoctoral researcher (R1).
Vidal Casado, Rebeca - Doctoral researcher (R2).

ACTIVE RESEARCH PROJECTS

Type of funding	Funding body	No. of projects
Competitive	ISCIII	2
Competitive	Ministerio de Sanidad, Servicios Sociales e Igualdad	1
No competitive	Fundación Nemesio Diez para el Fomento de la Educación y el Deporte	1
Total		4

- **Title:** Vulnerabilidad para los trastornos por juegos en jóvenes: proyecto "Sin Riesgo con el 12".
Principal investigator: Rubio Valladolid, Gabriel.
Project No.: 2020I026.
Funding body: Ministerio de Sanidad, Servicios Sociales e Igualdad (MSSSI).
Start date: 01/01/2021.
End date: 31/12/2023.
- **Title:** Phase II, placebo-controlled trial of cannabidiol for the treatment of alcohol dependence.
Principal investigator: Rubio Valladolid, Gabriel.
Project No.: ICI21/00113.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2022.
End date: 31/12/2025.

- **Title:** Identificación de biomarcadores cannabinoides en la dependencia del alcohol. Proyecto Cannabial.
Principal investigator: Rubio Valladolid, Gabriel.
Project No.: PI22/00355.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2023.
End date: 31/12/2025.
- **Title:** Cuidados a los RN y sus familias en los primeros 1.000 días de vida.
Principal investigator: Rubio Valladolid, Gabriel.
Funding body: Fundación Nemesio Diez para el Fomento de la Educación y el Deporte.
Start date: 13/03/2023.
End date: 12/03/2024.

OTHER ACTIVE PROJECTS OF THE RESEARCH GROUP NOT MANAGED BY THE FUNDACIÓN PARA LA INVESTIGACIÓN BIOMÉDICA DEL HOSPITAL 12 DE OCTUBRE (FIBH12O):

- **Title:** Efecto de la inhibición de kinurenina monooxigenasa, mediante Ro 61-8048, en el desarrollo de comportamientos adictivos inducidos por fentanilo. Relevancia en un modelo de dolor neuropático.
Principal investigator: M.^a Isabel Colado Megía.
Project No.: PNSD2019|025.
Funding body: Ministerio de Sanidad, Consumo y Bienestar Social
Start date: 01/12/2019.
End date: 31/05/2023.
- **Title:** Effect of kynurenine monooxigenase inhibition by Ro 61-8048 on the development of addictive behaviours induced by fentanyl. Relevance in a model of neuropathic chronic pain.
Principal investigator: M.^a Isabel Colado Megía and M.^a Esther O'Shea.
Project No.: PID2019-105847RB-I00.
Funding body: Ministerio de Ciencia, Innovación y Universidades.
Start date: 01/06/2020.
End date: 30/11/2023.

- **Title:** Efecto de la psilocibina sobre la incubación del “craving” de metanfetamina tras abstinencia prolongada: adaptaciones en la morfología de astrocitos y espinas dendríticas en el núcleo accumbens de rata.
Principal investigator: M.ª Isabel Colado Megía.
Project No.: PDNS2023I029.
Funding body: Ministerio de Sanidad, Consumo y Bienestar Social.
Start date: 01/12/2023.
End date: 31/11/2025.
- **Title:** Efecto de la kinurena sobre la incubación del “craving” de metanfetamina tras abstinencia prolongada: adaptaciones en la morfología de astrocitos y espinas dendríticas en el núcleo accumbens de rata.
Principal investigator: M.ª Isabel Colado Megía and M.ª Esther O’Shea.
Project No.: PID2022-142137OB-I00.
Funding body: Ministerio de Ciencia, Innovación y Universidades.
Start date: 01/09/2023.
End date: 03/08/2026.

- **Title:** Evaluación de la modulación de la vía de la kinurena como tratamiento en la dependencia alcohólica sobre la hiperalgesia inducida por la abstinencia.
Principal investigator: M.ª Esther O’Shea.
Project No.: PNSD2022I033.
Funding body: Ministerio de Sanidad, Consumo y Bienestar Social.
Start date: 01/01/2023.
End date: 31/12/2024.
- **Title:** Movilidad segura de usuarios vulnerables mediante exploración neuropsicofisiológica y técnicas de realidad virtual.
Principal investigator: Rosa Jurado Barba
Project No.: PID2021-122290OB-C22.
Funding body: Agencia Estatal de Investigación. Ministerio de Ciencia e Innovación.
Start date: 01/09/2022.
End date: 30/06/2025.

PUBLICATIONS*

Type of Document	No. of document	Σ IF (JCR 2022)
Articles	10	48.8
Reviews	3	13.3
Editorials	1	5.22
Total	14	67.3

Articles

- Almerge, JC; Sánchez Romero, S; Horcajadas, FA. Differences between substance-induced psychotic disorders and non-substance-induced psychotic disorders and diagnostic stability. *Adicciones*. 2023. 35. (2): p. 95-105. Article.
- Arias, F; Sion, A; Espinosa, R; Jurado Barba, R; Marin, M; Martínez Maldonado, A; Rubio, G. Psychological recovery stages of alcohol dependent patients after an intensive outpatient treatment: A 4-year follow-up study. *Adicciones*. 2023. 0. (0): p. 1575-1575. Article.
- Arias Horcajadas, F; Dávila Píriz, JR; Parra González, A; Sánchez Romero, S; Sánchez Morla, E; Ampuero Sánchez, I; Ramos Atance, JA. Cannabinoid receptor type 2 gene is associated with comorbidity of schizophrenia and cannabis dependence and fatty acid amide hydrolase gene is associated with cannabis dependence in the Spanish population. *Adicciones*. 2023. 0. (0): p. 1587-1587. Article.
- Bernal Sobrino, JL; Arias Horcajadas, F; Varela Rodríguez, C; Losada Pérez, C; Blanco Echevarría, A; Xsdel Yerro Alvarez, MJ; Martín Mayor, M et al. A 3-Year Retrospective Study of the Impact of Integrating an Addiction Liaison Team into an Outpatient Alcoholism Treatment Programme. *Alcohol Alcohol*. 2023. 58. (5): p. 515-522. Article.
- Escudero, B; Moya, M; López Valencia, L; Arias, F; Orío, L. Reelin Plasma Levels Identify Cognitive Decline in Alcohol Use Disorder Patients During Early Abstinence: The Influence of APOE4 Expression. *Int. J. Neuropsychopharmacol*. 2023. Article.
- García Marchena, N; Sanvisens, A; Abellí Deulofeu, E; Blanes, R; Torrens, M; Miquel, L; Rubio, G et al. Sex differences in the comorbidity of patients seeking a first treatment for Alcohol Use Disorder. *Int. J. Mental Health Addict*. 2023. Article.
- Hernández Rubio, A; Sanvisens, A; Barbier Torres, L; Blanes, R; Miquel, L; Torrens, M; Rubio, G et al. Associations of hypomagnesemia in patients seeking a first treatment of alcohol use disorder. *Drug Alcohol Depend*. 2023. 245. 109822. Article.
- Olivencia, MA; de Biedma Elduayen, LG; Giménez Gómez, P; Barreira, B; Fernández, A; Angulo, J; Colado, MI et al. Oxidized soluble guanylyl cyclase causes erectile dysfunction in alcoholic mice. *Br. J. Pharmacol*. 2023. 180. (18): p. 2361-2376. Article.
- Rubio, G; Gasparyan, A; Duque, A; García Gutiérrez, MS; Navarrete, F; Navarro, D; Manzanares, J. Emotional Processing and Maltreatment During Childhood as Factors of Vulnerability to Alcohol Abuse in Young Adults. *Int. J. Mental Health Addict*. 2023. Article.

- Rubio, G; Rodríguez, LE; Sion, A; Vidal, LR; Blanco, MJ; Zamora Bayon, A; Caba Moreno, M et al. How, when, and to what degree do people with alcohol dependence recover their psychological wellbeing and quality of life? The Madrid Recovery Project. *Front. Psychiatry*. 2023. 14. 1130078. Article.
- Holgado, IR; Ripollb, CEC; González, AJ; Yerro, MJ; Mena, SS; Rubio, G; Molina, JD. Post-traumatic Stress Disorder after the first wave of the Pandemic in Hospitalized COVID-19 Patients and Health Professionals in a Front-line Spanish Tertiary Hospital: a retrospective observational study. *Ansiedad Estres*. 2023. 29. (3): p. 137-144. Article.

Reviews

- Gasparyan, A; Sanchez, DM; Navarrete, F; Sion, A; Navarro, D; García Gutiérrez, MS; Valladolid, GR et al. Cognitive Alterations in Addictive Disorders: A Translational Approach. *Biomedicine*. 2023. 11. (7): 1796. Review.
- Isorna, M; Pascual, F; Aso, E; Arias, F. Impact of the legalisation of recreational cannabis use. *Adicciones*. 2023. 35. (3): p. 349-376. Review.

Editorials

- Varela Rodríguez, C; Rosillo Ramírez, N; Rubio Valladolid, G; Ruiz López, P. Editorial: Real world evidence, outcome research and healthcare management improvement through real world data (RWD). *Front. Public Health*. 2023. 10. p. 1064580-1064580. Editorial Material.

THESES DEFENDED OR SUPERVISED WITHIN THE GROUP

- **Doctoral candidate:** Nuria Morales Puerto.
Thesis title: Prevención del déficit de memoria inducido por la exposición intensiva a etanol en ratón mediante el compuesto neuroprotector 3,3'-diindolilmetano.
University: Universidad Complutense de Madrid.
Date read: 03/02/2023.
Thesis director: M.ª Esther O’Shea Gaya, M.ª Dolores Gutiérrez López, Rebeca Vidal Casado.
International mention: Yes.
- **Doctoral candidate:** Leticia Gil de Biezma Elduayen.
Thesis title: Modulación de la vía de kinurena en el tratamiento de la dependencia alcohólica: factores neuroquímicos y respuestas cognitivo-conductuales asociadas al abuso de etanol.
University: Universidad Complutense de Madrid.
Date read: 19/01/2023.
Thesis director: M.ª Isabel Colado Megía, M.ª Esther O’Shea Gaya, Pablo Giménez Gómez.
International mention: Yes.

END MASTER INVESTIGATIONS DIRECTED ON THE GROUP

- **Student:** Eva López Barro.
Title: Papel protector del 3,3'-Diindolilmetano frente a la disrupción de la barrera intestinal en un modelo celular de daño por etanol.
Directors: M.ª Dolores Gutiérrez-López and Alejandro Hionides Gutiérrez.
Master: Psicología y Drogas de Abuso.
University: Universidad Complutense de Madrid.

* Publications: only "Article", "Review", "Editorial Material" and "Letter" have been selected in "Document Type" of ISI Web Of Knowledge. The breakdown of publications includes some not included in the 2022 JCR, which are therefore not taken into account in the final count shown in the table, since they do not have IF.

END GRADUATED INVESTIGATIONS DIRECTED ON THE GROUP

- Student:** Elisa Marín Jerez.
Title: Efectos del consumo de fentanilo y del tratamiento con RO 61-8048 en cerebelo y colon de rata.
Directors: Carlos Núñez de la Calle and M.ª Esther O'Shea Gaya.
Degree: Bioquímica.
University: Universidad Complutense de Madrid.
- Student:** José Manuel Dotor Lavado and Mara Rey Bejarano.
Title: Perfiles de pacientes en tratamiento por tentativa de suicidio relacionados con la eficacia y la eficiencia de las intervenciones.
Directors: Gabriel Rubio Valladolid.
Degree: Medicina.
University: Universidad Complutense de Madrid.

Cognition and Psychosis

CENTER: Hospital Universitario 12 de Octubre (HU12O), Universidad Complutense de Madrid (UCM) and Universidad Autónoma de Madrid (UAM).

GROUP LEADER: Rodríguez Jiménez, Roberto (R4).

- Caballero González, Montserrat - Clinical researcher.
- Espejo-Saavedra Roca, Juan Manuel - Postdoctoral researcher (R2).
- Jiménez Bidón, Ana María - Clinical researcher.
- Martínez Gras, Isabel - Postdoctoral researcher (R2).
- Molina Martín, Juan de Dios - Postdoctoral researcher (R2).
- Moreno Montes, Eva María - Doctoral researcher (R4).
- Olmos Albacete, Ricardo - Doctoral researcher (R3).
- Ortega Cabrera, María José - Doctoral researcher (R2).
- Peñuelas Calvo, María Inmaculada - Doctoral researcher (R3).
- Pérez Nevot, Antonio Luis - Clinical researcher.
- Puente García, Rodrigo - Postdoctoral researcher (R2).
- Rentero Martín, David - Predoctoral researcher (R1).
- Romero Ferreiro, M.ª Verónica - Doctoral researcher (R3).
- Rosa Cerezo, Laura - Support nurse.
- Saiz Brionez, Nazaret - Support nurse.
- Sánchez Morla, Eva María - Doctoral researcher.
- Sánchez Pastor, Luis - Clinical researcher.
- Sánchez-Cabezudo Muñoz, Ángeles - Predoctoral researcher (R1).
- Serrano Pedraza, Ignacio - Doctoral researcher (R3).
- Valtueña García, Mercedes - Predoctoral researcher (R1).

ACTIVE RESEARCH PROJECTS

Type of funding	Funding body	No. of projects
Competitive	Comunidad de Madrid	1
Competitive	ISCIII	2
No competitive	Various	1
Total		4

- Title:** Impacto de los episodios maníacos en la progresión del deterioro cognitivo en el trastorno bipolar y su relación con actividad inflamatoria y estrés oxidativo: estudio longitudinal a 2 años.
Principal investigator: Sánchez Morla, Eva M.ª.
Project No.: PI18/01275.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2019.
End date: 31/12/2021; extended to 30/06/2023.
- Title:** Factores que influyen en la funcionalidad en la comunidad de pacientes con primeros episodios psicóticos: estudio longitudinal de neurocognición, cognición social y síntomas clínicos (PEP2F).
Principal investigator: Rodríguez Jiménez, Roberto.
Project No.: PI19/00766.
Funding body: Instituto de Salud Carlos III (ISCIII).
- Title:** Impacto de los episodios maníacos en la progresión del deterioro cognitivo en el trastorno bipolar y su relación con actividad inflamatoria y estrés oxidativo: estudio longitudinal a 2 años.
Start date: 01/01/2020.
End date: 31/12/2022; extended to 30/06/2024.
- Title:** P2022/BMD-7216. Ambiente y genes en esquizofrenia (AGES-CM 3).
Principal investigator: Rodríguez Jiménez, Roberto.
Project No.: S2022/BMD-7216.
Funding body: Comunidad de Madrid.
Start date: 01/01/2023.
End date: 31/12/2026.
- Title:** Eficacia del tratamiento intensivo.
Principal investigator: Peñuelas Calvo, María Inmaculada.
Funding body: Espín Jaime, José Carlos.
Start date: 22/05/2023.
End date: 21/05/2024.

PUBLICATIONS*

Type of Document	No. of document	Σ IF (JCR 2022)
Articles	22	107.6
Reviews	3	21.5
Editorials	1	2.9
Total	26	132
Letters	2	8.4
Total	28	140.4

* Publications: only "Article", "Review", "Editorial Material" and "Letter" have been selected in "Document Type" of ISI Web Of Knowledge. The breakdown of publications includes some not included in the 2022 JCR, which are therefore not taken into account in the final count shown in the table, since they do not have IF.

Articles

- Alvarez Fernández, S; Andrade González, N; Simal, P; Matias Guiu, JA; Gómez Escalonilla, C; Rodríguez Jimenez, R; Stiles, BJ et al. Emotional processing in patients with single brain damage in the right hemisphere. *BMC Psychol.* 2023. 11. (1): 8. Article.
- Arias Horcajadas, F; Dávila Píriz, JR; Parra González, A; Sánchez Romero, S; Sánchez Morla, E; Ampuero Sánchez, I; Ramos Atance, JA. Cannabinoid receptor type 2 gene is associated with comorbidity of schizophrenia and cannabis dependence and fatty acid amide hydrolase gene is associated with cannabis dependence in the Spanish population. *Adicciones.* 2023. 0. (0): p. 1587-1587. Article.
- Bachtoula, O; Arranz Paraiso, S; Luna, R; Serrano Pedraza, I. Visual motion discrimination experiments reveal small differences between males and females. *Vision Res.* 2023. 208. p. 108222-108222. Article.
- Butjosa, A; Usall, J; Vila Badia, R; Mezquida, G; Cuesta, MJ; Rodríguez Toscano, E; Amoretti, S et al. Impact of traumatic life events on clinical variables of individuals with first-episode psychosis and healthy controls. *Int. J. Soc. Psychiatr.* 2023. 69. (1): p. 134-145. Article.
- De la Serna, E; Puig, O; Mezquida, G; Moreno Izco, L; Merchan Naranjo, J; Amoretti, S; Ruiz, P et al. Relationship between cognition and age at onset of first-episode psychosis: comparative study between adolescents, young adults, and adults. *Eur Child Adolesc Psychiatry.* 2023. 32. (4): p. 639-649. Article.
- Diest, APV; Vilagut, G; Alayo, I; Ferrer, M; Amigo, F; Amann, BL; Aragon Pena, A et al. Traumatic stress symptoms among Spanish healthcare workers during the COVID-19 pandemic: a prospective study. *Epidemiol Psychiatr Sci.* 2023. 32. e50. Article.
- García Fernández, L; Romero Ferreiro, V; Izquierdo, M; Rodríguez, V; Alvarez Mon, MA; Lahera, G; Santos, JL et al. Dramatic increase of suicidality in children and adolescents after COVID-19 pandemic start: A two-year longitudinal study. *J. Psychiatr. Res.* 2023. 163. p. 63-67. Article.
- Hidalgo Figueroa, M; Salazar, A; Romero Alberca, C; MacDowell, KS; García Bueno, B; Bioque, M; Bernardo, M et al. Association of Prolactin, Oxytocin, and Homocysteine With the Clinical and Cognitive Features of a First Episode of Psychosis Over a 1-Year Follow-Up. *Int. J. Neuropsychopharmacol.* 2023. 26. (11): p. 796-807. Article.
- Izquierdo, A; Cabello, M; Leal, I; Torio, I; Madrigal, JLM; MacDowell, KS; Rodríguez Jimenez, R et al. Neighborhood Vulnerability and Disability in First Episode of Psychosis: A Multilevel Study. *J. Clin. Psychiatry.* 2023. 84. (2): 22m14401. Article.
- Muñoz Rivas, MJ; Redondo, N; Olmos, R; Ronzón Tirado, R. Intimate partner violence among adolescents: Prevalence rates after one decade of research. *J Adolesc.* 2023. 95. (1): p. 170-180. Article.
- Ortega, MA; Fraile Martínez, O; García Montero, C; Rodríguez Martín, S; Funes Moñux, RM; Pekarek, L; Bravo, C et al. Women with psychotic episodes during pregnancy show increased markers of placental damage with Tenney-Parker changes. *Histol Histopathol.* 2023. 38. (10): p. 1109-1118. Article.
- Rodríguez Jimenez, R; García Fernández, L; Baón Pérez, B; Ansedo Cascudo, JC; Arroba, CMA; Sendra Gutierrez, JM; Romero Ferreiro, V et al. Hospital admissions due to suicide attempts during the COVID-19 pandemic, a 3-year longitudinal study. *Psychiatry Res.* 2023. 327. 115346. Article.
- Romero Ferreiro, V; Garcia Gutierrez, A; Torio, I; Mari Beffa, P; Rodríguez Gomez, P; Perianez, JA; Moreno, EM et al. Cognitive versus emotional modulation within a Stroop paradigm in patients with schizophrenia. *BJPsych Open.* 2023. 9. (1): e19. Article.
- Romero Rivas, C; Rodríguez Cuadrado, S; Sabater, L; Gómez, PR; de la Guía, IH; Moreno, EM; Heinze, EG. Beyond the conservative hypothesis: a meta-analysis of lexical-semantic processing in Williams syndrome. *Lang. Cogn.* 2023. 15. (3): p. 526-550. Article.
- Ruiz Toca, A; Fernández Aragón, C; Madrigal, A; Halverson, T; Rodríguez Jiménez, R; Lahera, G. Social Cognition Mediates the Impact of Processing Speed and Sustained Attention on Global Functioning in Schizophrenia. *Psicothema.* 2023. 35. (1): p. 87-97. Article.
- Sabater, L; Ponari, M; Haro, J; Fernández Folgueiras, U; Moreno, EM; Pozo, MA; Ferré, P et al. The acquisition of emotion-laden words from childhood to adolescence. *Curr. Psychol.* 2023. 42. (33): p. 29280-29290. Article.
- Saiz Masvidal, C; Contreras, F; Soriano Mas, C; Mezquida, G; Díaz Caneja, CM; Vieta, E; Amoretti, S et al. Structural covariance predictors of clinical improvement at 2-year follow-up in first-episode psychosis. *Prog. Neuro-Psychopharmacol. Biol. Psychiatry.* 2023. 120. p. 110645-110645. Article.
- Sánchez Morla, EM; Gómez de Las Heras, V. RECURRENT SELF-LIMITED HYPERTHERMIA FOLLOWING ELECTROCONVULSIVE THERAPY. *Actas Esp. Psiquiatri.* 2023. 51. (1): p. 41-43. Article.
- Sánchez Torres, AM; Amoretti, S; Enguita Germán, M; Mezquida, G; Moreno Izco, L; Panadero Gómez, R; Rementería, L et al. Relapse, cognitive reserve, and their relationship with cognition in first episode schizophrenia: a 3-year follow-up study. *Eur. Neuropsychopharmacol.* 2023. 67. p. 53-65. Article.
- Segura, AG; Prohens, L; Gassó, P; Rodríguez, N; Garcia Rizo, C; Moreno Izco, L; Andreu Bernabeu, A et al. The polygenic basis of relapse after a first episode of schizophrenia. *Eur. Neuropsychopharmacol.* 2023. 75. p. 80-92. Article.
- Valli, I; Gonzalez Segura, A; Verdolini, N; Garcia Rizo, C; Berge, D; Baeza, I; Cuesta, MJ et al. Obstetric complications and genetic risk for schizophrenia: Differential role of antenatal and perinatal events in first episode psychosis. *Acta Psychiatr Scand.* 2023. 148. (1): p. 81-90. Article.
- Verdolini, N; Moreno Ortega, M; Salgado Pineda, P; Monté, G; de Aragón, AM; Dompablo, M; McKenna, PJ et al. Failure of deactivation in bipolar disorder during performance of an fMRI adapted version of the Stroop task. *J. Affect. Disord.* 2023. 329. p. 307-314. Article.
- Holgado, IR; Ripollb, CEC; González, AJ; Yerro, MJ; Mena, SS; Rubio, G; Molina, JD. Post-traumatic Stress Disorder after the first wave of the Pandemic in Hospitalized COVID-19 Patients and Health Professionals in a Front-line Spanish Tertiary Hospital: a retrospective observational study. *Ansiedad Estres.* 2023. 29. (3): p. 137-144. Article.

- Mezquida, G; Amoretti, S; Bioque, M; García Rizo, C; Sánchez Torres, AM; Pina Camacho, L; Lopez Pena, P et al. Identifying risk factors for predominant negative symptoms from early stages in schizophrenia: A longitudinal and sex-specific study in first-episode schizophrenia patients. *Span. J. Psychiatry Ment. Health.* 2023. 16. (3): p. 159-168. Article.

Reviews

- Ezquerro, B; Alacreu Crespo, A; Peñuelas Calvo, I; Abascal Peiró, S; Jiménez Muñoz, L; Nicholls, D; Baca García, E et al. Characteristics of single vs. multiple suicide attempters among adolescents: a systematic review and meta-analysis. *Eur Child Adolesc Psychiatry.* 2023. Review.
- Ortega, MA; Álvarez Mon, MA; García Montero, C; Fraile Martínez, Ó; Monserrat, J; Martínez Rozas, L; Rodríguez Jiménez, R et al. Microbiota-gut-brain axis mechanisms in the complex network of bipolar disorders: potential clinical implications and translational opportunities. *Mol Psychiatry.* 2023. 28. (7): p. 2645-2673. Review.

Editorials

- Fernández Caballero, A; Hussain, A; Latorre, JM; Martínez Rodrigo, A; Rodríguez Jimenez, R; Fernández Sotos, P. Editorial: Physiological computing of social cognition, volume II. *Front. Hum. Neurosci.* 2023. 17. 1152291. Editorial Material.

Letters

- de las Heras, VG; Campion, K; Sánchez Morla, EM. SELF-LIMITED RECURRENT HYPERTHERMIA AFTER ELECTROCONVULSIVE THERAPY. *Actas Esp. Psiquiatri.* 2023. 51. (1): p. 41-43. Letter.

- Roig, MC; Milán, FP; Alonso, L; Domínguez, JA; Carugno, T; Moratalla, E; Caballero, M et al. A Controversial Old Topic Revisited: Should Diagnostic Hysteroscopy Be Routinely Performed Prior to the First IVF Cycle? A Systematic Review and Updated Meta-analysis. *J. Minim. Invasive Gynecol.* 2023. 30. (12): p. 951-960. Review.

END MASTER INVESTIGATIONS DIRECTED ON THE GROUP

- **Student:** Johanna Cristina Cazar Guevara.
Title: Análisis del uso de clozapina en pacientes con diagnóstico de esquizofrenia en el Centro de Salud de Usera perteneciente al Área de Gestión Clínica de Psiquiatría y Salud Mental del Hospital Universitario 12 de Octubre de Madrid.
Director: Ángeles Sánchez Cabezudo and Roberto Rodríguez Jiménez.
Master: Máster Interuniversitario en Iniciación a la Investigación en Salud Mental.
University: Universidad Complutense de Madrid.

Neurodegenerative Diseases

CENTER: Hospital Universitario 12 de Octubre (HU12O).

GROUP LEADER: Bartolomé Robledo, Fernando (R3).

Alquézar Burillo, Carolina - Principal investigator. (PI) (R3).
 Benito León, Julián - Principal investigator (PI) (R3).
 Blanco Palmero, Víctor Antonio - Predoctoral researcher (R1).
 Díaz García, Mario - Researcher. título predoctoral (R1).
 Esteras Gallego, Noemí - Doctoral researcher (R3).
 González Sánchez, Marta - Predoctoral researcher (R1).
 Herrero San Martín, Alejandro Octavio - Clinical researcher.
 Llamas Velasco, Sara - Principal investigator. (PI) (R3).
 Méndez Guerrero, Antonio José - Clinical researcher.

Morenas Rodríguez, Estrella - Principal investigator. (PI) (R3).
 Navarro Nadal, Jorge - Predoctoral researcher (R1).
 Pérez de la Fuente, Rubén - Clinical researcher.
 Pérez Martínez, David Andrés - Doctoral researcher (R2).
 Rodríguez Perriñán, Guiomar - Predoctoral researcher (R1).
 Sancha Velasco, Ariadna - Predoctoral researcher (R1).
 Sánchez Ferro, Álvaro - Clinical researcher.
 Villarejo Galende, Alberto - Clinical researcher.

ACTIVE RESEARCH PROJECTS

Type of funding	Funding body	No. of projects
Competitive	EIT Health	1
Competitive	Fundación Eugenio Rodríguez Pascual	1
Competitive	ISCIII	9
Competitive	Ministerio de Economía y Competitividad	2
No competitive	Various	2
Total		15

- Title:** Validación de la proteína salival lactoferrina como biomarcador de la enfermedad de Alzheimer: alternativa al diagnóstico y mecanismo patogénico.
Principal investigator: Bartolomé Robledo, Fernando.
Project No.: PI18/00118.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2019.
End date: 31/12/2021; extended to 30/06/2023.
- Title:** Ejercicios caligráficos domiciliarios para mejorar la destreza manual en la enfermedad de Parkinson: ensayo clínico aleatorizado.
Principal investigator: Llamas Velasco, Sara.
Project No.: PI21/01622.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2022.
End date: 31/12/2024.
- Title:** SORL1 deficiency in Alzheimer's disease patients: interplay with mitochondria and autophagy.
Principal investigator: Bartolomé Robledo, Fernando.
Project No.: PI21/00183.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2022.
End date: 31/12/2024.
- Title:** Alteraciones salivales para el diagnóstico precoz de la enfermedad de Alzheimer: efectos y consecuencias de la disbiosis oral.
Principal investigator: Hernández Gallego, Jesús.
Project No.: PI21/00679.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2022.
End date: 31/12/2024.
- Title:** Definición de métricas y validación clínica de un sistema digital para la monitorización remota de los trastornos del movimiento.
Principal investigator: Benito León, Julián.
Project No.: TED2021-13174B-C33.
Funding body: Ministerio de Economía y Competitividad.
Start date: 01/12/2022.
End date: 30/11/2024.
- Title:** Ayuda adicional Miguel Servet.
Principal investigator: Alquézar Burillo, Carolina.
Project No.: CP20/00007.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2021.
End date: 31/12/2024.
- Title:** Alteraciones salivales para el diagnóstico precoz de la enfermedad de Alzheimer: efectos y consecuencias de la disbiosis oral.
Principal investigator: Hernández Gallego, Jesús.
Project No.: PI21/00679.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2022.
End date: 31/12/2024.
- Title:** Definición de métricas y validación clínica de un sistema digital para la monitorización remota de los trastornos del movimiento.
Principal investigator: Benito León, Julián.
Project No.: TED2021-13174B-C33.
Funding body: Ministerio de Economía y Competitividad.
Start date: 01/12/2022.
End date: 30/11/2024.
- Title:** Ayuda adicional Miguel Servet.
Principal investigator: Alquézar Burillo, Carolina.
Project No.: CP21/00049.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2022.
End date: 31/12/2025.
- Title:** Uso de organoides cerebrales derivados de pacientes para la búsqueda de tratamientos eficaces para la demencia frontotemporal.
Principal investigator: Alquézar Burillo, Carolina.
Funding body: Fundación Eugenio Rodríguez Pascual.
Start date: 19/12/2022.
End date: 18/12/2024.

- Title:** Estudio del papel de Tau en la regulación de la autofagia: relevancia para el diagnóstico y el tratamiento de la demencia frontotemporal.
Principal investigator: Alquézar Burillo, Carolina.
Project No.: PI22/00345.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2023.
End date: 31/12/2025.
- Title:** Factores relacionados con la activación microglial dependiente de TREM2 en la demencia con cuerpos de Lewy, influencia sobre su evolución y aplicaciones técnicas.
Principal investigator: Morenas Rodríguez, Estrella.
Project No.: PI22/00215.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2023.
End date: 31/12/2025.
- Title:** Validación y utilidad clínica de MooVeo: una plataforma digital para la consulta neurológica remota.
Principal investigator: Sánchez Ferro, Álvaro.
Project No.: PI22/01177.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2023.
End date: 31/12/2025.
- Title:** Evaluación de un nuevo marco multimodal para apoyar el diagnóstico y manejo del temblor.
Principal investigator: Benito León, Julián.

- Project No.:** PID2022-13858OB-C33.
Funding body: Ministerio de Economía y Competitividad.
Start date: 01/09/2023.
End date: 31/08/2027.
- Title:** PDnetGo.
Principal investigator: Sánchez Ferro, Álvaro.
Funding body: Eit Health.
Start date: 01/11/2023.
End date: 31/12/2024.
- Title:** Síndrome parkinsoniano asociado a una nueva mutación en TBK1: alteraciones patológicas ligadas a procesos autofágicos y alternativas terapéuticas.
Principal investigator: Carro Díaz, Eva M.^a.
Funding body: Fundación Española para la Investigación en Parkinson.
Start date: 21/12/2020.
End date: 31/12/2022; extended to 31/03/2023.
- Title:** MDS electronic diary (ediary) development initiative.
Principal investigator: Sánchez Ferro, Álvaro.
Funding body: The International Parkinson and Movement Disorder Society.
Start date: 16/01/2023.
End date: 15/01/2026.

EUROPEAN PROJECT APPLICATIONS 2023

- Call Identifier:** Pascual Maragall Research Program (Call for proposals 2023).
Project title: SORL1 deficiency, calcium influx and oxidative stress in Alzheimer's disease.
Acronym: CASORL1.
Number: 2023-1311.
Coordinator: Yes.
Coordinating Centre: FIBH12O.
Researcher participating in the project: Fernando Bartolomé Robledo.
Granted: No.
- Call Identifier:** Foundation: Standard Award Program in Alzheimer's Disease Research (Call for proposals 2023).
Project title: Deciphering the Complexity of Tauopathies: An iPSC-Derived Modeling Approach to improve the Diagnosis and Treatment.
Number: 1185364.
Coordinator: Yes.
Coordinating Centre: FIBH12O.
Researcher coordinating the project: Carolina Alquézar Burillo.
Granted: No.

PUBLICATIONS*

Type of Document	No. of document	Σ IF (JCR 2022)
Articles	27	147.3
Reviews	1	13.1
Editorials	3	7
Total	31	167.4
Letters	6	21.1
Total	37	188.5

* Publications: only "Article", "Review", "Editorial Material" and "Letter" have been selected in "Document Type" of ISI Web Of Knowledge. The breakdown of publications includes some not included in the 2022 JCR, which are therefore not taken into account in the final count shown in the table, since they do not have IF.

Articles

- Alcalá Torres, J; Pérez de la Fuente, R; Cardenas del Carre, A; Arteché López, A; Posada Rodríguez, IJ. Episodic ataxia type 2: a clinical, genetic and radiological study of 10 patients. *Rev. Neurologia*. 2023. 76. (10). p. 321-325. Article.
- Benito León, J; del Pino, AB; Aladro, Y; Cuevas, C; Domingo Santos, A; Sánchez Seco, VG; Labiano Fontcuberta, A et al. Abnormal functional connectivity in radiologically isolated syndrome: A resting-state fMRI study. *Mult. Scler. J*. 2023. 29. (11-12). p. 1393-1405. Article.
- Benito León, J; Ghosh, R; Lapeña Motilva, J; Martín Arriscado, C; Bermejo Pareja, F. Association between cumulative smoking exposure and cognitive decline in non-demented older adults: NEDICES study. *Sci Rep*. 2023. 13. (1). 5754. Article.
- Cena, CEG; Silva, L; Palencia, FHD; Moriñigo, MI; Santos, CP; Pazmiño, RS; Benito León, J et al. Internet of medical things. Measurement of respiratory dynamics using wearable sensors in post-COVID-19 patients. *Enfoque UTE*. 2023. 14. (3). p. 36-48. Article.
- Deb, S; Mondal, R; Lahiri, D; Shome, G; Roy, AG; Sarkar, V; Sarkar, S et al. Norovirus-associated neurological manifestations: summarizing the evidence. *J. Neurovirol*. 2023. 29. (4). p. 492-506. Article.
- Dubey, S; Das, S; Ghosh, R; Dubey, MJ; Chakraborty, AP; Roy, D; Das, G et al. The Effects of SARS-CoV-2 Infection on the Cognitive Functioning of Patients with Pre-Existing Dementia. *J. Alzheimers Dis. Rep*. 2023. 7. (1). p. 119-128. Article.
- Dubey, S; Ghosh, R; Ray, BK; Gutiérrez Ortiz, C; Benito León, J. A Case of Parinaud Syndrome in a Patient with Parkinson's Disease: Causal Association or Co-incident? *Neurol. India*. 2023. 71. (1). p. 129-131. Article.
- Finze, A; Biechele, G; Rauchmann, BS; Franzmeier, N; Palleis, C; Katzdobler, S; Weidinger, E et al. Individual regional associations between A β -, tau- and neurodegeneration (ATN) with microglial activation in patients with primary and secondary tauopathies. *Mol Psychiatry*. 2023. 28. (10). p. 4438-4450. Article.
- Ghosh, R; León Ruiz, M; Bole, K; Dubey, S; Benito León, J. A Novel Adult Case of Recurrent Acute Pancreatitis Caused by Hypercalcemia With Concurrent Manifestation of Posterior Reversible Encephalopathy Syndrome Revealing Undiagnosed Primary Hyperparathyroidism due to an Underlying Parathyroid Adenoma. *Neurohospitalist*. 2023. 14. (2). p. 174-177. Article.
- Ghosh, R; León Ruiz, M; Dubey, S; Chakraborty, A; Benito León, J. Higher-level gait disorder as a presenting manifestation of progressive supranuclear palsy: a video case report. *Rev. Neurologia*. 2023. 77. (4). p. 101-104. Article.
- Ghosh, R; León Ruiz, M; Purkait, S; Roy, D; Ghosh, T; Benito León, J. Headache as the presenting manifestation of Gorlin-Goltz syndrome with diastematomyelia: A case report. *Neurol. Clin. Neurosci*. 2023. 11. (6). p. 328-331. Article.
- Ghosh, R; León Ruiz, M; Sardar, SS; Lalsing, DP; Benito León, J. Downbeat Nystagmus as a Presenting Manifestation of Neurolisterosis in a Pregnant Woman. *Neuro-Ophthalmol*. 2023. 47. (4). p. 218-224. Article.
- Gómez Grande, A; Seiffert, AP; Villarejo Galende, A; González Sánchez, M; Llamas Velasco, S; Bueno, H; Gómez, EJ et al. Static first-minute-frame (FMF) PET imaging after 18F-labeled amyloid tracer injection is correlated to [18F]FDG PET in patients with primary progressive aphasia. *Rev. Esp. Med. Nucl. Imagen Mol*. 2023. 42. (4). p. 211-217. Article.
- Gómez López, A; Benito León, J; Labiano Fontcuberta, A; Moreno García, S; Salgado Cámara, P. Impact of a specific consultation for patients with progressive forms of multiple sclerosis on the response to their unmet care needs: a cross-sectional study. *Mult. Scler. Relat. Disord*. 2023. 72. p. 104609-104609. Article.
- López Aguirre, M; Matarazzo, M; Blesa, J; Monje, MHG; Rodríguez Rojas, R; Sánchez Ferro, A; Obeso, JA et al. Dopaminergic denervation and associated MRI microstructural changes in the nigrostriatal projection in early Parkinson's disease patients. *npj Parkinsons Dis*. 2023. 9. (1). 144. Article.
- Mondal, R; Deb, S; Mahata, M; Saha, S; Lahiri, D; Benito León, J. Subacute Sclerosing Panencephalitis in a 63-Year-Old Woman Presenting as Generalized Choreoathetosis. *Neurohospitalist*. 2023. 13. (4). p. 381-393. Article.
- Monje, MHG; Grosjean, S; Srp, M; Antunes, L; Bouça Machado, R; Cacho, R; Domínguez, S et al. Co-Designing Digital Technologies for Improving Clinical Care in People with Parkinson's Disease: What Did We Learn? *Sensors*. 2023. 23. (10). 4957. Article.
- Nanda, S; Lapeña Motilva, J; Misra, AK; Guha, G; Ghosh, S; Manna, A; Roy, S et al. P300 Wave Alterations and Cognitive Impairment in Cerebellum Lesions. *Cerebellum*. 2023. Article.
- Rodríguez Perrián, G; de la Encarnación, A; Moreno, F; de Munain, AL; Martínez, A; Martín Requero, A; Alquézar, C et al. Progranulin Deficiency Induces Mitochondrial Dysfunction in Frontotemporal Lobar Degeneration with TDP-43 Inclusions. *Antioxidants*. 2023. 12. (3). 581. Article.
- Saposnik, G; Sánchez Benavidez, G; García Arcelay, E; Franco Macías, E; Bensi, C; Carmelino, S; Allegri, RF et al. Design of a Non-Interventional Study to Assess Neurologists' Perspectives and Pharmacological Treatment Decisions in Early Alzheimer's Disease. *Neurol. Ther*. 2023. 12. (3). p. 995-1006. Article.
- Schlepckow, K; Morenas Rodríguez, E; Hong, S; Haass, C. Stimulation of TREM2 with agonistic antibodies-an emerging therapeutic option for Alzheimer's disease. *Lancet Neurol*. 2023. 22. (11). p. 1048-1060. Article.
- Schuurmans, IME; Dimitrov, B; Schröeter, J; Ribes, A; de la Fuente, RP; Zamora, B; van Karnebeek, CDM et al. Exploring genotype-phenotype correlations in glutaric aciduria type 1. *J. Inherit. Metab. Dis*. 2023. 46. (3). p. 371-390. Article.
- Seoane, D; Roca Rodríguez, L; Ruiz Ortiz, M; Franco Domingo, N; Laespada García, MI; Sánchez Tejerina, D; González Crespo, MR et al. Limbic encephalitis secondary to neuro-Behcet disease: an uncommon presentation. *Rev. Neurologia*. 2023. 77. (2). p. 61-64. Article.
- Sierra Magro, A; Bartolome, F; Lozano Muñoz, D; Alarcón Gil, J; Gine, E; Sanz SanCristobal, M; Alonso Gil, S et al. C/EBP β Regulates TFAM Expression, Mitochondrial Function and Autophagy in Cellular Models of Parkinson's Disease. *Int. J. Mol. Sci*. 2023. 24. (2). 1459. Article.

- Suarez, LM; Diaz Del Cerro, E; Felix, J; Gonzalez Sanchez, M; Ceprian, N; Guerra Perez, N; Novelle, MG et al. Sex differences in neuroimmunoendocrine communication. Involvement on longevity. *Mech. Ageing Dev*. 2023. 211. p. 111798-111798. Article.
- Villarejo Galende, A; García Arcelay, E; Piñol Ripoll, G; del Olmo Rodríguez, A; Viñuela, F; Boada, M; Franco Macías, E et al. Medical help-seeking intentions among patients with early Alzheimer's disease. *Front. Psychiatry*. 2023. 14. 1290002. Article.
- Younger, E; Ellis, EG; Parsons, N; Pantano, P; Tommasin, S; Caeyenberghs, K; Benito Leon, J et al. Mapping Essential Tremor to a Common Brain Network Using Functional Connectivity Analysis. *Neurology*. 2023. 101. (15). p. 1483-1494. Article.

Reviews

- Contador, I; Alzola, P; Stern, Y; de la Torre Luque, A; Bermejo Pareja, F; Fernández Calvo, B. Is cognitive reserve associated with the prevention of cognitive decline after stroke? A Systematic review and meta-analysis. *Ageing Res. Rev*. 2023. 84. p. 101814-101814. Review.

Editorials

- Bellido Cuéllar, S; de la Fuente, RP; Lezana Rosales, JM; Sánchez Calvin, MT; Saiz Díaz, RA; de la Aleja, JG. Epilepsy and Autism spectrum disorder caused by a pathogenic variant in TNRC6B. *Seizure*. 2023. 110. p. 117-118. Editorial Material.
- Ghosh, R; Dubey, S; Benito León, J. Black rash in dark-skinned people: do not forget dermatomyositis. *Neuromusc. Disord*. 2023. 33. (10). p. 788-789. Editorial Material.

Letters

- Antequera, D; Carrero, L; Gonzalez Sanchez, M; Cantero, JL; Orive, G; Muncio, C; Carro, E. Reduced Salivary Lactoferrin Levels in Early-Onset Alzheimer's Disease. *Aging Dis*. 2023. Letter.
- Ghosh, R; Dubey, S; Roy, D; Benito León, J. Pure alexia as a presenting manifestation of scrub typhus. *Neurologia (Engl Ed)*. 2023. 38. (4). p. 307-309. Letter.
- Ghosh, R; Dubey, S; Roy, D; Benito León, J. Pure alexia as a presenting manifestation of scrub typhus. *Neurología*. 2023. 38. (4). p. 307-309. Letter.

END MASTER INVESTIGATIONS DIRECTED ON THE GROUP

- **Student:** Marina Bosch Juan.
Title: Implicación de la deficiencia de SORL1 en la actividad mitocondrial en el contexto de la enfermedad de Alzheimer.
Director: Fernando Bartolomé Robledo.
Master: Investigación en Medicina Traslacional.
University: Universidad Complutense de Madrid.
- **Student:** Miriam Solera Sainero.
Title: Estudio de las alteraciones mitocondriales asociadas a la deficiencia de ATP13A2.
Directors: Fernando Bartolomé Robledo and Carolina Alquézar Burillo.
Master: Investigación en Medicina Traslacional.
University: Universidad Complutense de Madrid.

- Pérez Martínez, DA. Lecanemab en la enfermedad de Alzheimer: ¿realmente estamos ante un cambio en el pronóstico de la enfermedad? *Rev. Neurologia*. 2023. 76. (6). p. 185-188. Editorial Material.

- Ghosh, R; León Ruiz, M; Das, S; Dubey, S; Benito León, J. envenomation-induced posterior reversible encephalopathy syndrome presenting with Balint syndrome. *Neurología*. 2023. 38. (6). Letter.
- León Ruiz, M; Benito León, J; Castañeda Cabrero, C. El electroencefalograma: una prueba complementaria que no debe olvidarse realizar ante una primera crisis epiléptica. *Rev. Neurologia*. 2023. 76. (5). p. 183-184. Letter.
- Romero, JP; Benito León, J. Glucose-6-phosphate dehydrogenase deficiency and COVID-19 mortality. *Minerva Med*. 2023. 114. (3). p. 395-396. Letter.

- **Student:** Ariadna Sancha Velasco.
Title: Análisis comparativo del efecto de Tau sobre la autofagia en modelos celulares de sobreexpresión de Tau *wild-type* y portadora de mutaciones asociadas con la demencia frontotemporal-tau (DFT-Tau).
Director: Carolina Alquézar Burillo.
Master: Neurociencia.
University: Universidad Autónoma de Madrid.

END GRADUATED INVESTIGATIONS DIRECTED ON THE GROUP

- **Student:** Elisa Valero Jiménez.
Title: Uso de modelos celulares para estudiar el efecto de la acumulación de Tau en la autofagia.
Directors: Carolina Alquézar Burillo and Julio Rodríguez Romero.
Degree: Biotecnología.
University: Universidad Politécnica de Madrid.

PRIZES AND AWARDS

- Gonzalo Rodríguez Lafora 2023 Prize from the Asociación Madrileña de Neurología for the best published work in clinical research for Estrella Morenas Rodríguez.
- 3rd Prize Health Reputation Monitor 2023 for the Servicio de Neurología del Hospital Universitario 12 de Octubre, whose head of department is Dr. David Andrés Pérez Martínez.

Applied Behavioural Neuropharmacology

CENTER: Universidad Complutense de Madrid (UCM).

GROUP LEADERS: Orió Ortiz, Laura (R4) and López Moreno, José Antonio (R4).

Alen Fariñas, Francisco - Doctoral researcher (R3).
Bühler, Kora-Mareen - Postdoctoral researcher (R2).
Calleja Conde, Javier - Postdoctoral researcher (R2).
Escudero Moreno, Berta - Predoctoral researcher (R1).
Gine Domínguez, Elena - Doctoral researcher (R3).
Gómez de Heras, Raquel - Doctoral researcher (R3).

Gómez Ruiz, María - Doctoral researcher (R3).
Hernández Gálvez, M.ª Luz - Doctoral researcher (R3).
López Valencia, Leticia - Predoctoral researcher (R1).
Morales García, José Ángel - Doctoral researcher (R3).
Vázquez Penado, Mateo - Predoctoral researcher (R1).

OTHER ACTIVE PROJECTS OF THE RESEARCH GROUP NOT MANAGED BY THE FUNDACIÓN PARA LA INVESTIGACIÓN BIOMÉDICA DEL HOSPITAL 12 DE OCTUBRE (FIBH120):

- **Title:** REACT-AnticipaUCM. Anticipación y prevención del COVID-19 en la Comunidad de Madrid.
Principal investigator: José Antonio López Moreno.
Funding body: Ministerio de Educación y Ciencia.
Start date: 03/01/2022.
End date: 01/02/2023.
Project managed by the Universidad Complutense de Madrid (UCM).
- **Title:** Lipofagia: una nueva aproximación terapéutica para el tratamiento de la enfermedad de Parkinson.
Principal investigator: José A. Morales García.
Project No.: PR44/21-29931.
Funding body: Banco Santander-UCM.
Start date: 20/07/2022.
End date: 19/07/2023.
- **Title:** Sistema de detoxificación de toxinas bacterianas en el abuso de alcohol y la esquizofrenia: el papel de las alipoproteínas en periferia y cerebro.
Principal investigator: Laura Orío Ortiz.
Project No.: PID2021-127256OB-I00.
Funding body: Agencia Estatal de Investigación. Ministerio de Ciencia e Innovación.
Start date: 01/09/2022.
End date: 31/08/2026.
- **Title:** Ayudas a grupos UCM con evaluación aceptable o superior. Neurofarmacología de la ingesta y la conducta adictiva.
Principal investigator: Laura Orío and Raquel Gómez.
Project No.: GRFN14/22 - Ref. 962049.
Funding body: UCM-SANTANDER.
Start date: 01/09/2022.
End date: 31/08/2023.
- **Title:** Ayudas a grupos UCM con evaluación aceptable o superior. Psicofarmacología, genética y prevención de la adicción.
Principal investigator: José Antonio López Moreno.
Project No.: GRFN14/22 - Ref. 940157.
Funding body: UCM-SANTANDER.
Start date: 01/09/2022.
End date: 31/08/2023.
- **Title:** Impacto de un programa de actividad física en la reducción de las alteraciones cognitivas, neurofisiológicas y psicofisiológicas relacionadas con las conductas de consumo de alcohol y cannabis en adolescentes.
Principal investigator: Patricia Sampedro Piquero.
Funding body: Delegación del Gobierno para el Plan Nacional sobre Drogas. Ministerio de Sanidad y Política Social e Igualdad.
Start date: 2023.
End date: 2025.
- **Title:** Guía clínica sobre adicciones comportamentales basada en la evidencia.
Principal investigator: Francisco Pascual - Sociedad Científica Española de Estudios sobre el Alcohol, Alcoholismo y otras Toxicomanías. Sociodrogalcohol.
Project No.: 2022F009P1D.
Funding body: Delegación del Gobierno para el Plan Nacional sobre Drogas. Ministerio de Sanidad y Política Social e Igualdad. Call for NGOs with European funds.
Start date: 2023.
End date: 2024.
- **Title:** Caracterización epidemiológica y de inmunoprotección en poblaciones con trastornos por consumo de alcohol.
Principal investigator: Kora-Mareen Bühler.
Project No.: EXP2022/008941.
Funding body: Plan Nacional sobre Drogas. Fondos Europeos del Plan de Recuperación, Transferencia y Resiliencia.
Start date: 12/07/2023.
End date: 12/01/2025.
- **Title:** Análisis y validación de la melatonina en un modelo preclínico de daño neurológico inducido por exposición a mecloretamina.
Principal investigator: Jose Ángel Morales García.
Funding body: Ministerio de Ciencia e Innovación.
Start date: 31/08/2023.
End date: 30/08/2027.

PUBLICATIONS*

Type of Document	No. of document	Σ IF (JCR 2022)
Articles	6	28.008
Reviews	1	6.1
Total	7	34.108

Articles

- Bagán, A; Rodríguez Arévalo, S; Taboada Jara, T; Griñán Ferré, C; Pallàs, M; Brocos Mosquera, I; Callado, LF et al. Preclinical Evaluation of an Imidazole-Linked Heterocycle for Alzheimer's Disease. *Pharmaceutics*. 2023. 15. (10): 2381. Article.
- Calleja Conde, J; Echeverry Alzate, V; Bühler, KM; Morales García, JÁ; Segovia Rodríguez, L; Durán González, P; Olmos, P et al. Dissecting operant alcohol self-administration using saccharin-fading procedure. *Neuropsychopharmacol. Rep.* 2023. 43. (1): p. 12-22. Article.
- Corral Nieto, Y; Yakhine Diop, SMS; Moreno Cruz, P; Manrique García, L; Gabrielly Pereira, A; Morales García, JA; Niso Santano, M et al. Changes in Liver Lipidomic Profile in G2019S-LRRK2 Mouse Model of Parkinson's Disease. *Cells*. 2023. 12. (5): 806. Article.
- Escudero, B; Moya, M; López Valencia, L; Arias, F; Orio, L. Reelin Plasma Levels Identify Cognitive Decline in Alcohol Use Disorder Patients During Early Abstinence: The Influence of APOE4 Expression. *Int J Neuropsychopharmacol.* 2023. 26. (8): p. 545-556. Article.
- González Portilla, M; Moya, M; Montagud Romero, S; de Fonseca, FR; Orio, L; Rodríguez Arias, M. Oleylethanolamide attenuates the stress-mediated potentiation of rewarding properties of cocaine associated with an increased TLR4 proinflammatory response. *Prog. Neuro-Psychopharmacol. Biol. Psychiatry.* 2023. 124. p. 110722-110722. Article.
- Rodríguez González, A; Moya, M; Rodríguez de Fonseca, F; Gómez de Heras, R; Orio, L. Alcohol binge drinking induces downregulation of blood-brain barrier proteins in the rat frontal cortex -but not in the hippocampus-that is not prevented by OEA pretreatment. *Adv Drug Alcohol Res.* 2023. 3. p. 11091-11091. Article.
- Sierra Magro, A; Bartolome, F; Lozano Muñoz, D; Alarcón Gil, J; Gine, E; Sanz SanCristobal, M; Alonso Gil, S et al. C/EBPβ Regulates TFAM Expression, Mitochondrial Function and Autophagy in Cellular Models of Parkinson's Disease. *Int J Mol Sci.* 2023. 24. (2): 1459. Article.

Reviews

- Romero, A; Morales García, JÁ; Ramos, E. Melatonin: a multitasking indoleamine to modulate hippocampal neurogenesis. *Neural Regen. Res.* 2023. 18. (3): p. 503-505. Review.

THESES DEFENDED OR SUPERVISED WITHIN THE GROUP

- **Doctoral candidate:** Marta Moya Montes.
Thesis title: Implicación del sistema inmune innato en las alteraciones cognitivas y emocionales del Síndrome de Wernicke-Korsakoff.
University: Universidad Complutense de Madrid.
Date read: 16/03/2023.
Thesis director: Laura Orio Ortiz, Eva M.ª Marco Borja García-Bueno.
International mention: No.

* Publications: only "Article", "Review", "Editorial Material" and "Letter" have been selected in "Document Type" of ISI Web Of Knowledge. The breakdown of publications includes some not included in the 2022 JCR, which are therefore not taken into account in the final count shown in the table, since they do not have IF.

END MASTER INVESTIGATIONS DIRECTED ON THE GROUP

- **Student:** Candela Balboa Blanco.
Title: Diferencias sexuales en las conductas durante la abstinencia tras un consumo de alcohol en atracón.
Director: Laura Orio Ortiz.
Master: Psicofarmacología y drogas de abuso.
University: Universidad Complutense de Madrid.
- **Student:** Arley Sandoval Sarrias.
Title: Neurotoxicidad inducida por el uso crónico de nitritos de alquilo (*poppers*).
Director: Laura Orio Ortiz.
Master: Psicofarmacología y drogas de abuso.
University: Universidad Complutense de Madrid.
- **Student:** Nere Zurro Arrazola.
Title: Análisis de la ansiedad de pacientes pediátricos con síndrome de Williams durante el tratamiento dental.
Director: Manuel Joaquín Denova García and Francisco Alén Fariñas.
Master: Odontopediatría.
University: Universidad Complutense de Madrid.
- **Student:** Luz Adriana Claire Orihuela.
Title: El tratamiento para las adicciones a la heroína.
Director: Francisco Alén Fariñas.
Master: Psicofarmacología y drogas de abuso.
University: Universidad Complutense de Madrid.
- **Student:** Mateo Vázquez Penado.
Title: Estudio del efecto del pretratamiento con un fármaco mimético de apolipoproteína A1 (péptido 4F) frente a conductas relacionadas con el consumo de alcohol en atracón.
Director: Laura Orio Ortiz.
Master: Psicofarmacología y drogas de abuso.
University: Universidad Complutense de Madrid.
- **Student:** Javier Yzquierdo Cuenca.
ítulo: El papel de la reelina en los déficits en control inhibitorio asociados al trastorno por uso de alcohol (TUA).
Director: Laura Orio and Berta Escudero.
Master: Psicofarmacología y drogas de abuso.
University: Universidad Complutense de Madrid.
- **Student:** Alberto Gómez Navarro.
Title: Estudio del efecto neuroprotector y antiinflamatorio de la N,N-dimetiltriptamina en un modelo *in vitro* de enfermedad de Parkinson.
Director: José Ángel Morales García.
Master: Neurociencia.
University: Universidad Complutense de Madrid.
- **Student:** Olga Torres González.
Title: Disbiosis intestinal y su relación con los trastornos depresivos: el rol de la serotonina. Revisión sistemática
Director: Kora-Mareen Bühler.
Master: Psicología General Sanitaria.
University: Universidad Villanueva.
- **Student:** Teresa Muñoz Fernández de Castro.
Title: Programa de prevención primaria: uso problemático de Internet y de las redes sociales en adolescentes.
Director: Kora-Mareen Bühler.
Master: Psicología General Sanitaria.
University: Universidad Villanueva.
- **Student:** Cristian Ortega Bustos.
Title: Cambios neurobiológicos de la psicoterapia.
Director: Raquel Gómez de Heras.
Master: Psicofarmacología y drogas de abuso.
University: Universidad Complutense de Madrid.
- **Student:** Miriam Buenache Carmona.
Title: Tratamientos psicológicos eficaces del uso problemático de las redes sociales: una revisión sistemática.
Director: Raquel Gómez de Heras.
Master: Psicofarmacología y drogas de abuso.
University: Universidad Complutense de Madrid.
- **Student:** Yessica Estefany Flórez Caipa.
Title: Abuso de alcohol en las mujeres.
Director: Raquel Gómez de Heras.
Master: Psicofarmacología y drogas de abuso.
University: Universidad Complutense de Madrid.
- **Student:** María Madalina Acsinia
Title: El CBD como un posible tratamiento para las adicciones.
Director: Raquel Gómez de Heras.
Master: Psicofarmacología y drogas de abuso.
University: Universidad Complutense de Madrid.
- **Student:** Cristina Resuela Manzano.
Title: Uso abusivo de esteroides anabolizantes androgénicos, dopaje patológico y posibles efectos en las adicciones.
Director: Raquel Gómez de Heras.
Master: Psicofarmacología y drogas de abuso.
University: Universidad Complutense de Madrid.
- **Student:** Olga Torres González.
Title: Disbiosis intestinal y su relación con los trastornos depresivos: el rol de la serotonina. Revisión sistemática.
Director: Kora-Mareen Bühler.
Master: Psicología General Sanitaria.
University: Universidad Villanueva.
- **Student:** Marta Dorado Yanini
Title: Uso de redes sociales: influencia de la impulsividad y la autoestima.
Director: Kora-Mareen Bühler.
Master: Psicología General Sanitaria
University: Universidad Villanueva.

END GRADUATED INVESTIGATIONS DIRECTED ON THE GROUP

- **Student:** Leonor Álvarez-Villanueva Fernández.
Title: Tratamientos biológicos del trastorno de depresión mayor: énfasis en el potencial terapéutico de la psilocibina.
Director: Javier Calleja Conde.
Degree: Psicología.
University: Centro de Enseñanza Superior Cardenal Cisneros.
- **Student:** Alessandra Francia Martínez.
Title: El potencial terapéutico de los psicodélicos clásicos
Director: Javier Calleja Conde.
Degree: Psicología.
University: Centro de Enseñanza Superior Cardenal Cisneros.
- **Student:** Imanol Lozano Sanz.
Title: Potencial terapéutico de la psilocibina en el trastorno de ansiedad Generalizada.
Director: Javier Calleja Conde.
Degree: Psicología.
University: Centro de Enseñanza Superior Cardenal Cisneros.
- **Student:** Estrella Rodríguez Serrano.
Title: Explorando la depresión mayor: farmacología actual y la prometedora vía alternativa de la ketamina en pacientes con resistencia al tratamiento.
Director: Javier Calleja Conde.
Degree: Psicología.
University: Centro de Enseñanza Superior Cardenal Cisneros.
- **Student:** Miguel Escudero Tricás.
Title: Neurobiología de las adicciones: Una comparación de los mecanismos subyacentes en las adicciones y otros trastornos de la conducta.
Director: Raquel Gómez de Heras.
Degree: Psicología
University: Universidad Complutense de Madrid.
- **Student:** Mireya Gómez Morón.
Title: Relación entre el consumo crónico de cannabis y la aparición de un brote psicótico.
Director: Raquel Gómez de Heras.
Degree: Psicología
University: Universidad Complutense de Madrid.
- **Student:** Carlos González López.
Title: Neurobiología del comportamiento adictivo: Síndrome de abstinencia al alcohol.
Director: Raquel Gómez de Heras.
Degree: Psicología
University: Universidad Complutense de Madrid.
- **Student:** Ana Pérez Juárez.
Title: Comparación de la posible adicción a las redes sociales con la posible adicción a los videojuegos.
Director: Raquel Gómez de Heras.
Degree: Psicología
University: Universidad Complutense de Madrid.
- **Student:** María Vázquez Capitán.
Title: Relación existente entre el consumo de cocaína y la depresión en adultos.
Director: Raquel Gómez de Heras.
Degree: Psicología
University: Universidad Complutense de Madrid.

PRIZES AND AWARDS

- José Ángel Morales García has won second prize in the "Twitter science feed" category of the XII Concurso de Divulgación Científica of the UCM (2023).

STAYS

- Researcher Leticia López Valencia has completed a placement at the Experimental Neuropathology Laboratory of the Department of Pharmacology at the University of Oxford, between December 1, 2023 and April 30, 2024.
- For her part, Berta Escudero Monedero will be staying at The Scripps Research Institute from January 1, 2022 to March 31, 2023.

Neurotraumatology and Subarachnoid Hemorrhage

CENTER: Hospital Universitario 12 de Octubre (HU12O).

GROUP LEADER: Lagares Gómez-Abascal, Alfonso (R4).

Castaño León, Ana María - Researcher.doctor (R3).
Gómez López, Pedro Antonio - Postdoctoral researcher (R2).
Martín Munárriz, Pablo - Postdoctoral researcher (R2).
Navarro Main, Blanca - Postdoctoral researcher (R2).

Panero Pérez, Irene - Predoctoral researcher (R1).
Paredes Sansinenea, Igor - Doctoral researcher (R3).
Sánchez Carabias, María Cristina - Postdoctoral researcher (R2).

ACTIVE RESEARCH PROJECTS

Type of funding	Funding body	No. of projects
Competitive	Commission of the European Communities	1
Competitive	EIT Health	1
Competitive	Fundación de Investigación Médica Mutua Madrileña	3
Competitive	ISCIII	2
Competitive	Ministerio de Economía y Competitividad	1
Total		8

- **Title:** Papel de la respuesta inflamatoria aguda en el daño cerebral: traumatismo craneoencefálico y hemorragia subaracnoidea.
Principal investigator: Lagares Gómez-Abascal, Alfonso.
Project No.: PI18/01387.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2019.
End date: 31/12/2021; extended to 30/06/2023.
- **Title:** Nuevas herramientas para la detección y monitorización de la lesión axonal traumática.
Principal investigator: Castaño León, Ana María.
Funding body: Fundación de Investigación Médica Mutua Madrileña.
Start date: 14/11/2019.
End date: 31/11/2022; extended to 31/11/2024.
- **Title:** Trastornos del sueño tras conmoción cerebral.
Principal investigator: Paredes Sansinenea, Igor.
Funding body: Fundación de Investigación Médica Mutua Madrileña (FMM).
Start date: 06/07/2021.
End date: 05/07/2024.
- **Title:** Biomarkers to improve diagnosis and management of mild traumatic brain injury in vulnerable patients - BRAINI2.
Principal investigator: Lagares Gómez-Abascal, Alfonso.
Project No.: 220325.
Funding body: EIT Health.
Start date: 01/01/2022.
End date: 30/12/2024.
- **Title:** Nuevos biomarcadores y tecnología para mejorar las reglas de predicción en traumatismo craneoencefálico leve.
Principal investigator: Lagares Gómez-Abascal, Alfonso.
Project No.: PI21/01844.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2022.
End date: 31/12/2024.
- **Title:** SurgeryAI-models: incorporating digital tools and ai into the surgery value chain.
Principal investigator: Lagares Gómez-Abascal, Alfonso.
Project No.: TED2021-130944B-C22.
Funding body: Ministerio de Economía y Competitividad.
Start date: 01/12/2022.
End date: 30/11/2024.
- **Title:** Traumatismo craneal y fractura de cadera: aprovechar los datos de la vida real para mejorar el proceso asistencial y los resultados en salud.
Principal investigator: Lagares Gómez-Abascal, Alfonso.
Funding body: Fundación de Investigación Médica Mutua Madrileña.
Start date: 01/08/2023.
End date: 31/07/2026.
- **Title:** Effectiveness and cost-effectiveness of the stratum tool to assist surgery in patients affected by brain tumours: a quasi-experimental study.
Principal investigator: Lagares Gómez-Abascal, Alfonso.
Project No.: 01137416.
Funding body: Commission of the European Communities.
Start date: 01/12/2023.
End date: 30/11/2028.

EUROPEAN PROJECT APPLICATIONS 2023

- Call Identifier:** HORIZON-HLTH-2024-DISEASE-03-two-stage.
Project title: Tackling the silent epidemic of Older Adult Traumatic Brain Injury.
Acronym: OA-TBI.
Number: 101156091-1.
Coordinator: No.
Coordinating Centre: No.
IG researcher participating in the project: Alfonso Lagares.
Granted: Pending phase 2.
- Call Identifier:** HORIZON-HLTH-2024-DISEASE-03-two-stage.
Project title: Investigation and validation of circulating biomarkers for outcome prediction and treatment selection in mild traumatic brain injury.
Acronym: OA-TBI.
Number: 101148988-1.
Coordinator: No.
Coordinating Centre: No.
IG researcher participating in the project: Alfonso Lagares.
Granted: Pending phase 2.

PUBLICATIONS*

Type of Document	No. of document	Σ IF (JCR 2022)
Articles	11	29.4
Reviews	1	4
Editorials	1	0.8
Total	13	34.2

Articles

- Araujo Castro, M; Paredes, I; Pérez López, C; Feijoo, PG; Alvarez Escola, C; Calatayud, M; Lagares, A et al. 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): p. 250-258. Article.
- Castaño Leon, AM; Gómez, PA; Paredes, I; Munarriz, PM; Panero, I; Eiriz, C; García Pérez, D et al. Surgery for acute subdural haematoma: the value of pre-emptive decompressive craniectomy by Propensity score analysis. *J. Neurosurg. Sci*. 2023. 67. (1): p. 83-92. Article.
- Castaño Leon, AM; Moreno Gomez, LM; Jimenez Roldan, L; Gonzalez, P; Campollo, J; Lagares, A. Task synergies in neurovascular surgery: Image-guided navigation using a thermoplastic facial mask for the resection of a symptomatic occult to MRI brain microarteriovenous malformation. *J. Neuroradiol*. 2023. 50. (2): p. 237-240. Article.
- Castaño Leon, AM; Sánchez Carabias, C; Hilario, A; Ramos, A; Navarro Main, B; Paredes, I; Munarriz, PM et al. Serum assessment of traumatic axonal injury: the correlation of GFAP, t-Tau, UCH-L1, and NFL levels with diffusion tensor imaging metrics and its prognosis utility. *J. Neurosurg*. 2023. 138. (2): p. 454-464. Article.
- Galiana, A; Ruiz, S; Alen, JF; Grande, AG; Panero, I; Vega, D; García Perez, D et al. Effects of cranioplasty in cerebral blood perfusion using quantification with 99m-Tc HMPAO SPECT-CT. *J Neuroimaging*. 2023. 33. (1): p. 174-183. Article.
- García Perez, D; Castano Leon, AM; Moreno Gomez, LM; Esteban Sinovas, O; García Posadas, G; Panero Perez, I; Paredes, I et al. Novel CT-based parameters assessing relative cross-sectional area to guide surgical management and predict clinical outcomes in patients with acute subdural hematoma. *Neuroradiology*. 2023. 65. (3): p. 489-501. Article.
- García Pérez, D; Panero, I; Lagares, A; Gómez, PA; Alén, JF; Paredes, I. Atlanto-occipital dislocation with concomitant severe traumatic brain injury: A retrospective study at a level 1 trauma center. *Neurocirugia*. 2023. 34. (1): p. 12-21. Article.
- Gómez, LMM; García Pérez, D; González León, PJ; Munarriz, PM; Castaño León, AM. Pathogenesis of spinal intramedullary lipomas: two case reports. *J. Med. Case Rep*. 2023. 17. (1): 317. Article.
- Hossain, I; Younsi, A; Leon, AMC; Lippa, L; Tóth, P; Terpolilli, N; Tobieson, L et al. Huge variability in restrictions of mobilization for patients with aneurysmal subarachnoid hemorrhage- A European survey of practice. *Brain Spine*. 2023. 3. 101731. Article.
- Iglesias, S; Munarriz, PM; Saceda, J; Catalán Uribarrena, G; Miranda, P; Vidal, JM; Fustero, D et al. Multicentric and collaborative study of Spanish neurosurgical management of pediatric craniopharyngiomas: S-PedCPG.co. *Neurocirugia*. 2023. 34. (2): p. 67-74. Article.
- Lagares, A; Payen, JF; Biberthaler, P; Poca, MA; Méjan, O; Pavlov, V; Viglino, D et al. Study protocol for investigating the clinical performance of an automated blood test for glial fibrillary acidic protein and ubiquitin carboxy-terminal hydrolase L1 blood concentrations in elderly patients with mild traumatic BRAIN Injury and reference values (BRAINI-2 Elderly European study): a prospective multicentre observational study. *BMJ OPEN*. 2023. 13. (7). Article.

* Publications: only "Article", "Review", "Editorial Material" and "Letter" have been selected in "Document Type" of ISI Web Of Knowledge. The breakdown of publications includes some not included in the 2022 JCR, which are therefore not taken into account in the final count shown in the table, since they do not have IF.

- Mee, H; Castaño Leon, AM; Timofeev, I; Adeleye, A; Bhagavatula, ID; Marklund, N; Muehlschlegel, S et al. Standardizing Cranioplasty Outcomes Following Stroke or Traumatic Brain Injury: Protocol for the Development of a Core Outcome Set. *JMIR RES. Protoc*. 2023. 12. e37442. Article.
- Panero, I; Lagares, A; Alén, JA; García perez, D; Eiriz, C; Castano leon, AM; Cepeda, S et al. Efficacy of percutaneous pedicle screws for thoracic and lumbar spine fractures compared with open technique. *J. Neurosurg. Sci*. 2023. 67. (4): p. 462-470. Article.
- Sancho, J; Villa, M; Chavarrías, M; Juarez, E; Lagares, A; Sanz, C. SLIMBRAIN: Augmented reality real-time acquisition and processing system for hyperspectral classification mapping with depth information for in-vivo surgical procedures. *J. Syst. Architect*. 2023. 140. 102893. Article.

Reviews

- Mee, H; Leon, AC; Anwar, F; Grieve, K; Owen, N; Turner, C; Whiting, G et al. Towards a core outcome set for cranioplasty following traumatic brain injury and stroke 'A systematic review of reported outcomes'. *Brain Spine*. 2023. 3. 101735. Review.
- Nakisli, S; Lagares, A; Nielsen, CM; Cuervo, H. Pericytes and vascular smooth muscle cells in central nervous system arteriovenous malformations. *Front. Physiol*. 2023. 14. 1210563. Review.

Editorials

- Delgado López, PD; Carballal, CF; Paredes, I; Delgado, HR; Fernández, DS; Míguez, AV. Catastrophism in spine surgery and the impact of radiological reports. *Neurocirugia*. 2023. 34. (5): p. 217-220. Editorial Material.

END GRADUATED INVESTIGATIONS DIRECTED ON THE GROUP

- Student:** Javier Fernández del Amo.
Title: Factores clínicos y angiográficos relacionados con la presentación clínica en las malformaciones arteriovenosas cerebrales.
Director: Ana María Castaño León and Alfonso Lagares Gómez-Abascal.
Degree: Medicina.
University: Universidad Complutense de Madrid.
- Student:** Beatriz Villar Gomara.
Title: Análisis de la fiabilidad interobservador y la capacidad predictiva en cuanto a tratamiento de las escalas clínicas sobre aneurismas cerebrales incidentales.
Director: Ana María Castaño León and Alfonso Lagares Gómez-Abascal.
Degree: Medicina.
University: Universidad Complutense de Madrid.

PATENTS

- Title:** Método para determinar la evolución del daño cerebral agudo y composición farmacéutica para su tratamiento.
Number: P202031194.
Type: SPANISH patent.
Inventors: Alfonso Lagares Gómez-Abascal, Francisco Javier Egea Máiquez, Víctor Farré Alins, Alejandra Palomino Antolín, Paloma Narros Fernández, Juliana Martins Rosa, Esther Parada Pérez, Borja Jesús Hernández García, José María Roda Frade, Santiago Yus Teruel, Cristina Sánchez Carabias, Luis Gandía Juan.
Owners: Fundación i+12 (20 %), Fundación para la Investigación Biomédica del Hospital Universitario de La Princesa (52 %), UAM (4 %), Fundación para la Investigación Biomédica del Hospital Universitario La Paz (24 %).
Date of application: 30/11/2020.
Status: In process.

Neurovascular

CENTER: Hospital Universitario 12 de Octubre (HU12O) and Universidad Complutense de Madrid (UCM).

GROUP LEADERS: Lizasoain Hernández, Ignacio (R4) and Moro Sánchez, M.ª Ángeles (R4).

Calleja Castaño, Patricia - Predoctoral researcher (R1).
 Castejón Ferrer, David - Support technician.
 Cuartero Desviat, M.ª Isabel - Doctoral researcher (R3).
 Díaz Benito, Blanca - Predoctoral researcher (R1).
 Fernández Valle, Encarnación - Clinical researcher.
 Gaohong, Di - Predoctoral researcher (R1).
 García Biro, Lidia - Manager.
 García Culebras, Alicia - Doctoral researcher (R3).
 García Segura, Juan Manuel - Doctoral researcher (R3).

González de la Aleja Molina, Arturo - Doctoral researcher (R3).
 Hurtado Moreno, Olivia - Doctoral researcher (R3).
 Martínez Salio, Antonio - Clinical researcher.
 Moraga Yébenes, Ana - Doctoral researcher (R3).
 Ostos Moliz, Fernando - Clinical researcher.
 Pradillo Justo, Jesús Miguel - Doctoral researcher (R4).
 Seoane Fernández, David - Clinical researcher.
 Torres López, Cristina - Predoctoral researcher (R1).

ACTIVE RESEARCH PROJECTS

Type of funding	Funding body	No. of projects
Competitive	ISCIII	1
Competitive	Leducq Foundation For Cardiovascular Research	1
Total		2

- **Title:** NETs e ICTUS: inmunotrombosis, envejecimiento e infección (NETsTROKE).
Principal investigator: Lizasoain Hernández, Ignacio.
Project No.: PI20/00535.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2021.
End date: 31/12/2023; extended to 31/12/2024.

- **Title:** Leducq - TransAtlantic Network of Excellence on Circadian Effects in Stroke.
Principal investigator: Lizasoain Hernández, Ignacio.
Project No.: 21CVD04.
Funding body: Leducq Foundation For Cardiovascular Research.
Start date: 01/01/2022.
End date: 31/12/2026.

OTHER ACTIVE PROJECTS OF THE RESEARCH GROUP NOT MANAGED BY THE FUNDACIÓN PARA LA INVESTIGACIÓN BIOMÉDICA DEL HOSPITAL 12 DE OCTUBRE (FIBH12O):

- **Title:** Stroke-Immune Mediated Pathways and Cognitive Trajectory.
Principal investigator: María Ángeles Moro Sánchez.
Project No.: 19CVD01.
Funding body: Leducq - Transatlantic Networks of Excellence Foundation.
Start date: 01/01/2020.
End date: 31/12/2024.
- **Title:** Role of maladaptive adult hippocampal neurogenesis in vascular cognitive impairment and dementia.
Principal investigator: María Ángeles Moro Sánchez.
Project No.: PID2019-106581RB-I00.
Funding body: Ministerio de Ciencia e Innovación.
Start date: 01/06/2020.
End date: 31/05/2023.
- **Title:** Leducq - TransAtlantic Network of Excellence on Circadian Effects in Stroke.
Principal investigator: María Ángeles Moro Sánchez.
Project No.: 21CVD04.
Funding body: Leducq - Transatlantic Networks of Excellence Foundation.

- **Title:** Daño en barrera intestinal tras ictus isquémico y hemorrágico: detección temprana mediante resonancia magnética y efecto sobre la inflamación, daño cerebral y función.
Principal investigator: Jesús Miguel Pradillo Justo.
Project No.: PID2020-117765RB-I00.
Funding body: Ministerio de Ciencia e Innovación.
Start date: 01/09/2021.
End date: 01/08/2024.
- **Title:** Dissecting the role of brain perivascular spaces and glymphatic clearance in vascular-driven dementia.
Principal investigator: María Ángeles Moro Sánchez.
Project No.: PID2022-140616OB-I00.
Funding body: Ministerio de Ciencia e Innovación.
Start date: 01/09/2023.
End date: 01/08/2026.

- **Title:** Excelencia Severo Ochoa 2020.
Principal investigator: Vicente Andrés.
IG Coordinator: María Ángeles Moro Sánchez is the coordinator of one of the programs and is self-funded.
Project No.: 21CVD04.
Funding body: Ministerio de Ciencia e Innovación.
Start date: 01/01/2022.
End date: 31/12/2025.

PUBLICATIONS*

Type of Document	No. of document	Σ IF (JCR 2022)
Articles	10	91.2
Reviews	3	20.808
Total	13	112.008

Articles

- Clemente Moragón, A; Oliver, E; Calle, D; Cussó, L; Gómez, M; Pradillo, JM; Castejón, R et al. Neutrophil $\beta(1)$ adrenoceptor blockade blunts stroke-associated neuroinflammation. *Br. J. Pharmacol.* 2023. 180. (4): p. 459-478. Article.
- Fraga, E; Medina, V; Cuartero, MI; García Culebras, A; Bravo Ferrer, I; Hernández Jiménez, M; García Segura, JM et al. Defective hippocampal neurogenesis underlies cognitive impairment by carotid stenosis-induced cerebral hypoperfusion in mice. *Front. Cell. Neurosci.* 2023. 17. 1219847. Article.
- García Martínez, I; Alen, R; Pereira, L; Povo Retana, A; Astudillo, AM; Hitos, AB; Gomez Hurtado, I et al. Saturated fatty acid-enriched small extracellular vesicles mediate a crosstalk inducing liver inflammation and hepatocyte insulin resistance. *JHEP Rep.* 2023. 5. (8): 100756. Article.
- Hernández Jiménez, M; Abad Santos, F; Cotgreave, I; Gallego, J; Jilma, B; Flores, A; Jovin, TG et al. Safety and Efficacy of ApTOLL in Patients With Ischemic Stroke Undergoing Endovascular Treatment A Phase 1/2 Randomized Clinical Trial. *JAMA Neurol.* 2023. 80. (8): p. 779-788. Article.
- La Russa, D; Di, C; Lizasoain, I; Moraga, A; Bagetta, G; Amantea, D. Tumor Necrosis Factor (TNF)- α -Stimulated Gene 6 (TSG-6): A Promising Immunomodulatory Target in Acute Neurodegenerative Diseases. *Int. J. Mol. Sci.* 2023. 24. (2): 1162. Article.
- López Merino, E; Cuartero, MI; Esteban, JA; Briz, V. Perinatal exposure to pesticides alters synaptic plasticity signaling and induces behavioral deficits associated with neurodevelopmental disorders. *Cell Biol Toxicol.* 2023. 39. (5): p. 2089-2111. Article.
- Marto, JP; Strambo, D; Ntaios, G; Nguyen, TN; Herzig, R; Czlonkowska, A; Demeestere, J et al. Safety and Outcome of Revascularization Treatment in Patients With Acute Ischemic Stroke and COVID-19: The Global COVID-19 Stroke Registry. *Neurology.* 2023. 100. (7): p. 739-750. Article.
- Paz García, M; Povo Retana, A; Jaén, RI; Prieto, P; Peraza, DA; Zaragoza, C; Hernandez Jimenez, M et al. Beneficial effect of TLR4 blockade by a specific aptamer antagonist after acute myocardial infarction. *Biomed. Pharmacother.* 2023. 158. 114214. Article.
- Saver, JL; Klerman, EB; Buchan, AM; Calleja, P; Lizasoain, I; Bahr Hosseini, M; Lee, SR et al. Consensus Recommendations for Standardized Data Elements, Scales, and Time Segmentations in Studies of Human Circadian/Diurnal Biology and Stroke. *Stroke.* 2023. 54. (7): p. 1943-1949. Article.
- Seoane, D; Roca Rodríguez, L; Ruiz Ortiz, M; Franco Domingo, N; Laespada García, MI; Sánchez Tejerina, D; González Crespo, MR et al. Limbic encephalitis secondary to neuro-Behcet disease: an uncommon presentation. *Rev. Neurologia.* 2023. 77. (2): p. 61-64. Article.
- Torres López, C; Cuartero, MI; García Culebras, A; de la Parra, J; Fernández Valle, ME; Benito, M; Vázquez Reyes, S et al. Ipsilesional Hippocampal GABA Is Elevated and Correlates With Cognitive Impairment and Maladaptive Neurogenesis After Cortical Stroke in Mice. *Stroke.* 2023. 54. (10): p. 2652-2665. Article.
- Ostos, F; Rodríguez López, A; Jiménez, PM; Sánchez, CS; Martínez Salio, A; Ballenilla, F; Lizasoain, I et al. Use of Tenecteplase in Acute Ischemic Stroke in the Time of SARS-CoV-2. *Neurohospitalist.* 2023. 13. (3): p. 266-271. Article.

* Publications: only "Article", "Review", "Editorial Material" and "Letter" have been selected in "Document Type" of ISI Web Of Knowledge. The breakdown of publications includes some not included in the 2022 JCR, which are therefore not taken into account in the final count shown in the table, since they do not have IF.

Reviews

- Cuartero, MI; García Culebras, A; Nieto Vaquero, C; Fraga, E; Torres López, C; Pradillo, J; Lizasoain, I et al. The role of gut microbiota in cerebrovascular disease and related dementia. Br. J. Pharmacol. 2023. 181. (6): p. 816-839. Review.
- García Culebras, A; Cuartero, MI; Peña Martínez, C; Moraga, A; Vázquez Reyes, S; de Castro Millán, FJ; Cortes Canteli, M et al. Myeloid cells in vascular dementia and Alzheimer's disease: Possible therapeutic targets? Br. J. Pharmacol. 2023. 181. (6): p. 777-798. Review.

THESES DEFENDED OR SUPERVISED WITHIN THE GROUP

- **Doctoral candidate:** Cristina Torres López.
Thesis title: Deterioro cognitivo tras ictus isquémico: mecanismos implicados en la disfunción de la neurogénesis hipocampal.
University: Universidad Complutense de Madrid.
Date read: 27/10/2023.
Thesis director: María Ángeles Moro, Ignacio Lizasoain María Isabel Cuartero.
International mention: Yes.

END MASTER INVESTIGATIONS DIRECTED ON THE GROUP

- **Student:** Mónica Amarilla Iriarte.
Title: Desarrollo y caracterización de un nuevo modelo de vasculitis cerebral.
Directors: Jesús Miguel Pradillo and Manuel Navarro Oviedo.
Master: Neurociencia.
University: Universidad Complutense de Madrid.
- **Student:** Alberto Aguado Calvo.
Title: Determinación de la translocación bacteriana y sus consecuencias sobre la inflamación y la lesión cerebral tras ictus isquémico experimental.
Directors: Jesús Miguel Pradillo and Manuel Navarro Oviedo.
Master: Neurociencia.
University: Universidad Complutense de Madrid.
- **Student:** Alba Fernández Bustelo
Title: iPSCs modificadas mediante CRISPR/Cas9 como herramienta para modular genes desregulados tras ictus isquémico.
Directora: Ana Moraga Yébenes.
Master: Medicina Traslacional.
University: Universidad Complutense de Madrid.

END GRADUATED INVESTIGATIONS DIRECTED ON THE GROUP

- **Student:** Sara Wignall.
Title: Perspectiva de género en la asignatura de farmacología.
Director: Olivia Hurtado Moreno.
Degree: Nutrición Humana y Dietética.
University: Universidad Complutense de Madrid.
- **Student:** Natalia Rivas Manzanegue.
Title: Educación nutricional en un grupo de mujeres marroquíes.
Director: Olivia Hurtado Moreno.
Degree: Nutrición Humana y Dietética.
University: Universidad Complutense de Madrid.
- **Student:** Adrián Rodríguez Llave.
Title: Estudio de la neurogénesis maladaptativa y el deterioro cognitivo posictus en un modelo murino experimental de isquemia cerebral.
Directors: Francisco Javier de Castro Millán and María Ángeles Moro Sánchez.
Degree: Biología Sanitaria.
University: Universidad de Alcalá.

STAYS

- Between September 15 and December 15, 2023, researcher Blanca Díaz Benito completed a stay at the Institute for Stroke and Dementia Research (ISD) University Hospital, LMU Munich with Dr. Steffen Tiedt.

Translational Psychiatry

CENTER: Hospital Universitario 12 de Octubre (HU12O) and Universidad Complutense de Madrid (UCM).

GROUP LEADERS: Agüera Ortiz, Luis Fernando (R4) and Leza Cerro, Juan Carlos (R4).

- | | |
|---|--|
| Caso Fernández, Javier - Doctoral researcher (R3). | Morales Zahonero Beatriz - Support technician. |
| Castillo García, Isabel María - Researcher. | Moreno Moreno, Beatriz - Support technician. |
| Díaz García César - Predoctoral researcher (R1). | Movilla Pérez, Mónica María - Predoctoral researcher (R1). |
| García Bueno, Borja - Doctoral researcher (R3). | Muñoz López, Marina - Predoctoral researcher (R1). |
| González Bris, Álvaro - Predoctoral researcher (R1). | Muñoz Madrigal, José Luis - Doctoral researcher (R3). |
| Herrera Rodríguez, Sara - Clinical researcher. | Navio Acosta, Mercedes - Postdoctoral researcher (R3). |
| Holgado Madera, Pedro Manuel - Clinical researcher. | Ortega Bernardo, María del Carmen - Graduate researcher. |
| López Álvarez, Jorge - Researcher. | Ramos García, Javier - Researcher. |
| López Fuentetaja, Ana María - Predoctoral researcher (R1). | Robledo Montaña, Javier - Predoctoral researcher (R1). |
| López Gutiérrez, Irene - Predoctoral researcher (R1). | Sanz Fuentenebro, Francisco Javier - Researcher. |
| Mac-Dowell Mata, Karina Soledad - Postdoctoral researcher (R2). | Sanz Martínez, Miguel - Support technician. |
| Malan-Müller, Stefanie - Doctoral researcher (R2). | Ulecia Morón, Cristina - Predoctoral researcher (R1). |
| Martin Hernández, David - Postdoctoral researcher (R2). | Villalba Borrueal, Antonio Miguel - Support nurse. |

OTHER ACTIVE PROJECTS OF THE RESEARCH GROUP NOT MANAGED BY THE FUNDACIÓN PARA LA INVESTIGACIÓN BIOMÉDICA DEL HOSPITAL 12 DE OCTUBRE (FIBH12O):

- **Title:** Mecanismos de entrada a cerebro de señales inflamatorias en patologías psiquiátricas.
Principal investigators: Juan Carlos Leza Cerro and Elena Figuero Ruiz.
Project No.: PID2019- 109033RB-I00.
Funding body: Ministerio de Ciencia e Innovación.
Start date: 01/06/2020.
End date: 31/05/2023.
- **Title:** Mitofagia, inmunidad innata y estrés oxidativo en la enfermedad psicótica y la depresión mayor: caracterización de su papel y posible modulación farmacológica y epigenética.
Principal investigator: Javier Rubén Caso Fernández.
Project No.: PID2020-113103RB-I00.
Funding body: Ministerio de Ciencia e Innovación.
Start date: 01/09/2021.
End date: 31/08/2024.
- **Title:** Proyecto valoración de los compuestos X/Y en inflamación, estado óxido/nitrosativo y traslocación bacteriana intestinal en un modelo de CMS en rata.
Principal investigator: Juan Carlos Leza Cerro.
Project No.: 322-2022-B-2023, art. 60.
Funding body: Artículo 83. Chemo Research, Laboratorios Licons S.A. and Universidad Complutense de Madrid.
Start date: 01/09/2022.
End date: 31/05/2024.
- **Title:** Regulación de la activación glial por inhibición de la recaptación de noradrenalina como tratamiento alternativo contra la neurodegeneración.
Principal investigator: José Luis Muñoz Madrigal.
Project No.: PID2021-123871OB-I00.
Funding body: Agencia Estatal de Investigación. Ministerio de Ciencia e Innovación.
Start date: 01/09/2022.
End date: 31/08/2025.
- **Title:** Investigación de la interacción oral-intestinal-cerebral en la ansiedad y la depresión.
Principal investigator: Stefanie Malan Müller.
Project No.: PID2021-126468OA-I00.
Funding body: Agencia Estatal de Investigación. Ministerio de Ciencia e Innovación.
Start date: 01/09/2022.
End date: 31/08/2024.
- **Title:** Regulación noradrenérgica de CX3CR1 y del inflamasoma NLRP3 como potenciales mecanismos mediadores de los efectos terapéuticos de reboxetina en la enfermedad de Alzheimer.
Principal investigator: José Luis Muñoz Madrigal.
Project No.: PR44/21-29932.
Funding body: Santander - Universidad Complutense de Madrid.
Start date: 20/07/2022.
End date: 19/07/2023.
- **Title:** Apolipoproteínas y sus receptores en esquizofrenia: más allá del transporte de colesterol.
Principal investigator: Borja García Bueno.
Project No.: PR44/21-29921.
Funding body: Santander - Universidad Complutense de Madrid.
Start date: 20/07/2022.
End date: 19/07/2023.
- **Title:** Permeabilidad de barreras y neuroinflamación en el contexto de las enfermedades neuropsiquiátricas. Un enfoque preclínico y clínico.
Principal investigators: Juan Carlos Leza Cerro and Elena Figuero Ruiz.
Project No.: PID2022-137932NB-I00.
Funding body: Ministerio de Ciencia e Innovación.
Start date: 01/09/2023.
End date: 31/07/2027.

PUBLICATIONS*

Type of Document	No. of document	Σ IF (JCR 2022)
Articles	15	83.9
Reviews	4	18.2
Editorials	2	9.9
Total	21	112

Articles

- Agüera Ortiz, L; Moreno Menguiano, C; Gutierrez Rodríguez, M; González Salvador, T; Claver Martín, MD; Gutiérrez Labrador, R; Mesa Rodas, N et al. Psychogeriatric care in times of COVID. Lessons learned and proposals for similar situations. *Actas Esp. Psiquiatri.* 2023. 51. (1): p. 1-8. Article.
- Bioque, M; Mac Dowell, KS; Font, C; Meseguer, A; Macau, E; García Orellana, M; Valentí, M et al. Acute effects of a session of electroconvulsive therapy on brain-derived neurotrophic factor plasma levels. *Span. J. Psychiatry Ment. Health.* 2023. 16. (3): p. 137-142. Article.
- Church, KA; Rodríguez, D; Mendiola, AS; Vanegas, D; Gutierrez, IL; Tamayo, I; Amadu, A et al. Pharmacological depletion of microglia alleviates neuronal and vascular damage in the diabetic CX3CR1-WT retina but not in CX3CR1-KO or hCX3CR1(I249/M280)-expressing retina. *Front. Immunol.* 2023. 14. p. 1130735-1130735. Article.
- Hidalgo Figueroa, M; Salazar, A; Romero Alberca, C; MacDowell, KS; García Bueno, B; Bioque, M; Bernardo, M et al. Association of Prolactin, Oxytocin, and Homocysteine With the Clinical and Cognitive Features of a First Episode of Psychosis Over a 1-Year Follow-Up. *Int. J. Neuropsychopharmacol.* 2023. 26. (11): p. 796-807. Article.
- Izquierdo, A; Cabello, M; Leal, I; Torio, I; Madrigal, JLM; MacDowell, KS; Rodríguez Jimenez, R et al. Neighborhood Vulnerability and Disability in First Episode of Psychosis: A Multilevel Study. *J. Clin. Psychiatry.* 2023. 84. (2): 22m14401. Article.
- Lamanna Rama, N; MacDowell, KS; López, G; Leza, JC; Desco, M; Ambrosio, E; Soto Montenegro, ML. Neuroimaging revealed long-lasting glucose metabolism changes to morphine withdrawal in rats pretreated with the cannabinoid agonist CP-55, 940 during periadolescence. *Eur. Neuropsychopharmacol.* 2023. 69. p. 60-76. Article.
- López Villatoro, JM; Díaz Marsá, M; de la Torre Luque, A; MacDowell, KS; Prittowitz, C; Leza, JC; Carrasco, JL. Inflammatory and oxidative endophenotypes in borderline personality disorder: A biomarker cluster analysis. *World J. Biol. Psychiatry.* 2023. 24. (7): p. 587-594. Article.
- Malan Müller, S; Valles Colomer, M; Palomo, T; Leza, JC. The gut-microbiota-brain axis in a Spanish population in the aftermath of the COVID-19 pandemic: microbiota composition linked to anxiety, trauma, and depression profiles. *Gut Microbes.* 2023. 15. (1): 2162306. Article.
- Martín Hernández, D; Martínez, M; Robledo Montaña, J; Muñoz López, M; Virto, L; Ambrosio, N; Marín, MJ et al. Neuroinflammation related to the blood-brain barrier and sphingosine-1-phosphate in a pre-clinical model of periodontal diseases and depression in rats. *J. Clin. Periodontol.* 2023. 50. (5): p. 642-656. Article.
- Moodley, A; Womersley, JS; Swart, PC; van den Heuvel, LL; Malan Müller, S; Seedat, S; Hemmings, SMJ. A network analysis investigating the associations between posttraumatic stress symptoms, markers of inflammation and metabolic syndrome. *J. Psychiatr. Res.* 2023. 165. p. 105-114. Article.
- Ortiz, LFA; García Ribas, G; Luna, FJ; Alvarez, MCP; Marcos, NS; López, BS; Estudio NEURAXCARE, Grp. Usefulness of Community Pharmacy for Early Detection of Cognitive Impairment in Older People Using the IQ-CODE Questionnaire. *JPAD-J. Prev. Alzheimers Dis.* 2023. 10. (3): p. 488-496. Article.
- Reneses, B; Escudero, A; Tur, N; Agüera Ortiz, L; Moreno, DM; Saiz Ruiz, J; Rey Bruguera, M et al. The black hole of the transition process: dropout of care before transition age in adolescents. *Eur Child Adolesc Psychiatry.* 2023. 32. (7): p. 1285-1295. Article.
- Rodríguez Jimenez, R; García Fernández, L; Baón Pérez, B; Ansedo Cascudo, JC; Arroba, CMA; Sendra Gutiérrez, JM; Romero Ferreira, V et al. Hospital admissions due to suicide attempts during the COVID-19 pandemic, a 3-year longitudinal study. *Psychiatry Res.* 2023. 327. 115346. Article.
- Ruiz Guerrero, F; del Barrio, AG; de la Torre Luque, A; Ayad Ahmed, W; Beato Fernandez, L; Montes, FP; Velasco, ML et al. Oxidative stress and inflammatory pathways in female eating disorders and borderline personality disorders with emotional dysregulation as linking factors with impulsivity and trauma. *Psychoneuroendocrinology.* 2023. 158. 106383. Article.
- Saccà, V; Novellino, F; Salsone, M; Abou Jaoude, M; Quattrone, A; Chiriaco, C; Madrigal, JLM et al. Challenging functional connectivity data: machine learning application on essential tremor recognition. *Neurol. Sci.* 2023. 44. (1): p. 199-207. Article.
- Zamora Banegas, B; Alvarez Sesmero, S; del Yerro Alvarez, MJD; Agüera Ortiz, LF; López Alvarez, J. Elderly patients with adaptive disorder diagnosis in psychogeriatric interconsultation: clinical profile and therapeutic approach. *Actas Esp. Psiquiatri.* 2023. 51. (2): p. 46-55. Article.

Reviews

- Bouza, E; Arango, C; Moreno, C; Gracia, D; Martín, M; Pérez, V; Lázaro, L et al. Impact of the COVID-19 pandemic on the mental health of the general population and health care workers. *Rev. Esp. Quim.* 2023. 36. (2): p. 125-143. Review.
- Castro Quintas, A; Palma Gudiel, H; San Martín González, N; Caso, JR; Leza, JC; Fañanás, L. Salivary secretory immunoglobulin A as a potential biomarker of psychosocial stress response during the first stages of life: A systematic review. *Front. Neuroendocrinol.* 2023. 71. 101083. Review.
- Martín Hernández, D; Muñoz López, M; Tendilla Beltrán, H; Caso, JR; García Bueno, B; Menchén, L; Leza, JC. Immune System and Brain/Intestinal Barrier Functions in Psychiatric Diseases: Is Sphingosine-1-Phosphate at the Helm? *Int. J. Mol. Sci.* 2023. 24. (16): 12634. Review.
- Rust, C; Malan Muller, S; van den Heuvel, LL; Tonge, D; Seedat, S; Pretorius, E; Hemmings, SMJ. Platelets bridging the gap between gut dysbiosis and neuroinflammation in stress-linked disorders: A narrative review. *J. Neuroimmunol.* 2023. 382. 578155. Review.

Editorials

- Pereira, MP; García Bueno, B; Caso, JR. Editorial: Neuroinflammatory and oxidative/nitrosative pathways in neuropsychiatric and neurological diseases and their possible neuropharmacological regulation, Volume II. *Front. Pharmacol.* 2023. 14. p. 1191907-1191907. Editorial Material.
- Tendilla Beltrán, H; Martín Hernández, D. Editorial: Non-canonical pathways of psychiatric drugs: beyond their neurotransmitter action. *Front. Neurosci.* 2023. 17. 1278748. Editorial Material.

THESES DEFENDED OR SUPERVISED WITHIN THE GROUP

- **Doctoral candidate:** Álvaro González Bris.
Thesis title: Inmunidad innata y neuroinflamación en modelos doble-hit de patologías neuropsiquiátricas en rata: estudio de potenciales dianas farmacológicas.
University: Universidad Complutense de Madrid.
Date read: 10/03/2023.
Thesis director: Karina MacDowell, Javier R. Caso, Juan Carlos Leza.
International mention: No.
- **Doctoral candidate:** Irene López Gutiérrez.
Thesis title: Estudio de los efectos neuroprotectores y antiinflamatorios de la noradrenalina y del potencial terapéutico de la reboxetina en la enfermedad de Alzheimer.
University: Universidad Complutense de Madrid.
Date read: 23/06/2023.
Thesis director: José Luis Muñoz Madrigal.
International mention: Yes.
- **Doctoral candidate:** Fabián Hernández Álvarez.
Thesis title: Estrés oxidativo e inflamación en trastorno bipolar de inicio temprano.
University: Universidad Complutense de Madrid.
Date read: 10/11/2023.
Thesis director: Carmen Moreno, Juan Carlos Leza.
International mention: No.
- **Doctoral candidate:** Marta Moya Montes.
Thesis title: Implicación del sistema inmune innato en las alteraciones cognitivas y emocionales del síndrome de Wernicke Korsakoff.
University: Universidad Complutense de Madrid.
Date read: 16/03/2023.
Thesis director: Borja García Bueno, Eva Marco, Laura Orío.
International mention: No.

END MASTER INVESTIGATIONS DIRECTED ON THE GROUP

- **Student:** César Díaz García
Title: Alteraciones del sistema endocannabinoide y la plasticidad sináptica en un modelo preclínico *in vivo* de periodontitis y depresión.
Directors: Borja García Bueno and David Martín Hernández.
Master: Neurociencias.
University: Universidad Complutense de Madrid.

* Publications: only "Article", "Review", "Editorial Material" and "Letter" have been selected in "Document Type" of ISI Web Of Knowledge. The breakdown of publications includes some not included in the 2022 JCR, which are therefore not taken into account in the final count shown in the table, since they do not have IF.

PRIZES AND AWARDS

- Claudia Yanes Castilla, Irene López-Gutiérrez. Special mention for “Las mariposas del alma” in the “Photography” category at the 12th UCM Outreach Competition. June 2023. Universidad Complutense de Madrid.
- First prize at PhDay 2023 for “Puesta a punto de un modelo preclínico de periodontitis y esquizofrenia”. 05/10/2023. Universidad Complutense de Madrid.
- Second prize in the XVIII Curso en Metodología de Investigación en Periodoncia for “Efecto del tratamiento periodontal en un modelo combinado de periodontitis y depresión en ratas Wistar”. DENTAID. 24/02/2023.

PATENTS

- **Title:** Procedimiento para la elaboración de nanopartículas lipídicas, y nanopartículas lipídicas con los macrófagos cerebrales como células diana.
Number: P201800272.
Type: SPANISH patent.
Inventors: Borja García Bueno, Aline Sayd Gaban, Francisco Monroy Muñoz, Lara Hernández Moleiro, Juan Carlos Leza Cerro.
Owners: Fundación i+12 (20 %), UCM (80 %).
Priority Date: 12/12/2018.
Status: Granted (09/07/2019).

COORDINATOR:

Francisco Javier Fernández Martínez

Genetics and Inheritance
Research on Physical Activity and Health
Research on Intelligent Biomaterials
Care Research - InveCuid
Translational Research with iPS Cells
Regenerative Medicine
Toxicology and Safety of Chemical and Biological Agents

The Transversal Area is made up of 7 research groups that contribute more than 80 researchers to the structure of the Instituto i+12 and share as their main characteristic the interdisciplinary nature of their approaches and the horizontality of their proposals.

In this sense, they cover aspects ranging from the identification of the biological mechanisms involved in the etiology of a wide spectrum of pathologies, including the genomic approach to them, to the development of therapeutic methodologies that allow the replacement or regeneration of structurally and functionally damaged tissues or organs. Also included is the development of intelligent biomaterials or new drugs for high-incidence diseases or for rare diseases that generally lack therapy. These lines, complemented by research into patient care and safety, enable the creation of an area within the scientific structure made up of several axes, which can channel the development of inter- and intra-group research projects and respond to the requirements of any other area of the Instituto i+12.

Cooperative development objectives set in the area:

General objectives

- Establish solid intra-area collaborations through the request for joint actions that involve obtaining resources.
 - Two actions requested by various research groups (research projects, personnel, training, etc.). Period: five years. Degree of achievement: medium.
 - Two publications signed by members of two or more groups in the area. Period: annual. Degree of achievement: low.
- Extend existing collaborations to new areas of i+12. 2 publications signed by two or more i+12 groups. Period: annual. Degree of achievement: high.
- Promote joint training activities. 2 theses, final year projects, master's degree projects co-directed between several groups. Period: annual. Degree of achievement: medium.
- Encourage the protection of intellectual property in collaborative developments. 1 application for registration of intellectual property associated with the collaborative activity of groups in the area. Period: five years. Degree of achievement: low.
- Establish Asset channels to improve the flow of information and coordination between the different groups. Two area meetings held. Period: annual. Degree of achievement: medium.

List of the 5 most relevant publications of the Transversal Area during 2023

Below are the 5 most relevant publications of the Cross-disciplinary Area selected on the basis of the original articles led by researchers in the area, published in the top 10% of their subject category in JCR and most frequently cited:

1. Fiuza Luces, C; **Valenzuela, PL**; Galvez, BG; Ramirez, M; Lopez Soto, A; Simpson, RJ; **Lucia, A**. The effect of physical exercise on anticancer immunity. Nat. Rev. Immunol. 2023. Article.
2. **Sanchez Salcedo, S**; **Garcia, A**; Gonzalez Jimenez, A; **Vallet Regi, M**. Antibacterial effect of 3D printed mesoporous bioactive glass scaffolds doped with metallic silver nanoparticles. Acta Biomater. 2023. 155. p. 654-666. Article.
3. Lu, QR; Guo, P; Wang, XH; **Ares, I**; **Lopez Torres, B**; **Martinez Larranaga, MR**; Li, TT; Zhang, YY; Wang, X; **Anadon, A**; **et Martinez, MA**. MS4A3-HSP27 target pathway reveals potential for haematopoietic disorder treatment in alimentary toxic aleukia. Cell Biol. Toxicol. 2023. 39. (1): p. 201-216. Article.
4. Ye, XC; Zhao, YX; Ma, WQ; **Ares, I**; **Martínez, M**; **Lopez Torres, B**; **Martínez Larrañaga, MR**; Wang, X; **Anadón, A**; **et Martínez, MA**. The potential of CD38 protein as a target for autoimmune diseases. Autoimmun. Rev. 2023. 22. (4): 103289. Article.
5. **Garcia Manzanares, ME**; Lancharro Bermudez, M; Fernandez Blanc, B; Hernandez Martinez, A; Rodriguez Almagro, J; Caparros Sanz, MR. Assessment, diagnosis and treatment of peristomal skin lesions by remote imaging: An expert validation study. J Adv Nurs. 2023. 79. (2): p. 630-640. Article.

Genetics and Inheritance

CENTER: Hospital Universitario 12 de Octubre (HU12O).

GROUP LEADER: Fernández Martínez, Francisco Javier (R4).

Gómez Mangón, Irene - Predoctoral researcher (R1).

Mayo de Andrés, Sonia - Doctoral researcher.

Moreno García, Marta - Doctoral researcher.

Moreno Izquierdo, Ana - Graduate researcher.

Sánchez Calvin, María Teresa - Clinical researcher.

ACTIVE RESEARCH PROJECTS

Type of funding	Funding body	No. of projects
Competitive	Fundación de Investigación Médica Mutua Madrileña	1
Competitive	ISCIII	4
No competitive	Various	1
Total		6

• **Title:** Evaluación de la utilización del exoma fetal como herramienta para la identificación de la base genética de las alteraciones ecográficas mayores.

Principal investigator: Fernández Martínez, Francisco Javier.

Project No.: PI18/01657.

Funding body: Instituto de Salud Carlos III (ISCIII).

Start date: 01/01/2019.

End date: 31/12/2021; extended to 30/06/2023.

• **Title:** Caracterización genómica de mutaciones germinales y somáticas en pacientes pediátricos con epilepsia refractaria.

Principal investigator: Mayo de Andrés, Sonia.

Funding body: Fundación de Investigación Médica Mutua Madrileña (FMM).

Start date: 05/12/2019

End date: 04/12/2022; extended to 15/12/2024.

• **Title:** Analizador genético capilar.

Principal investigator: Fernández Martínez, Francisco Javier.

Project No.: IFEQ22/00094.

Funding body: Instituto de Salud Carlos III (ISCIII).

Start date: 01/01/2023.

End date: 31/12/2024.

• **Title:** Equipo de PCR cuantitativa.

Principal investigator: Fernández Martínez, Francisco Javier.

Project No.: IFEQ22/00109.

Funding body: Instituto de Salud Carlos III (ISCIII).

Start date: 01/01/2023.

End date: 31/12/2024.

• **Title:** Evaluación clínicotraslacional de la secuenciación del genoma completo no invasivo (NIWGs) en el ámbito preimplantacional y prenatal.

Principal investigator: Fernández Martínez, Francisco Javier.

Project No.: PI22/01967.

Funding body: Instituto de Salud Carlos III (ISCIII).

Start date: 01/01/2023.

End date: 31/12/2025.

• **Title:** Aplicaciones clínicas del test prenatal no invasivo (TPNI) ampliado en la disfunción placentaria.

Principal investigator: Fernández Martínez, Francisco Javier.

Funding body: Illumina Productos de España, S.L.U.

Start date: 25/05/2022.

End date: 24/05/2024.

PUBLICATIONS*

Type of Document	No. of document	Σ IF (JCR 2022)
Articles	2	4.9
Reviews	1	5.6
Editorials	1	3
Total	4	13.5

* Publications: only "Article", "Review", "Editorial Material" and "Letter" have been selected in "Document Type" of ISI Web Of Knowledge. The breakdown of publications includes some not included in the 2022 JCR, which are therefore not taken into account in the final count shown in the table, since they do not have IF.

Articles

- Rodríguez García, ME; Cotrina Vinagre, FJ; Sánchez Calvin, MT; de Aragón, AM; de Las Heras, RS; Dinman, JD; de Vries, BBA et al. A novel de novo variant in CASK causes a severe neurodevelopmental disorder that masks the phenotype of a novel de novo variant in EEF2. *J. Hum. Genet.* 2023. 68. (8): p. 543-550. Article.

- Soengas Gonda, E; de la Fuente, RP; Artech Lopez, A; Gomez Cano, MD; Quesada Espinosa, JF; Milla, CP; Rosales, JML et al. Expanding the Phenotypic Spectrum of Alazami Syndrome: Two Unrelated Spanish Families. *Neuropediatrics.* 2023. 54. (01): p. 31-36. Article.

Reviews

- Mayo, S; Gómez Manjón, I; Marco Hernández, AV; Fernández Martínez, FJ; Camacho, A; Martínez, F. N-Type Ca Channel in Epileptic Syndromes and Epilepsy: A Systematic Review of Its Genetic Variants. *Int. J. Mol. Sci.* 2023. 24. (7): 6100. Review.

Editorials

- Bellido Cuéllar, S; de la Fuente, RP; Lezana Rosales, JM; Sánchez Calvin, MT; Saiz Díaz, RA; de la Aleja, JG. Epilepsy and Autism spectrum disorder caused by a pathogenic variant in TNRC6B. *Seizure.* 2023. 110. p. 117-118. Editorial Material.

Research on Physical Activity and Health

CENTER: Universidad Europea (UE) and Hospital Universitario 12 de Octubre (HU12O).

GROUP LEADER: Lucía Mulas, Alejandro (R4).

Aguilar Moreno, Antonia María - Support technician.

Brea Alejo, Lidia - Postdoctoral researcher (R2).

Carmona Parrondo, Ricardo - Investigador titulado superior.

Caro Barri, Ana Teresa - Graduate researcher.

Garrido Rodríguez, Eva - Predoctoral researcher (R1).

Horta Herrera, Saúl - Support technician.

Izquierdo García, Juan - Junior clinical researcher.

Márquez Díaz, Rita Rocío - Predoctoral researcher (R1).

Pérez Alonso, Vanesa - Postdoctoral researcher (R2).

Rincón Castanedo, Cecilia - Predoctoral researcher (R1).

Santa Cruz Ramos, Eva - Predoctoral researcher (R1).

Sanz Ayan, María Paz - Junior clinical researcher.

Valenzuela Tallón, Pedro Luis - Investigador posdoctoral (R2).

OTHER ACTIVE PROJECTS OF THE RESEARCH GROUP NOT MANAGED BY THE FUNDACIÓN PARA LA INVESTIGACIÓN BIOMÉDICA DEL HOSPITAL 12 DE OCTUBRE (FIBH12O):

- **Title:** Exercise and lifestyle intervention for patients with adolescent cancer: a randomized controlled trial.

Principal investigators: Alejandro Lucía Mulas and Carmen Fiuza Lucas.

Project No.: IIG_FULL_2021_007.

Funding body: Wereld Kanker Onderzoek Fonds (WKOF), World Cancer Research Fund International.

Start date: 01/04/2022.

End date: 01/04/2026.

PUBLICATIONS*

Type of Document	No. of document	Σ IF (JCR 2022)
Articles	23	205.31
Reviews	8	136.9
Editorials	5	64
Total	36	406.21

Articles

- Alcalde Estévez, E; Sosa, P; Asenjo Bueno, A; Plaza, P; Valenzuela, PL; Naves Díaz, M; Olmos, G et al. Dietary phosphate restriction prevents the appearance of sarcopenia signs in old mice. *J. Cachexia Sarcopenia Muscle*. 2023. 14. (2): p. 1060-1074. Article.
- de la Torre, MF; Fiuza Lucas, C; Laine Menéndez, S; Delmiro, A; Arenas, J; Martin, MA; Lucia, A et al. Pathophysiology of Cerebellar Degeneration in Mitochondrial Disorders: Insights from the Harlequin Mouse. *Int. J. Mol. Sci*. 2023. 24. (13): 10973. Article.
- Fiuza Lucas, C; Valenzuela, PL; Galvez, BG; Ramirez, M; Lopez Soto, A; Simpson, RJ; Lucia, A. The effect of physical exercise on anticancer immunity. *Nat. Rev. Immunol*. 2023. Article.
- Izquierdo García, J; Arranz Escudero, A; de Meneses, RT; de la Torre, N; Amat Macías, IM; Martín, JIC; Sanz Ayán, MP et al. Efficacy of a cardiac rehabilitation program in a municipal sports

center compared to the hospital program: randomized controlled trial eCARCEX. *An. Sist. Sanit. Navar*. 2023. 46. (3): e1050. Article.

- Karazi, W; Scalco, RS; Stemmerik, MG; Lokken, N; Lucia, A; Santalla, A; Martinuzzi, A et al. Data from the European registry for patients with McArdle disease (EUROMAC): functional status and social participation. *Orphanet J. Rare Dis*. 2023. 18. (1): 210. Article.
- Leo, P; Mateo March, M; Valenzuela, PL; Muriel, X; Gandía Soriano, A; Giorgi, A; Zabala, M et al. Influence of Torque and Cadence on Power Output Production in Cyclists. *Int. J. Sport Physiol. Perform*. 2023. 18. (1): p. 27-36. Article.
- Lokken, N; Voermans, NC; Andersen, LK; Karazi, W; Reason, SL; Zweers, H; Wilms, G et al. Patient-Reported Experiences with a Low-Carbohydrate Ketogenic Diet: An International Survey in Patients with McArdle Disease. *Nutrients*. 2023. 15. (4): 843. Article.

- Maceira, A; Valenzuela, PL; Santos Lozano, A; García González, MP; Ortega, LH; Díaz Gonzalez, L; Boraita, A et al. Myocardial Fibrosis and Coronary Calcifications Caused by Endurance Exercise? Insights from Former Professional Cyclists. *Med. Sci. Sports Exerc*. 2023. 55. (2): p. 151-157. Article.
- Macías Valle, A; Rodríguez López, C; González Senac, NM; Mayordomo Cava, J; Vidán, MT; Cruz Arnés, ML; Jiménez Gómez, LM et al. Exercise effects on functional capacity and quality of life in older patients with colorectal cancer: study protocol for the ECOOL randomized controlled trial. *BMC Geriatr*. 2023. 23. (1): 314. Article.
- Martínez Zamora, MD; Valenzuela, PL; Díez, IE; Martínez Quel, O. Influence of preterm birth on physical fitness in early childhood. *Eur. J. Sport Sci*. 2023. 23. (11): p. 2129-2138. Article.
- Matey Rodríguez, C; Lopez Ortiz, S; Penin Grandes, S; Pinto Fraga, J; Valenzuela, PL; Pico, M; Fiuza Lucas, C et al. Validation and Determination of Physical Activity Intensity GT3X+ Cut-Points in Children and Adolescents with Physical Disabilities: Preliminary Results in a Cerebral Palsy Population. *Children-Basel*. 2023. 10. (3): 475. Article.
- Muriel, X; Hernández Belmonte, A; Mateo March, M; Valenzuela, PL; Zabala, M; Barranco Gil, D; Lucia, A et al. Is the Record Power Profile Repeatable? A Practical Analysis and Interpretation in Professional Cyclists. *J. Strength Cond. Res*. 2023. 37. (5): p. 1131-1134. Article.
- Ordovas, JM; Rios Insua, D; Santos Lozano, A; Lucia, A; Torres, A; Kosgodagan, A; Camacho, JM. A Bayesian network model for predicting cardiovascular risk. *Comput. Meth. Programs Biomed*. 2023. 231. p. 107405-107405. Article.
- Quintana Torres, D; Valle Cao, A; Bousquets Muñoz, P; Freitas Rodríguez, S; Rodríguez, F; Lucia, A; López Otín, C et al. The secretome atlas of two mouse models of progeria. *Aging Cell*. 2023. 22. (10). Article.
- Rodriguez Lopez, C; Santalla, A; Valenzuela, PL; Real Martínez, A; Villarreal Salazar, M; Rodriguez Gomez, I; Pinós, T et al. Muscle glycogen unavailability and fat oxidation rate during exercise: Insights from McArdle disease. *J. Physiol.-London*. 2023. 601. (3): p. 551-566. Article.

Reviews

- Balaguer, J; García Hidalgo, L; Hladun, R; Márquez Vega, C; Pérez Alonso, V. Recent Evidence-Based Clinical Guide for the Use of Dinutuximab Beta in Pediatric Patients with Neuroblastoma. *Target. Oncol*. 2023. 18. (1): p. 77-93. Review.
- Fiuza Lucas, C; Valenzuela, PL; Santos Lozano, A; Ruiz Casado, A; Lucia, A. Exercise and quality of life in cancer. *J. Sport Health Sci*. 2023. 12. (4): p. 489-490. Review.
- García Chico, C; López Ortiz, S; Peñín Grandes, S; Pinto Fraga, J; Valenzuela, PL; Emanuele, E; Ceci, C et al. Physical Exercise and the Hallmarks of Breast Cancer: A Narrative Review. *Cancers*. 2023. 15. (1): 324. Review.
- Lassaletta, A; Morales, JS; Valenzuela, PL; Estes, B; Kahalley, LS; Mabbott, DJ; Unnikrishnan, S et al. Neurocognitive outcomes in pediatric brain tumors after treatment with proton versus photon radiation: a systematic review and meta-analysis. *World Journal of Pediatrics*. 2023. 19. (8): p. 727-740. Review.

- Valenzuela, PL; Santos Lozano, A; Morales, JS; Castillo García, A; Lucia, A. Association between self-reported sleep characteristics and cardiovascular risk factors: Weight status and physical activity matter. *Eur. J. Sport Sci*. 2023. 23. (6): p. 1-8. Article.
- Valenzuela, PL; Alejo, LB; Lucia, A; Barranco Gil, D. What Does It Take to Become a Professional Cyclist? A Laboratory-Based Longitudinal Analysis in Competitive Young Riders. *Int. J. Sport Physiol. Perform*. 2023. 18. (11): p. 1275-1282. Article.
- Valenzuela, PL; Alejo, LB; Montalvo Perez, A; Ojanguren, D; Gorriz, M; Pagola, I; Ozcoidi, LM et al. Pre-sleep protein supplementation in professional cyclists during a training camp: a three-arm randomized controlled trial. *J. Int. Soc. Sport Nutr*. 2023. 20. (1): 2166366. Article.
- Valenzuela, PL; Alejo, LB; Montalvo Pérez, A; Revuelta, C; Ojanguren, D; Lucia, A; Barranco Gil, D. Laboratory-based determinants of simulated time trial performance in cyclists. *Biol. Sport*. 2023. 40. (4): p. 1169-1176. Article.
- Valenzuela, PL; Alejo, LB; Ozcoidi, LM; Lucia, A; Santalla, A; Barranco Gil, D. Durability in Professional Cyclists: A Field Study. *Int. J. Sport Physiol. Perform*. 2023. 18. (1): p. 99-103. Article.
- Valenzuela, PL; Maceira, A; Santos Lozano, A; García Gonzalez, MP; Ortega, LH; Díaz Gonzalez, L; Boraita, A et al. Aortic Diameters and Calcifications in Former World-Class Cyclists. *Med. Sci. Sports Exerc*. 2023. 55. (11): p. 1945-1951. Article.
- Valenzuela, PL; Mateo March, M; Muriel, X; Zabala, M; Lucia, A; Barranco Gil, D; Pallares, JG. Between-Seasons Variability of Cyclists' Peak Performance: A Longitudinal Analysis of "Real-World" Power Output Data in Male Professional Cyclists. *Int. J. Sport Physiol. Perform*. 2023. 18. (10): p. 1141-1144. Article.
- Valenzuela, PL; Santos Lozano, A; Saco Ledo, G; Castillo García, A; Lucia, A. Obesity, cardiovascular risk, and lifestyle: cross-sectional and prospective analyses in a nationwide Spanish cohort. *Eur. J. Prev. Cardiol*. 2023. 30. (14): p. 1493-1501. Article.

* Publications: only "Article", "Review", "Editorial Material" and "Letter" have been selected in "Document Type" of ISI Web Of Knowledge. The breakdown of publications includes some not included in the 2022 JCR, which are therefore not taken into account in the final count shown in the table, since they do not have IF.

- Valenzuela, PL; Carrera Bastos, P; Castillo García, A; Lieberman, DE; Santos Lozano, A; Lucia, A. Obesity and the risk of cardiometabolic diseases. *Nat. Rev. Cardiol.* 2023. 20. (7): p. 475-494. Review.
- Valenzuela, PL; Ruilope, LM; Santos Lozano, A; Wilhelm, M; Kränkel, N; Fiuza Luces, C; Lucia, A. Exercise benefits in cardiovascular diseases: from mechanisms to clinical implementation. *Eur. Heart J.* 2023. 44. (21): p. 1874-1889. Review.
- Valenzuela, PL; Saco Ledo, G; Morales, JS; Gallardo Gómez, D; Morales Palomo, F; López Ortiz, S; Rivas Baeza, B et al. Effects of physical exercise on physical function in older adults in residential care: a systematic review and network meta-analysis of randomised controlled trials. *Lancet Health. Longev.* 2023. 4. (6): p. 247-256. Review.

Editorials

- Galvão, DA; Taaffe, DR; Kim, JS; Newton, RU; Lucia, A. Can exercise increase natural killer cell infiltration of the prostate? *BJU Int.* 2023. 131. (1): p. 1-3. Editorial Material.
- Fiuza Luces, C; Valenzuela, PL; Morales, JS; Lucia, A. Childhood cancer: exercise is medicine. *Lancet Child. Adolesc. Health.* 2023. 7. (1): p. 3-4. Editorial Material.
- Valenzuela, PL. Recent Advances in Nutrition for Disease Prevention and Sports Performance Enhancement. *Nutrients.* 2023. 15. (5): 1170. Editorial Material.
- Valenzuela, PL; Santos Lozano, A; Fiuza Luces, C; Lucia, A. What time of the day should I exercise? *J. Physiol.-London.* 2023. Editorial Material.

PRIZES AND AWARDS

- The "Lazo Rosa Amiga" award for research into exercise and breast cancer was presented to Alejandro Lucía Mulas by the Asociación Murciana para la Ayuda a Mujeres con Cáncer de Mama in September 2023.

Research on Intelligent Biomaterials

CENTER: Universidad Complutense de Madrid (UCM).

GROUP LEADER: Salinas Sánchez, Antonio Jesús (R4).

- Aguilar Colomer, Anna - Predoctoral researcher (R1).
- Álvarez Corchado, Elena - Predoctoral researcher (R1).
- Arcos Navarrete, Daniel - Doctoral researcher (R4).
- Baeza García, Alejandro - Postdoctoral researcher (R2).
- Cabañas Criado, María Victoria - Doctoral researcher.
- Castillo Romero, Rafael - Doctoral researcher.
- Colilla Nieto, Montserrat - Doctoral researcher (R3).
- Cortes Bazo, Alejandro - Graduate researcher.
- Doadrio Villarejo, Antonio Luis - Doctoral researcher (R4).
- Doadrio Villarejo, Juan Carlos - Doctoral researcher (R3).
- Dumontel, Bianca - Doctoral researcher.
- Egea Benavente, David - Predoctoral researcher (R1).
- Estévez Amado, Manuel - Predoctoral researcher (R1).
- García Fontecha, Ana - Postdoctoral researcher (R3).
- Gisbert Garzarán, Miguel - Doctoral researcher.
- Gómez Cerezo, María Natividad - Postdoctoral researcher (R2).
- González Ortiz, Blanca - Doctoral researcher (R3).
- Heras Rubio, Clara - Predoctoral researcher (R1).
- Izquierdo Barba, Isabel - Postdoctoral researcher (R4).
- Jiménez Holguín, Javier - Predoctoral researcher (R1).
- Lozano Borregón, Daniel - Postdoctoral researcher (R3).
- Manzano García, Miguel - Doctoral researcher (R4).
- Martínez Carmona, Marina - Predoctoral researcher (R1).
- Mora Raimundo, Patricia - Postdoctoral researcher.
- Moreno Zafra, Víctor Manuel - Predoctoral researcher (R1).
- Pablos Lagartos, Jesús Luis - Postdoctoral researcher (R2).
- París Fernández de la Puente, Juan Luis - Predoctoral researcher (R1).
- Peña López, Juan - Doctoral researcher (R3).
- Rodríguez Palomo, Adrián - Predoctoral researcher (R1).
- Román Zaragoza, Jesús - Doctoral researcher (R4).
- Romero Antolín, José Alejandro - Predoctoral researcher (R1).
- Sánchez Salcedo, Sandra - Postdoctoral researcher (R3).
- Villaverde Cantizano, Gonzalo - Predoctoral researcher (R1).
- Villegas Díaz, María Rocío - Predoctoral researcher (R1).

ACTIVE RESEARCH PROJECTS

Type of funding	Funding body	No. of projects
Competitive	ISCIII	1
Total		1

- **Title:** Design of a new osteoinductive biomaterial for the bone defects treatment.
Principal investigator: Salinas Sánchez, Antonio Jesús.
Project No.: PI20/01384.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2021.
End date: 31/12/2023; extended to 30/06/2025.

OTHER ACTIVE PROJECTS OF THE RESEARCH GROUP NOT MANAGED BY THE FUNDACIÓN PARA LA INVESTIGACIÓN BIOMÉDICA DEL HOSPITAL 12 DE OCTUBRE (FIBH120):

- **Title:** Nanosistemas mesoporosos polivalentes para el tratamiento de enfermedades del hueso (Post-VERDI).
Principal investigator: Antonio J. Salinas Sánchez.
Project No.: FEI-EU-23-13.
Funding body: European Research Council.
Start date: 01/06/2023.
End date: 31/05/2028.
- **Title:** Biocerámicas nanoestructuradas con aplicaciones en infección ósea y neoplasia hematológica. Nano&Niche.
Principal investigators: Isabel Izquierdo-Barba and Daniel Arcos Navarrete.
Project No.: PID2020-117091RB-I00.
Funding body: Ministerio de Ciencia e Innovación (Retos).
Start date: 01/09/2021.
End date: 31/08/2024.
- **Title:** Anticipación y prevención de COVID-19 en la Comunidad de Madrid.
Principal investigator: Miguel Manzano García.
Project No.: PR38/21-21 ANTICIPA-CM.
Funding body: Comunidad de Madrid: Fondo Europeo de Desarrollo Regional - Recursos REACT-UE del Programa Operativo de Madrid 2014-2020, in the line of action of I+D+i projects in response to COVID-19.
Start date: 02/01/2020.
End date: 31/12/2023.

- **Title:** Nanopartículas inteligentes para el hueso osteoporótico (IBONE).
Principal investigator: Miguel Manzano García.
Project No.: PID2019-117091RB-I00.
Funding body: Ministerio de Ciencia e Innovación.
Start date: 01/06/2020.
End date: 31/05/2023.
- **Title:** GIOTTO: Active aGelng and Osteoporosis: The next challenge for smarT nanobiOmaterials and 3D technologies Diseases.
Principal investigator: Chiara Vitale Brovarone; at UCM Isabel Izquierdo Barba.
Project No.: H2020-NMBP-TR-IND-2018.
Funding body: European Commission. Horizon 2020. Work Programme 2018-2020.
Start date: 01/01/2019.
End date: 30/09/2023.
- **Title:** Call for funding to UCM groups.
Principal investigator: Antonio J. Salinas Sánchez.
Project No.: 2023-GRFN32/23.
Funding body: Universidad Complutense de Madrid.
Start date: 31/05/2023.
End date: 31/10/2023.

- **Title:** Materiales disruptivos bidimensionales (2D).
Principal investigator: Miguel Manzano García.
Project No.: PR47/21 MAD2D-CM PRTR-CM (PRTR) UCM7.
Funding body: Comunidad de Madrid.
Start date: 01/01/2021.
End date: 31/03/2025.
- **Title:** Nanomateriales multifuncionales para el tratamiento de infecciones de prótesis osteoarticulares (Nano4Infection).
Principal investigator: Isabel Izquierdo-Barba.
Project No.: FD5/22_01.
Funding body: Fundación Ramón Areces (XXI Concurso Nacional para la Adjudicación de Ayudas a la Investigación en Ciencias de la Vida y de la Materia).
Start date: 14/04/2023.
End date: 13/04/2026.

PUBLICATIONS*

Type of Document	No. of document	Σ IF (JCR 2022)
Articles	15	110.308
Reviews	4	23.116
Editorials	1	6.208
Total	20	139.632

Articles

- Aragonese Cazorla, G; Vallet Regí, M; Gómez, MM; González, B; Luque Garcia, JL. Integrated transcriptomics and metabolomics analysis reveals the biomolecular mechanisms associated to the antitumoral potential of a novel silver-based core@shell nanosystem. *Microchim. Acta.* 2023. 190. (4): 132. Article.
- Arenas Vivo, A; Celis Arias, V; Amariei, G; Rosal, R; Izquierdo Barba, I; Hidalgo, T; Vallet Regí, M et al. Antiadherent AgBDC Metal-Organic Framework Coating for Escherichia coli Biofilm Inhibition. *Pharmaceutics.* 2023. 15. (1): 301. Article.
- Arias Rodríguez, LI; Pablos, JL; Vallet Regí, M; Rodríguez Mendiola, MA; Arias Castro, C; Sánchez Salcedo, S; Salinas, AJ. Enhancing Osteoblastic Cell Cultures with Gelatin Methacryloyl, Bovine Lactoferrin, and Bioactive Mesoporous Glass Scaffolds Loaded with Distinct Parsley Extracts. *Biomolecules.* 2023. 13. (12): 1764. Article.
- Casarrubios, L; Cicuéndez, M; Vallet Regí, M; Portolés, MT; Arcos, D; Feito, MJ. Osteoimmune Properties of Mesoporous Bioactive Nanospheres: A Study on T Helper Lymphocytes. *Nanomaterials.* 2023. 13. (15): 2183. Article.
- Colilla, M; Vallet Regí, M. Organically Modified Mesoporous Silica Nanoparticles against Bacterial Resistance. *Chem. Mat.* 2023. 35. (21): p. 8788-8805. Article.
- Dumontel, B; Jiménez, C; Vallet Regí, M; Manzano, M. Bioinspired extracellular vesicle-coated silica nanoparticles as selective delivery systems. *Mater. Today Bio.* 2023. 23. 100850. Article.
- Estévez, M; Cicuéndez, M; Crespo, J; Serrano López, J; Colilla, M; Fernández Acevedo, C; Oroz Mateo, T et al. Large-scale production of superparamagnetic iron oxide nanoparticles by flame spray pyrolysis: In vitro biological evaluation for biomedical applications. *J. Colloid Interface Sci.* 2023. 650. p. 560-572. Article.
- Fernandez Medina, T; Vaquette, C; Gomez Cerezo, MN; Ivanovski, S. Characterization of the Protein Corona of Three Chairside Hemoderivatives on Melt Electrowritten Polycaprolactone Scaffolds. *Int J Mol Sci.* 2023. 24. (7): 6162. Article.
- Gómez Cerezo, N; Sayago Carro, R; Cortés Bazo, A; Fernández García, MF; Kubacka, A. PdCu deposited alloys on TiO₂ for hydrogen photo-production. *Catal. Today.* 2023. 423. 114280. Article.

- Jiménez, C; Moreno Borralló, A; Dumontel, B; Manzano, M; Vallet Regí, M. Biomimetic camouflaged nanoparticles with selective cellular internalization and migration competences. *Acta Biomater.* 2023. 157. p. 395-407. Article.
- Lozano, D; Leiva, B; Gómez Escalonilla, IS; Portal Núñez, S; de Górtazar, AR; Manzano, M; Vallet Regí, M. Pleiotrophin-Loaded Mesoporous Silica Nanoparticles as a Possible Treatment for Osteoporosis. *Pharmaceutics.* 2023. 15. (2): 658. Article.
- Pablos, JL; Jiménez Holguín, J; Salcedo, SS; Salinas, AJ; Corrales, T; Vallet Regí, M. New Photocrosslinked 3D Foamed Scaffolds Based on GelMA Copolymers: Potential Application in Bone Tissue Engineering. *Gels.* 2023. 9. (5): 403. Article.

Reviews

- Arcos, D; Portolés, MT. Mesoporous Bioactive Nanoparticles for Bone Tissue Applications. *Int J Mol Sci.* 2023. 24. (4): 3249. Review.
- Dumontel, B; Conejo Rodríguez, V; Vallet Regí, M; Manzano, M. Natural Biopolymers as Smart Coating Materials of Mesoporous Silica Nanoparticles for Drug Delivery. *Pharmaceutics.* 2023. 15. (2): 447. Review.

Editorials

- Arcos, D. Nanomaterials in Biomedicine 2022. *Int J Mol Sci.* 2023. 24. (10). Editorial Material.

THESES DEFENDED OR SUPERVISED WITHIN THE GROUP

- **Doctoral candidate:** Gonzalo Luengo Alonso.
Thesis title: Tratamiento de defectos óseos metafisarios en hueso osteoporótico mediante implantes de vidrio mesoporoso enriquecidos con células mesenquimales y osteostatina.
University: Universidad Complutense de Madrid.
Date read: 08/03/2023.
Thesis director: Antonio Salinas Sánchez, David Cecilia López.
International mention: No.

- Sanchez Salcedo, S; Garcia, A; Gonzalez Jimenez, A; Vallet Regí, M. Antibacterial effect of 3D printed mesoporous bioactive glass scaffolds doped with metallic silver nanoparticles. *Acta Biomater.* 2023. 155. p. 654-666. Article.
- Sánchez Salcedo, S; Heras, C; Lozano, D; Vallet Regí, M; Salinas, AJ. Nanodevices based on mesoporous glass nanoparticles enhanced with zinc and curcumin to fight infection and regenerate bone. *Acta Biomater.* 2023. 166. p. 655-669. Article.
- Sayago Carro, R; Gómez Cerezo, MN; Fernández García, M; Kubacka, A. Inverse-type CoOx-TiO₂ catalysts for the Energy-Efficient Thermo-Photo Valorization of CO₂. *J. Clean Prod.* 2023. 429. 139542. Article.

- Gisbert Garzarán, M; Gómez Cerezo, MN; Vallet Regí, M. Targeting Agents in Biomaterial-Mediated Bone Regeneration. *Int J Mol Sci.* 2023. 24. (3): 2007. Review.
- Lozano, D; Larraga, V; Vallet Regí, M; Manzano, M. An Overview of the Use of Nanoparticles in Vaccine Development. *Nanomaterials.* 2023. 13. (12): 1828. Review.

END MASTER INVESTIGATIONS DIRECTED ON THE GROUP

- **Student:** José Carlos García Perdiguero.
Title: Nanoparticles coated with cell membranes for biomedical applications.
Director: Miguel Manzano García and Carla Jiménez.
Master: Biotecnología.
University: Universidad Autónoma de Madrid.
- **Student:** Sergio Andrés Cruz Quiñones.
Title: Respuesta celular *in vitro* a nanopartículas de vidrios mesoporosos bioAsset. para el tratamiento de la osteoporosis.
Director: Mónica Cicuéndez Maroto and Ana García Fontecha.
Master: Biomateriales.
University: Universidad Complutense de Madrid.

- **Student:** Eider Abarrategui Otero.
Title: Desarrollo de soportes 3D híbridos biocompatibles con aplicación en ingeniería de tejidos.
Director: Sandra Sánchez Salcedo and M.^a Natividad Gómez Cerezo.
Master: Biomateriales.
University: Universidad Complutense de Madrid.
- **Student:** Inés Bueso-Inchausti García.
Title: Diseño y optimización de nanopartículas mesoporosas de sílice para potencial aplicación en transfección génica.
Director: Natividad Gómez Cerezo and Miguel Gisbert Garzarán.
Master: Biomateriales.
University: Universidad Complutense de Madrid.

* Publications: only "Article", "Review", "Editorial Material" and "Letter" have been selected in "Document Type" of ISI Web Of Knowledge. The breakdown of publications includes some not included in the 2022 JCR, which are therefore not taken into account in the final count shown in the table, since they do not have IF.

TRABAJOS DE PRÁCTICAS EN EMPRESA, TFM DIRIGIDOS DENTRO DEL GRUPO

- **Student:**Eider Abarrategui Otero.
Title: Yes.tesis y evaluación de las propiedades biológicas de diferentes sistemas basados en biomateriales funcionalizados.
Director: Jesús Luis Pablos Lagartos.
Master: Biomateriales.
University: Universidad Complutense de Madrid.

END GRADUATED INVESTIGATIONS DIRECTED ON THE GROUP

- **Student:**Gabriel López Herrero.
Title: Modificación superficial de plímeros biocompatibles para su aplicación en ingeniería de tejidos.
Director: Jesús Luis Pablos Lagartos.
Degree: Farmacia.
University: Universidad Complutense de Madrid.
- **Student:**Sofía Villarrubia Hueté.
Title: Fabricación de andamios biocerámicos tridimensionales para regeneración de tejido óseo.
Director: Blanca González Ortiz e Isabel Izquierdo Barba.
Degree: Ingeniería de Materiales.
University: Universidad Complutense de Madrid.

BECA DE COLABORACIÓN CON DEPARTAMENTOS UNIVERSITARIOS DEL MINISTERIO DE EDUCACIÓN DIRIGIDA DENTRO DEL GRUPO

- **Student:**Gabriel López Herrero.
Title: Yes.tesis y optimización de nuevos biomateriales con propiedades antibacterianas.
Director: Jesús Luis Pablos Lagartos.
Degree: Farmacia.
University: Universidad Complutense de Madrid.

PRIZES AND AWARDS

- In June 2023, Antonio Jesús Salinas Sánchez was elected as a "Full Member - medal 13" of the Real Academia Nacional de Farmacia.
- During 2023, María Vallet Regí receives numerous awards and distinctions:
 - The 2023 Scientific Career Award in the 5th Edition of the Hipatia Awards, from the newspaper El Economista.
 - "Doctora de Alcalá" Research Award for Excellence in Experimental Sciences.
 - Honorary Academician of the Royal European Academy of Doctors.
 - Honorary degree from the Universidad de Murcia.
 - Sanitarias Award in recognition of her professional career in scientific research, awarded by Redacción Médica.
 - Spanish leader in Materials Science according to Research.com.

STAYS

- During 2023, several foreign pre-doctoral and post-doctoral students spent periods of more than 3 months with this research group at i+12:
 - Bianca Dumontel (Italy).
 - Laura Arias (Mexico).
 - Ilaria Corvaglia (Italy).
 - Rim Bounhajeb (Tunisia).
 - Degnet Melese-Dereje (Ethiopia).

PATENTS

- **Title:** Composiciones de nanocápsulas para la liberación controlada de agentes de interés terapéutico.
Number: EP18382005-ES.
Type: European patent validation in SPAIN.
Inventors: Pablo Luis Ortiz Romero, José Luis Pablos Álvarez, Alicia Usategui Corral, María Vallet Regí, M.ª Rocío Villegas Díaz, Alejandro Baeza García.
Owners: Universidad Complutense de Madrid (60 %), Fundación para la Investigación Biomédica del Hospital 12 de Octubre (40 %).
Date of validation: 19/02/2020.
Priority data: EP18382005 (09/01/2018).
Status: Granted (10/03/2021).

Care Research - InveCuid

CENTER: Hospital Universitario 12 de Octubre (HU12O) and Universidad Complutense de Madrid (UCM).

GROUP LEADER: Pérez García, Santiago (R2).

Aguilar Ortega, Juana María - Researcher in Nursing (R1).
Collados Gómez, Laura - Researcher in Nursing (R2).
Frade Mera, María Jesús - Doctoral researcher (R2).
García Manzanares, María Elena - Researcher in Nursing (R1).
Garzón Delgado, M.ª del Valle - Researcher in Nursing (R1).
Hidalgo Doniga, Carolina - Researcher in Nursing.

Lendínez Mesa, Alejandro - Doctoral researcher (R2).
López López, Candelas - Researcher in Nursing (R2).
Salamanca Castro, Ana Belén - Predoctoral researcher (R1).
Sánchez Barroso, Lara - Postdoctoral researcher (R2).
Zaragoza Garcia, Ignacio - Postdoctoral researcher (R2).

ACTIVE RESEARCH PROJECTS

Type of funding	Funding body	No. of projects
Competitive	ISCIII	1
No competitive	Fundación Convatec	1
Total		2

- **Title:** Estudio de validez y fiabilidad de la escala ESCID adaptada para medir el dolor en pacientes críticos con daño cerebral adquirido, no comunicativos y con vía aérea artificial ESCID-DC.
Principal investigator: López López, Candelas.
Project No.: PI20/00431.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2021.
End date: 31/12/2023; extended to 30/06/2025.

- **Title:** Evaluación de la efectividad de un dispositivo externo experimental en la prevención de las hernias paraestomales. Estudio piloto.
Principal investigator: Pérez García, Santiago.
Funding body: Fundación Convatec.
Start date: 26/04/2023.
End date: 25/04/2026.

PUBLICATIONS*

Type of Document	No. of document	Σ IF (JCR 2022)
Articles	7	19.5
Reviews	3	9
Total	10	28.5

Articles

- Arrogante, O; Raurell Torredà, M; Zaragoza García, I; Sánchez Chillón, FJ; Aliberch Raurell, AM; Amaya Arias, A; Rojo, A. TeamSTEPPS-based clinical simulation training program for critical care professionals: A mixed-methodology study. *Enferm. Intensiv.* 2023. 34. (3): p. 126-137. Article.
- Estrada Lorenzo, JM; Arroba, CMA; Lopez, C. Bibliometric analysis of original articles of journal ENFERMERIA INTENSIVA in the period 2001-2020. *Enferm. Intensiv.* 2023. 34. (2): p. 100-108. Article.
- Garcia Manzanares, ME; Lancharro Bermudez, M; Fernandez Blanc, B; Hernandez Martinez, A; Rodriguez Almagro, J; Caparros Sanz, MR. Assessment, diagnosis and treatment of peristomal skin lesions by remote imaging: An expert validation study. *J Adv Nurs.* 2023. 79. (2): p. 630-640. Article.
- Hontoria Alcoceba, R; López, C; Hontoria Alcoceba, V; Sánchez Morgado, AI. Implementation of Evidence-Based Practice in Peripheral Intravenous Catheter Care. *J. Nurs. Care Qual.* 2023. 38. (3): p. 226-233. Article.

- López, C; Arranz Esteban, A; Sánchez, MM; Pérez, T; Arias Rivera, S; Solís Muñoz, M; Latorre Marco, I. Pain Behaviors Analyzed by Videorecording in Brain-Injured Patients Admitted to the Intensive Care Unit. *Pain Manag. Nurs.* 2023. 24. (2): p. 113-122. Article.
- Mateos Arroyo, JA; Zaragoza García, I; Sánchez Gómez, R; Posada Moreno, P; Ortuño Soriano, I. Validation of the Barthel Index as a Predictor of In-Hospital Mortality among COVID-19 Patients. *Healthcare.* 2023. 11. (9): 1338. Article.
- Navarro Meléndez, A; Gimenez, MJ; Robledo Donascimento, Y; Río González, A; Lendínez Mesa, A. Physiotherapy applied to palliative care patients: a descriptive practice-based study. *BMC Palliat. Care.* 2023. 22. (1): 99. Article.
- Onteniente Gomis, MM; Ortiz Romero, PL; Romero, FT; Castro, ABS; de Frutos, FJO. Spanish Version of the RECAP Questionnaire to Assess Control of Atopic Eczema: Translation, Cultural Adaptation, Validation, and Correlations with Other Patient-Reported Outcome Measures. *Actas Dermosifiliogr.* 2023. 114. (6): p. 488-493. Article.

- Onteniente Gomis, MM; Ortiz Romero, PL; Romero, FT; Castro, ABS; de Frutos, FJO. Spanish Version of the RECAP Questionnaire to Assess Control of Atopic Eczema: Translation, Cultural Adaptation, Validation, and Correlations With Other Patient-Reported Outcome Measures. *Actas Dermosifiliogr.* 2023. 114. (6): p. 488-493. Article.
- Pérez Rivas, FJ; Rico Blázquez, M; López, C; Domínguez Fernández, S; Cobos Serrano, JL; Bazán, MJA. 'Learning by doing', a model for improving the promotion of healthy lifestyles by student nurses. *BMC Nurs.* 2023. 22. (1): 236. Article.
- Sánchez Gómez, R; López Alcorocho, JM; Núñez Fernández, A; Fernández, MLG; Martínez Sebastián, C; Ortuño Soriano, I; Zaragoza García, I et al. Morton's Extension on Hallux Rigidus Pathology. *Prosthesis.* 2023. 5. (1): p. 251-263. Article.
- Zaragoza García, I; Arias Rivera, S; Frade Mera, MJ; Marti, JD; Gallart, E; San José Arribas, A; Velasco Sanz, TR et al. Enteral nutrition management in critically ill adult patients and its relationship with intensive care unit-acquired muscle weakness: A national cohort study. *PLoS One.* 2023. 18. (6). Article.

Reviews

- Blázquez González, P; Mirón González, R; Lendínez Mesa, A; Luengo González, R; Mancebo Salas, N; Camacho Arroyo, MT; Martínez Hortelano, JA. Impact of virtual reality-based therapy on post-stroke depression: A systematic review and meta-analysis of randomized controlled trials. *Worldviews Evid.-Based Nurs.* 2023. 21. (2): p. 194-201. Review.
- Gimeno Hernán, V; Moreno Muñoz, G; Meneses Monroy, A; Faraldo Cabana, A; Orgaz Rivas, E; Zaragoza García, I; Ortuño Soriano, I. Influence of Care on the Prevention of Bacteremia in Hemodialysis: Systematic Review. *Nephrol. Nurs. J.* 2023. 50. (4): p. 333-344. Review.

- Pallas Alonso, C; Montealegre, A; Hernández Aguilar, MT; Muñoz Amat, B; Collados Gómez, L; Jiménez Fernández, L; García Lara, N et al. XIII International Conference on Kangaroo Mother Care - Different opinions, experiences and related KMC issues: Good practices, stabilisation concept, nutrition and basic respiratory support. *Acta Paediatr.* 2023. 112. (12): p. 2478-2485. Review.

END MASTER INVESTIGATIONS DIRECTED ON THE GROUP

- **Student:** Isabel Iglesias Prieto.
Title: Protocolo de movilización temprana en pacientes críticos con trauma grave.
Director: Candelas López López.
Master: Urgencias, Emergencias y Críticos en Enfermería.
University: Universidad Europea de Madrid.

END GRADUATED INVESTIGATIONS DIRECTED ON THE GROUP

- **Student:** Natalia Lorenzo Mayorga.
Title: Papel de la enfermera dentro de las familias con niños ingresados en UCI.
Director: Santiago Pérez García.
Degree: Enfermería.
University: Universidad Complutense de Madrid.
- **Student:** Marina Martín Núñez.
Title: Estrés y burnout en profesionales de enfermería de Atención Primaria. Una revisión bibliográfica.
Director: Candelas López López.
Degree: Enfermería.
University: Universidad Complutense de Madrid.
- **Student:** Adriana Suárez Gordo.
Title: Abordaje de la soledad no deseada en personas mayores desde Atención Primaria. Una revisión bibliográfica.
Director: Candelas López López.
Degree: Enfermería.
University: Universidad Complutense de Madrid.

* Publications: only "Article", "Review", "Editorial Material" and "Letter" have been selected in "Document Type" of ISI Web Of Knowledge. The breakdown of publications includes some not included in the 2022 JCR, which are therefore not taken into account in the final count shown in the table, since they do not have IF.

PRIZES AND AWARDS

- Prize for the best scientific article published in the 10th Ana M^a Martínez Scientific Competition for the work "Cultural Adaptation and Validation of the Premature Infant Pain Profile-Revised (PIPP-R) Pain Measurement Scale: Research Protocol", in which Laura Collados Gómez participates, together with other authors. DOI: 10.3390/ijerph191912338. PMID: 36231638; PMCID: PMC9566023.
- Best oral communication presented at a scientific meeting in the 10th Ana M^a Martínez Scientific Competition for the conference "Early KMC in preterm infants with less than 28 weeks. Lateral position versus traditional position".

PATENTS

- **Title:** Dispositivo de fijación en ostomía para la prevención de hernias.
Number: P201531826.
Type: SPANISH patent.
Inventor: Juan Almenara Pulido (cesión a la FIBHU12O).
Owners: Fundación i+12 (100 %).
Priority Date: 17/12/2015.
Status: Granted (05/04/2018).

Translational Research with iPSCs

CENTER: Hospital Universitario 12 de Octubre (HU12O).

GROUP LEADER: Gallardo Pérez, M.^a Esther (R3).

Cerrada López, Victoria - Superior technique.
Dorado Monreal, Helena - Support technician.
García López, Marta - Predoctoral researcher (R1).
Jiménez Vicente, Lydia - Superior technique.

Ortuño Costela, María del Carmen - Predoctoral researcher (R1).
Porroche Romero, Ainhoa - Predoctoral researcher (R1).
Reche Sainz, José Alberto - Senior Clinical Researcher

ACTIVE RESEARCH PROJECTS

Type of funding	Funding body	No. of projects
Competitive	ISCIII	2
Competitive	Ministerio de Economía y Competitividad	1
Competitive	Organización Nacional de Ciegos Españoles (ONCE)	3
Total		6

- **Title:** Enfermedad de McArdle: aproximaciones terapéuticas 2D/3D basadas en el uso de iPSCs.
Principal investigator: Gallardo Pérez, M.^a Esther.
Project No.: PI18/00151.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2019.
End date: 31/12/2021; extended to 30/06/2023.
- **Title:** Generación de un modelo humano de RGCs para la búsqueda de terapias contra la atrofia óptica dominante.
Principal investigator: Gallardo Pérez, M.^a Esther.
Funding body: Organización Nacional de Ciegos Españoles (ONCE).
Start date: 15/10/2021.
End date: 14/10/2022; extended to 14/04/2023.
- **Title:** Atrofia óptica dominante: iPSCs como modelo de enfermedad, mejora del diagnóstico y aproximación a terapia.
Principal investigator: Gallardo Pérez, M.^a Esther.
Project No.: PI21/00162.
Funding body: Instituto de Salud Carlos III (ISCIII).
Start date: 01/01/2022.
End date: 31/12/2024.
- **Title:** Neoteric biomaterials for hiPSCs monitored differentiation to RGCs: creation, microfabrication & microfluidics.
Principal investigator: Gallardo Pérez, M.^a Esther.
Project No.: PCI2022-132920.
Funding body: Ministerio de Economía y Competitividad.
Start date: 01/06/2022.
End date: 31/05/2025.
- **Title:** BioTEP-DOA: generación de RGCs candidatas a terapia celular para la DOA por diferenciación de iPSCs sobre biomateriales escalables.
Principal investigator: Gallardo Pérez, M.^a Esther.
Funding body: Organización Nacional de Ciegos Españoles (ONCE).
Start date: 18/10/2022.
End date: 17/10/2023; extended to 14/12/2023.
- **Title:** TerDOA BiomiPS: nuevas aproximaciones terapéuticas para DOA basadas en tecnología de iPSCs y biomateriales texturizados.
Principal investigator: Gallardo Pérez, M.^a Esther.
Funding body: Organización Nacional de Ciegos Españoles (ONCE).
Start date: 04/09/2023.
End date: 03/09/2024.

EUROPEAN PROJECT APPLICATIONS 2023

- Call Identifier:** M-ERA.NET Call 2021.
Project title: Neoteric Biomaterials for hiPSCs Monitored Differentiation to RGCs: Creation, Microfabrication & Microfluidics.
Acronym: bioMAT4EYE.
Number: PCI2022-132920.
Coordinator: No.
Coordinating Centre: Universidad Complutense de Madrid.
IG researcher participating in the project: Dr. M. Esther Gallardo (Work Package 4 PI)
Granted: Yes.
- Call Identifier:** M-ERA.NET Call 2023.
Project title: Functional skeletal muscle from hiPSCs: 3D nanocellulose guiding structures in flow-operated microreactors.
Acronym: nCell3Dmuscle.
Number: proyecto 11106.
Coordinator: Yes.
Coordinating Centre: Fundación para la Investigación Biomédica Hospital 12 de Octubre.
IG researcher participating in the project: Dr. M.ª Esther Gallardo.
Granted: No.

PUBLICATIONS*

Type of Document	No. of document	Σ IF (JCR 2022)
Articles	1	4.700
Total	1	4.700

Articles

- Cerrada, V; García Consuegra, I; Arenas, J; Gallardo, ME. Creation of an iPSC-Based Skeletal Muscle Model of McArdle Disease Harboring the Mutation c. 2392T>C (p.Trp798Arg) in the PYGM Gene. Biomedicines. 2023. 11. (9): 2434. Article.

THESES DEFENDED OR SUPERVISED WITHIN THE GROUP

- Doctoral candidate:** Victoria Cerrada López.
Thesis title: Enfermedad de McArdle: Generación de un modelo de músculo esquelético humano basado en el uso de iPSCs.
University: Universidad Complutense de Madrid.
Date read: 18/05/2023.
Thesis director: María Esther Gallardo Pérez.
International mention: No.

END MASTER INVESTIGATIONS DIRECTED ON THE GROUP

- Student:** Raquel González Jabardo.
Title: Atrofia óptica dominante: iPSCs como modelo de enfermedad y mejora en el diagnóstico.
Director: M. Esther Gallardo.
Master: Bioquímica, Biología Molecular y Biomedicina.
University: Universidad Complutense de Madrid.
- Student:** Ainhoa Porroche Romero.
Title: Adaptación de biomateriales para el cultivo y diferenciación de iPSCs.
Director: M. Esther Gallardo.
Master: Bioquímica, Biología Molecular y Biomedicina.
University: Universidad Complutense de Madrid.
- Student:** Paula Irene Alemán Cabrera.
Title: Hidrogeles de alginato y gelatina funcionalizados con péptidos para el soporte de hiPSCs.
Director: M. Esther Gallardo.
Master: Biomateriales.
University: Universidad Complutense de Madrid.

* Publications: only "Article", "Review", "Editorial Material" and "Letter" have been selected in "Document Type" of ISI Web Of Knowledge. The breakdown of publications includes some not included in the 2022 JCR, which are therefore not taken into account in the final count shown in the table, since they do not have IF.

PRIZES AND AWARDS

- Asociación Nacional de Ciegos de España (ONCE): The project led by Dr. M. Esther Gallardo: TerDOA BiomiPS: New therapeutic approaches for DOA based on iPSCs technology and texturized biomaterials has been awarded €7,000 in the call for research projects in eye prevention, promoted by ONCE.

Regenerative Medicine

CENTER: Hospital Universitario 12 de Octubre (HU12O).

GROUP LEADER: Flores de la Cal, Ana Isabel (R4).

Collado Ehapo, Jennifer - Superior technique.

De la Torre Merino, María Paz - Doctoral researcher.

Forcen Acebal, Laura - Senior Clinical Researcher

García García-Porrero, Alicia - Senior Clinical Researcher

Gutiérrez Vélez, María del Carmen - Senior Clinical Researcher

Masero Casasola, Ana Rosa - Senior Clinical Researcher

Muñoz Galligo, Eloy - Senior Clinical Researcher

ACTIVE RESEARCH PROJECTS

Type of funding	Funding body	No. of projects
Competitive	Fundación para la Innovación y la Prospectiva en Salud en España (FIPSE):	1
Competitive	Instituto de Salud Carlos III.	2
Competitive	Ministerio de Economía y Competitividad	1
Total		4

• **Title:** Análisis celular y molecular de las estructuras tisulares en pacientes con patología de suelo pélvico. Papel de las células madre mesenquimales de placenta en la regeneración *in vivo* e *in vitro*.

Principal investigator: Flores de la Cal, Ana Isabel.

Project No.: PI18/01278.

Funding body: Instituto de Salud Carlos III (ISCIII).

Start date: 01/01/2019.

End date: 31/12/2021; extended to 30/06/2023.

• **Title:** Plan de negocio para el desarrollo de una nueva terapia celular de la incontinencia urinaria.

Principal investigator: Flores de la Cal, Ana Isabel.

Project No.: 4075-22.

Funding body: Fundación para la Innovación y la Prospectiva en Salud en España (FIPSE).

Start date: 03/11/2022.

End date: 02/05/2023.

• **Title:** Desarrollo de un producto basado en células mesenquimales de decidua para el tratamiento de la incontinencia urinaria.

Principal investigator: Flores de la Cal, Ana Isabel.

Project No.: DTS22/00166.

Funding body: Instituto de Salud Carlos III (ISCIII)

Start date: 01/01/2023.

End date: 31/12/2025.

• **Title:** Estrategia de terapia avanzada con células madre de placenta y secretoma en enfermedades de mayor prevalencia femenina. Modelos de incontinencia urinaria y esclerosis múltiple.

Principal investigator: Flores de la Cal, Ana Isabel.

Project No.: PID2022-140785OB-I00.

Funding body: Ministerio de Economía y Competitividad.

Start date: 01/09/2023.

End date: 31/08/2027.

PUBLICATIONS*

Type of Document	No. of document	Σ IF (JCR 2022)
Articles	1	5.5
Reviews	1	6
Editorials	1	3.3
Total	3	14.8

Articles

- de la Torre, P; Pérez Lorenzo, MJ; Alcázar Garrido, A; Collado, J; Martínez López, M; Forcén, L; Masero Casasola, AR et al. Perinatal mesenchymal stromal cells of the human decidua restore continence in rats with stress urinary incontinence

induced by simulated birth trauma and regulate senescence of fibroblasts from women with stress urinary incontinence. *Front. Cell. Dev. Biol.* 2023. 10. p. 1033080-1033080. Article.

* Publications: only "Article", "Review", "Editorial Material" and "Letter" have been selected in "Document Type" of ISI Web Of Knowledge. The breakdown of publications includes some not included in the 2022 JCR, which are therefore not taken into account in the final count shown in the table, since they do not have IF.

Reviews

- Gramignoli, R; Hofmann, N; Agudo Barriuso, M; Antica, M; Flores, A; Girandon, L; Kerdjoudj, H et al. Expert Revision of Key Elements for Clinical-Grade Production and Qualification of Perinatal Derivatives. *Stem Cells Transl. Med.* 2023. 13. (1): p. 14-29. Review.

Editorials

- Cruz Utrilla, A; Martín, EPG; Pérez, LD; Curiel, AR; Quezada, A; López, AD; Vicent, L et al. ECMO in pulmonary arterial hypertension and chronic thromboembolic pulmonary hypertension as a bridge to therapy. *Kardiol. Pol.* 2023. 81. (5): p. 500-504. Editorial Material.

END MASTER INVESTIGATIONS DIRECTED ON THE GROUP

• **Student:** Leonardo David Escobar Cortés.

Title: Evaluación del diagnóstico de VIH en gestantes atendidas en tres centros de alta complejidad.

Director: Eloy Muñoz Gállego.

Master: Máster sobre infección por el virus de la inmunodeficiencia humana.

University: Universidad Rey Juan Carlos de Madrid.

• **Student:** César Rodolfo Yanes Bengoa.

Title: Revisión bibliográfica de la prevalencia y factores de riesgo asociados al cáncer cérvico-uterino en mujeres VIH.

Director: Eloy Muñoz Gállego.

Master: Máster sobre infección por el virus de la inmunodeficiencia humana.

University: Universidad Rey Juan Carlos de Madrid.

END GRADUATED INVESTIGATIONS DIRECTED ON THE GROUP

• **Student:** Natalia Guío Marugán.

Title: Análisis celular y molecular de los efectos regenerativos de las células madre mesenquimales de placenta sobre las células de pacientes con patología de suelo pélvico.

Directors: Ana Isabel Flores de la Cal and Paz de la Torre Merino.

Degree: Biología Sanitaria.

University: Universidad de Alcalá.

• **Student:** Elena del Río García.

Title: Actualización en Mutilación Genital Femenina.

Directors: Eloy Muñoz Gállego and María del Carmen Gutiérrez Vélez.

Degree: Medicina.

University: Universidad Complutense de Madrid.

PATENTS

• **Title:** Células madre de la *decidua parietalis* de la placenta para su uso en la incontinencia urinaria de esfuerzo crónica.

Number: P201931035.

Type: SPANISH patent.

Inventors: Ana Isabel Flores de la Cal, Paz de la Torre Merino, M.^a Jesús Pérez Lorenzo, Álvaro Alcázar Garrido, Eloy Muñoz Gállego, Ana Rosa Masero Casasola, M.^a del Carmen Gutiérrez Vélez, José Medina Polo, Jesús Alfredo Grande García, Alicia García García Porrero.

Owners: Fundación i+12 (100 %).

Date of application: 22/11/2019.

Status: Granted (27/06/2022).

Toxicology and Safety of Chemical and Biological Agents

CENTER: Universidad Complutense de Madrid (UCM).

GROUP LEADER: Martínez Caballero, M.^a Aranzazu (R4).

Anadón Navarro, Arturo - Doctoral researcher.

Ares Lombán, Irma - Doctoral researcher.

López Torres, Bernardo -Graduate researcher.

Martínez Caballero, Marta - Doctoral researcher.

Martínez Larrañaga, María Rosa - Doctoral researcher.

Maximiliano Guerra, Jorge Enrique -Graduate researcher.

OTHER ACTIVE PROJECTS OF THE RESEARCH GROUP NOT MANAGED BY THE FUNDACIÓN PARA LA INVESTIGACIÓN BIOMÉDICA DEL HOSPITAL 12 DE OCTUBRE (FIBH12O):

- Title:** The mechanism of PGC-1 α in the neurotoxicity of T-2 toxin through the blood brain barrier and the excavation of small molecule agonist.
Principal investigator: en España, Arturo Anadón Navarro.
Project No.: Grant/Award number 2662020DKPY020.
Funding body: The Fundamental Research Funds for the Central Universities. Project of Excellence FIM UHK, República Popular China.
Start date: 2020.
End date: 2024.
- Title:** Coordinated project: "Biofuncionalidad de las algas pardas y la microbiota marina para la mejora de la seguridad y calidad alimentaria". Subproject n.º 3: "Evaluación de la toxicidad *in vitro* y/o funcionalidad de compuestos Asset. caracterizados de algas pardas y microbiota marina".
Principal investigator: Teresa Aymerich Calvet (coordinator); María Aránzazu Martínez Caballero (of the GI).
Project No.: PID2020-115979RR-C33.
Funding body: I+D+i projects, within the framework of the State Programs for Knowledge Generation and Scientific and Technological Strengthening of the I+D+i System and I+D+i Oriented to the Challenges of Society, Call 2020. Ministerio de Ciencia e Innovación. Agencia Estatal de Investigación.
Start date: 01/09/2021.
End date: 2025.
- Title:** Creación de nuevo recurso educativo virtual para estudiantes de Grado en Farmacia.
Principal investigator: Susana Torrado Durán.
Project No.: Proyecto 291. Call 2022-2023.
Funding body: Vicerrectorado de Calidad, Universidad Complutense de Madrid, call 2022/2023.
Start date: 2022.
End date: 2023.
- Title:** Creación de nuevos recursos educativos virtuales para estudiantes de grado en Farmacia.
Principal investigator: Susana Torrado Durán.
Project No.: Proyecto 340. Call 2023-2024.
Funding body: Vicerrectorado de Calidad, Universidad Complutense de Madrid, call 2023/2024.
Start date: 2023.
End date: 2024.

EUROPEAN PROJECT APPLICATIONS 2023

- Call Identifier:** EFSA (European Food Safety Authority) Call: OC/EFSA/PREV/2023/01. Call 2022/2023.
Project title: Proyecto Environmental Neurotoxicants – Advancing Understanding on the Impact of Chemical Exposure on Brain Health and Disease. Lot 3. Generate pesticides/chemicals data for neurotoxicity using NAMs.
Acronym: OC/EFSA/PREV/2023/01.
Coordinator: Yes.
Coordinating Centre: Universidad Complutense de Madrid.
Granted: No.

PUBLICATIONS*

Type of Document	No. of document	Σ IF (JCR 2022)
Articles	2	19.7
Reviews	5	41.5
Total	7	61.2

Articles

- Lu, QR; Guo, P; Wang, XH; Ares, I; Lopez Torres, B; Martínez Larrañaga, MR; Li, TT et al. MS4A3-HSP27 target pathway reveals potential for haematopoietic disorder treatment in alimentary toxic aleukia. *Cell Biol. Toxicol.* 2023. 39. (1): p. 201-216. Article.
- Ye, XC; Zhao, YX; Ma, WQ; Ares, I; Martínez, M; Lopez Torres, B; Martínez Larrañaga, MR et al. The potential of CD38 protein as a target for autoimmune diseases. *Autoimmun. Rev.* 2023. 22. (4): 103289. Article.

Reviews

- Badawy, S; Liu, YA; Guo, MY; Liu, ZL; Xie, CQ; Marawan, MA; Ares, I et al. Conjugated linoleic acid (CLA) as a functional food: Is it beneficial or not? *Food Res. Int.* 2023. 172. 113158. Review.
- Feng, J; Zheng, YL; Guo, MY; Ares, I; Martínez, M; Lopez Torres, B; Martínez Larrañaga, MR et al. Oxidative stress, the blood-brain barrier and neurodegenerative diseases: The critical beneficial role of dietary antioxidants. *Acta Pharm. Sin. B.* 2023. 13. (10): p. 3988-4024. Review.
- Wang, X; Li, H; Wang, S; Martínez, MA; Ares, I; Martínez, M; Martínez Larrañaga, MR et al. Tefluthrin: metabolism, food residues, toxicity, and mechanisms of action. *Crit. Rev. Toxicol.* 2023. 52. (8): p. 664-680. Review.
- Xu, XQ; Yu, YX; Ling, M; Ares, I; Martínez, M; Lopez Torres, B; Maximiliano, JE et al. Oxidative stress and mitochondrial damage in lambda cyhalothrin toxicity: A comprehensive review of antioxidant mechanisms. *Environ. Pollut.* 2023. 338. 122694. Review.
- Zhao, YX; Ye, XC; Xiong, ZF; Ihsan, A; Ares, I; Martínez, M; Lopez Torres, B et al. Cancer Metabolism: The Role of ROS in DNA Damage and Induction of Apoptosis in Cancer Cells. *Metabolites.* 2023. 13. (7): 796. Review.

THESES DEFENDED OR SUPERVISED WITHIN THE GROUP

- Doctoral candidate:** Bernardo López Torres.
Thesis title: Neurotoxicidad inducida por el piretroide lambda cialotrin.
University: Universidad Complutense de Madrid.
Date read: 26/05/2023.
Thesis director: María Aránzazu Martínez Caballero , Irma Ares Lombán.
International mention: No.

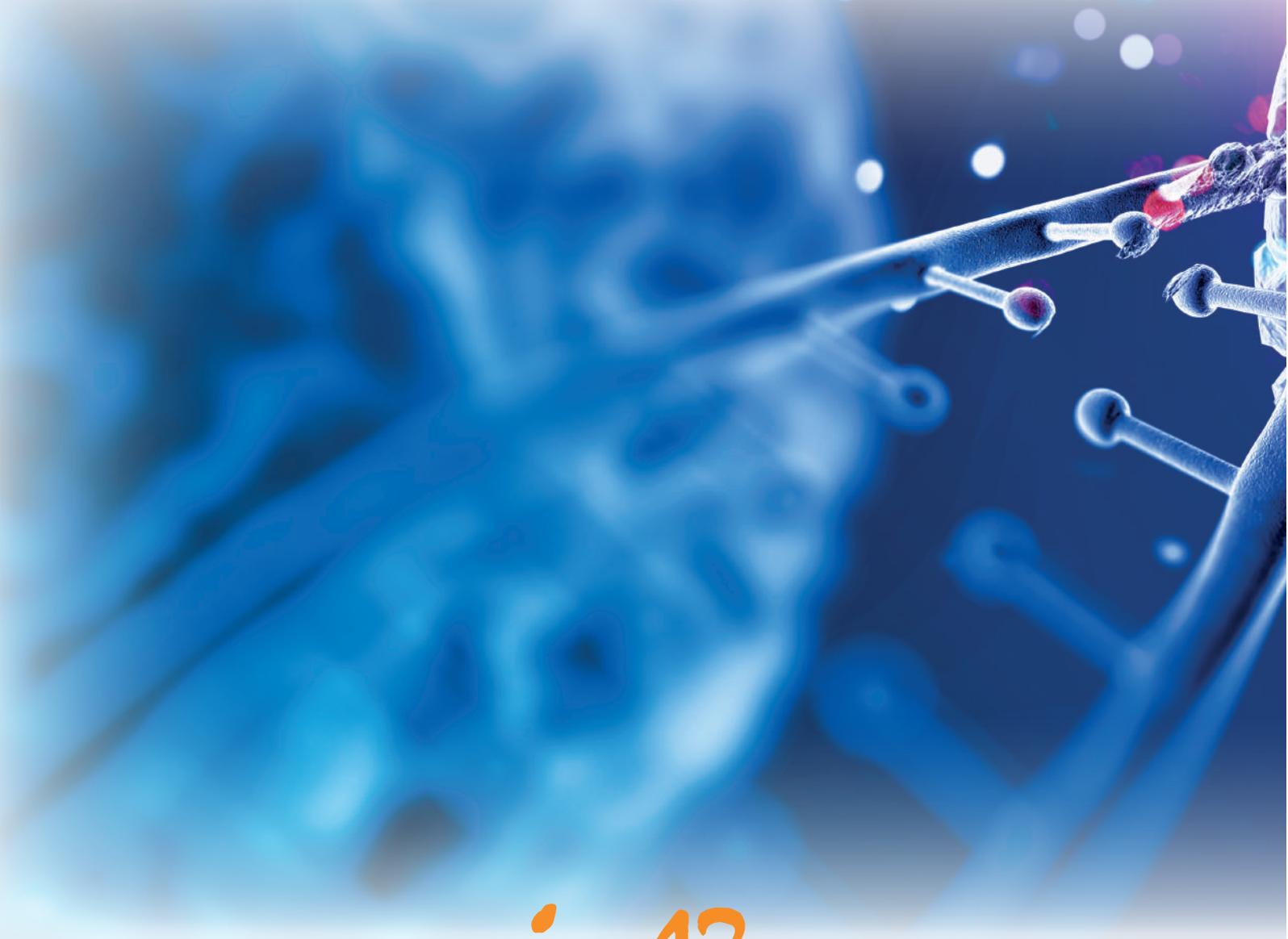
END MASTER INVESTIGATIONS DIRECTED ON THE GROUP

- Student:** Hugo Aedo Grisolia.
Title: Efecto sobre estrés oxidativo *in vitro* del extracto CB08100-SYP de una bacteria marina del género *Tritonibacter*.
Director: María Aránzazu Martínez Caballero e Irma Ares Lombán.
Master: Producción y Sanidad Animal.
University: Universidad Complutense de Madrid.

* Publications: only "Article", "Review", "Editorial Material" and "Letter" have been selected in "Document Type" of ISI Web Of Knowledge. The breakdown of publications includes some not included in the 2022 JCR, which are therefore not taken into account in the final count shown in the table, since they do not have IF.

PRIZES AND AWARDS

- Award of the Medalla CESFAC (Confederación Española de Fabricantes de Alimentos Compuestos para Animales) Merit in Animal Feed 2023 to Dr. Arturo Anadón, in the R+D+i category for his important contribution to the improvement of livestock knowledge and to the dignification of the work of professionals in the sector (2023).
- Appointment of Arturo Anadón as Distinguished Fellow of the European Association for Veterinary Pharmacology and Toxicology (2023).
- Appointment of María Rosa Martínez-Larrañaga as Distinguished Fellow of the European Association for Veterinary Pharmacology and Toxicology (2023).
- Appointment of Arturo Anadón as Research Fellow of INTI International University & Colleges, Malaysia (2023).
- Nombramiento de Arturo Anadón como Guest Editor del Journal of Veterinary Pharmacology and Therapeutics (Volumen 46, suplemento 1, junio de 2023) (Actas del 15.º Congreso Internacional de la Asociación Europea de Farmacología y Toxicología Veterinaria). Brujas (Bélgica), 2-5 de junio de 2023, págs. 1-141. ISBN 0140-7783 (papel), ISSN 1365-2885 (en línea). DOI: 10.1111/jvp13130.
- Appointment of Arturo Anadón as Nominating Committee Member of the International Union of Toxicology (IUTOX).
- Appointment of Arturo Anadón as Council Member of the Federation of European Academies of Medicine (FEAM) (2023).
- Inclusion of Arturo Anadón in the Environment, Sustainability and Climate Task Force (TFESC) as a member of the European Academy (2023).



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Hospital 12 de Octubre



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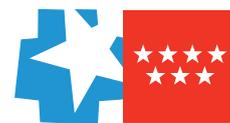
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