

2025

Annual report

*Biomedical Research
Institute of Lleida*







Presentation

It is a pleasure to present the 2025 Annual Report of the Lleida Institute for Biomedical Research (IRBLleida). This document brings together a year of shared effort, scientific progress, and a dedication that becomes evident in every project and every step forward. Above all, IRBLleida is its people: a team with talent, commitment, and a sincere ambition to grow, to excel, and to continue driving research that transforms real-world challenges.

I would like to express my deepest gratitude to all the individuals and organizations that make this work possible. To the office staff, who ensure daily operations with rigor and professionalism. To the research staff, whose creativity, perseverance, and critical thinking generate valuable knowledge. To the funding bodies, companies, collaborators, and friends of the center, whose support confirms the trust placed in our project. Your involvement is essential, and it is thanks to all of you that IRBLleida continues to move forward.

Throughout 2025, the quality of our scientific output has remained at a very high level, with 62% of publications appearing in first-quartile journals, for a total of 408 papers. This level of excellence places us in a solid position within the Catalan research landscape, reinforcing IRBLleida's role as an institution that produces impactful knowledge and that contributes significantly to the country's research system.

It has also been a year of intense and enriching institutional activity. Lleida hosted the ICS Research Day, a space that strengthens the connection between scientific research and healthcare. We also celebrated our Annual Symposium once again, an event that has become part of the center's identity and that is now a key gathering point for our research groups. At the same time, we have continued to promote innovation and internationalization, two strategic lines that open new opportunities and enhance the institute's global projection.

All of this contributes to a year that reaffirms IRBLleida's role as a key player in the generation of knowledge and in societal progress. We will continue moving forward with determination, nurturing this drive to grow and to contribute – from Lleida – to a stronger, more open, and more transformative biomedical research ecosystem. New challenges await us, and we face them with the same enthusiasm and commitment that define us.





Main achievements in 2025



623

Total staff



530

Researchers



37

Research groups



108

Principal investigators



36

New competitive projects



408

Scientific publications



2,331.15

Total IF



5.71

Medium IF



62%

Scientific production Q1



51

New clinical studies



431K

Fundraising (€)



11.9M

Budget (€)

Main figures are for 2025.



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Introduction

What is The Institute for Research in Biomedicine of Lleida

The Institute for Research in Biomedicine of Lleida (IRBLleida) has been a pioneering institution in biomedical research and innovation since 2004. With a multidisciplinary team of more than 600 people, we work in key areas such as oncology, neuroscience, cardiology and endocrinology, among others. We foster collaboration with national and international institutions to share knowledge and cutting-edge technologies. In addition, we are committed to the training of new talent and constant innovation in biomedicine. Our goal is to understand the fundamental mechanisms of human pathologies and to generate scientific discoveries that transform people's health and quality of life. IRBLleida has been a CERCA institute since 2013, and as such is organized according to a model of good governance and operation that ensures efficiency, management flexibility, talent recruitment and promotion, strategic planning and executive capacity. It is also one of the 36 Spanish Health Research Institute (IIS) recognized by the Carlos III Health Institute as established by Law 16/2003, of 28 May, on the cohesion and quality of the national health system.

IRBLleida Mission

To generate knowledge through excellence, to be able to impact the population's health and quality of life and do so with a strong international commitment and inclusion of the region's potential.

Historical Background

The Lleida Biomedical Research Institute (IRBLleida) was founded in 2004 with the signing of a cooperation agreement between the Catalan Health Institute (ICS), the Dr Pifarré Foundation and the University of Lleida (UdL). It comprises biomedical research groups from the region of Lleida, more specifically from the UdL and the health system. The groups cover all three aspects of biomedical research: basic, translational and clinical epidemiological research.





Lleida Health Campus: UdL, HUAV and HUSM

The Institute for Research in Biomedicine of Lleida (IRBLleida) has been a pioneering institution in biomedical research and innovation since 2004. With a multidisciplinary team of more than 600 people, we work in key areas such as oncology, neuroscience, cardiology and endocrinology, among others. We foster collaboration with national and international institutions to share knowledge and cutting-edge technologies. In addition, we are committed to the training of new talent and constant innovation in biomedicine. Our goal is to understand the fundamental mechanisms of human pathologies and to generate scientific discoveries that transform people's health and quality of life.

IRBLleida acts as a cluster of all biomedical research carried out in Lleida and incorporates two key stakeholders that conduct health research and implement innovation policies:

- The **University of Lleida (UdL)** includes researchers from the Faculties of Medicine and Nursing and Physiotherapy.
- The Department of Health, which includes research professionals from its health care providers:
 - » Catalan Health Institute (ICS): **Arnau de Vilanova University Hospital (HUAV)**, the Lleida Primary Health Care and Community and the Alt Pirineu–Aran Primary Health Care.
 - » Gestió de Serveis Sanitaris (GSS): **Santa Maria University Hospital (HUSM)**, **Pallars Regional Hospital** and Mental Health, and others.

It also interacts with the Lleida **AgriFood Science and Technology Park** and **Agrotecnio**, the research centre for agriculture, animal production and food technology at the **ETSEA campus** of the University of Lleida.



IRBLleida, Institute for Research in Biomedicine of Lleida

In collaboration with:



UdL, University of Lleida



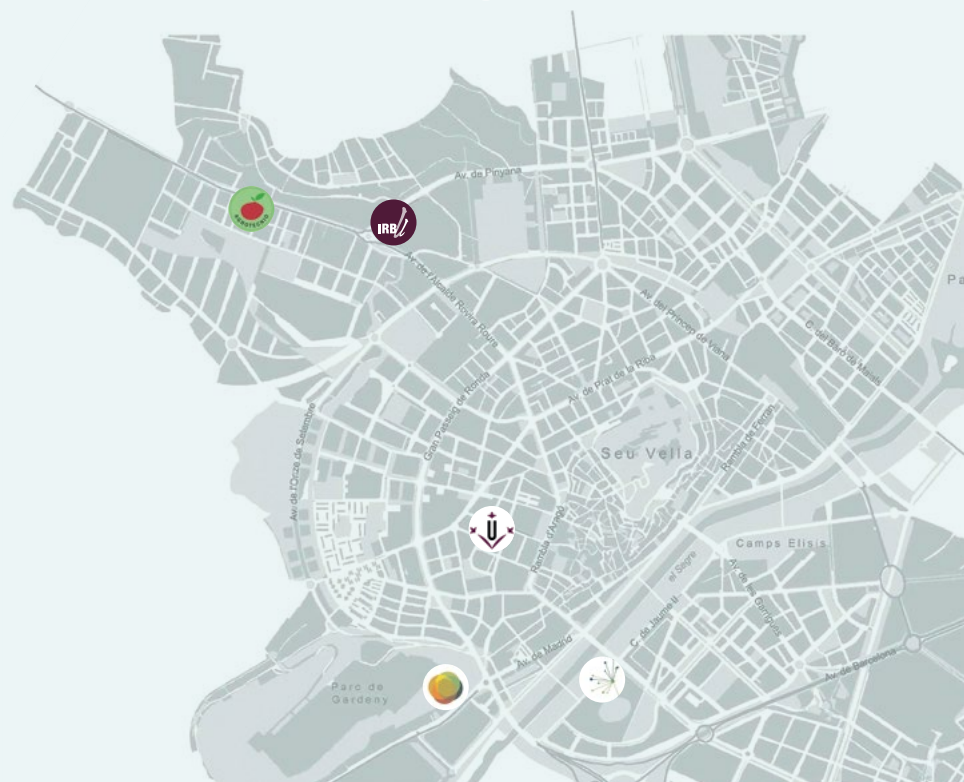
Agrotecnio, Research Centre in Agrotechnology



Inspires, Polytechnic Institute for Innovation and Sustainability Research



Agrobitech Lleida Park





Lleida Health Region

The Lleida Health Region includes the counties of Les Garrigues, La Noguera, Pla d'Urgell, La Segarra, El Segrià and L'Urgell. The provision of health, educational, cultural, commercial and professional services to people living in other municipalities in the region of Lleida, and in part of the 'La Franja', the Pyrenees and even the Terres de l'Ebre, make Lleida a centre of attraction that goes beyond the district itself (with 370,000 inhabitants) to cover the needs of its inhabitants. In terms of teaching, IRBLleida receives support from the Health Sciences area of the University of Lleida with the degrees of Medicine, Nursing and Physiotherapy, and Human Nutrition and Dietetics. UdL lecturers and IRBLleida researchers also participate in the teaching of the Biotechnology degree. Since September 2009, the bachelor's degree in Biomedicine has been taught in coordination with the University of Marburg, a pioneer in this degree in the world. IRBLleida has a large animal facility located in Torrelameu, equipped with state-of-the-art experimental operating theatres, with the main objective of training surgeons, and facilities to carry out research activity using porcine models.

Healthcare activity in data

Table 1. Healthcare activity data for HUAV (Hospital Universitari Arnau de Vilanova) and HUSM (Hospital Universitari Santa Maria). Numbers for HUSM include general healthcare, mental healthcare and social healthcare.

2025	HUAV	HUSM
Outpatient consultations	450,901	268,761
- Face-to-face visits	339,587	235,469
- Telemedicine	111,314	33,292
Day hospital sessions	44,631	23,684 + 183,878 rehabilitation
Discharges	30,052	10,360
Total beds	451	192





Organization of the institute

IRBLleida is organized according to a governance and management model that ensures scientific excellence, transparency, and efficient use of resources. The Institute operates under a clear institutional framework that combines strategic oversight, scientific advisory structures, executive management, and specialized committees that support research activity, ethical compliance, and innovation.

The governing bodies are responsible for defining strategic priorities and ensuring alignment with the Institute's mission, while advisory boards provide independent scientific and strategic guidance. Executive and management structures oversee day-to-day operations, resource allocation, and implementation of institutional policies. In parallel, a network of ethics committees, evaluation bodies, and internal commissions guarantees compliance with regulatory requirements, quality standards, and good research practices across all areas of activity.

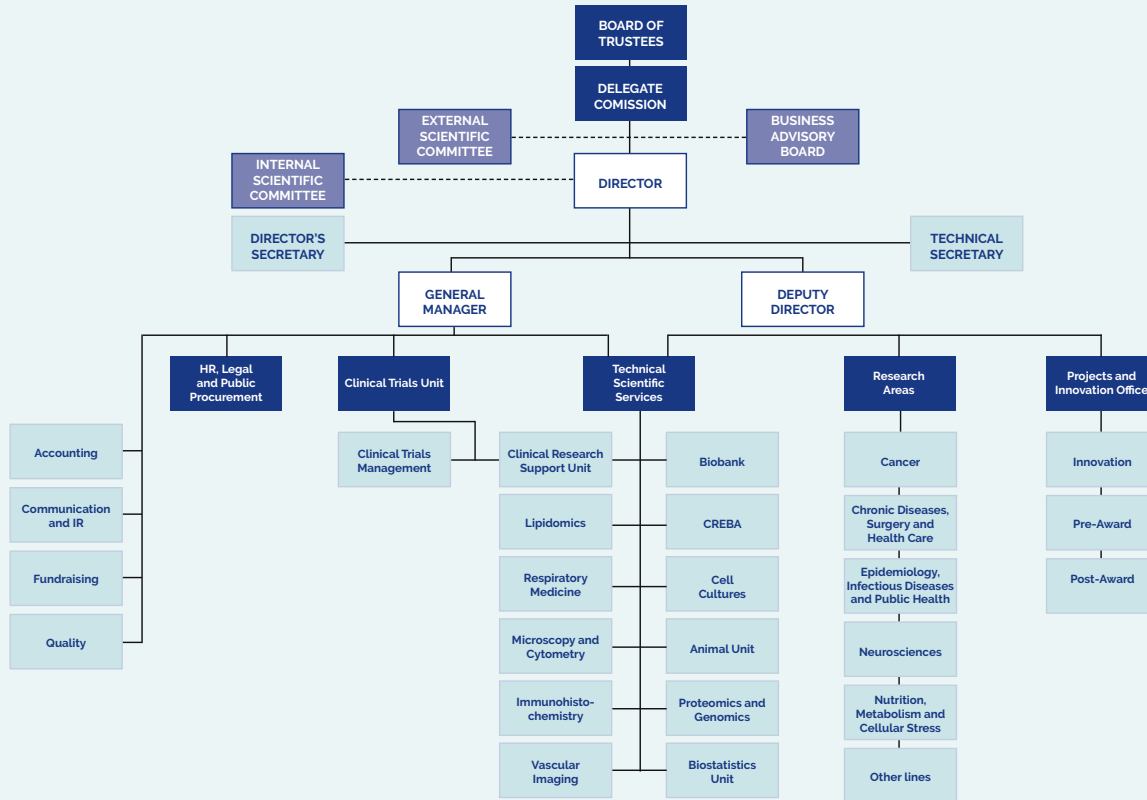
This organizational structure enables IRBLleida to coordinate multidisciplinary research, support researchers and research groups effectively, and maintain accountability at both institutional and public levels.

Organization

1. Governing and Executive Bodies
 - 1.1 Board of Trustees
 - 1.2 Delegated Commission
 - 1.3 Executive Direction
2. External Advisory Boards
 - 2.1 External Scientific Advisory Board (eSAB)
 - 2.2 Business Advisory Board (BAB)
3. Internal Advisory Committees
 - 3.1 Internal Scientific Committee
 - 3.2 Internal Scientific Evaluation Committee
 - 3.3 Innovation Committee
 - 3.4 Biosafety Commission
 - 3.5 Equality Commission
 - 3.6 Quality Commission
 - 3.7 Education and Training Committee
 - 3.8 Works Council
 - 3.9 Joint IRBLleida – UdL Commission
 - 3.10 Compliance and Anti-Fraud Committee
 - 3.11 Health and Safety Committee
 - 3.12 Patients Commission
 - 3.13 Environmental Sustainability Committee
 - 3.14 Human Resources Excellence in Research Governance Structure
4. Ethical Committees
 - 4.1 Animal experimentation ethics committees (UdL CEEA)
 - 4.2 Clinical Research Ethical Committee (CEIm)

IRBLLeida, in accordance with its statutes, is structured into the following bodies:

- Governing: board of trustees and its delegate commission.
- Advisory: the internal scientific committee (ISC), External Scientific Advisory Board (eSAB) and Business Advisory Board (BAB).
- Executive and Management Bodies.



SCIENTIFIC DIRECTION

Director

Dr. Diego Arango del Corro

Deputy Director

Dr. Joan Sayós Ortega

General Manager

Ms. Eva López Truco

Executive Assistant

Ms. Naiara Vilagínés Joven / Mr. Marc Mariner Cortés

Technical Secretary

Mr. Jaime Seuma Morlanes / Ms. Carme Peirau Gabarrell

IRBLLEIDA MANAGEMENT OFFICE

Human Resources

Ms. Esther Castell Palacín
 Ms. Elena Moscatel Mendelsohn
 Ms. Sara Palau Camarero
 Ms. Sílvia Roig Font
 Ms. Sandra Vega González

Financial

Mr. Joan Oró Trilla
 Ms. Sílvia Aresté Grau
 Mr. Albert Dalmales París
 Ms. Núria Minguell Queralt
 Ms. Noèlia Pérez Marsol

Clinical Trials

Ms. Sílvia Aresté Grau
 Mr. Albert Dalmales París
 Ms. Núria Minguell Queralt
 Mr. Joan Oró Trilla
 Ms. Noèlia Pérez Marsol

Reception and Concierge

Mr. Fernando Tortras Pastor

Projects and Innovation Department (project promotion and management, scientific production, valorisation and transfer)

Ms. Mònica Arango Usuga
 Dr. Núria Bahí Pla
 Dr. Joaquín Bonelli Blasco
 Ms. Paloma Buj Dourin
 Ms. Anna Castilló
 Ms. Lluïsa Cortés Gomis
 Ms. Maite Falcó Mascaró
 Mr. Oriol Gasà Falcon
 Ms. Anna Verdugo Oliver

Fundraising

Mr. Josep M. Bosch Pons

Communication and Public Engagement

Ms. Meritxell Soria Yenez

Core Facilities Coordination

Dr. Maria Ruiz Miró



1. Governing and Executive Bodies

1.1 Board of Trustees

Governance, representation, and executive management at IRBLLeida is entrusted to the board of trustees, which holds all necessary powers to fulfill its foundational mission. Its composition in 2025 was as follows:

PRESIDENT

Hon. Dr. Olga Pané Mena

Counselor of the Department of Health of the Generalitat of Catalonia

FIRST VICE-PRESIDENT

Hon. Dr. Núria Montserrat Pulido i Ferreras

Counselor of the Department of Research and Universities of the Generalitat of Catalonia

SECOND VICE-PRESIDENT

Dr. Jaume Puy i Llorens / Dr. M. Àngels Balsells Bailon

Rector of the University of Lleida

DEPUTY GENERAL DIRECTOR

Mr. David Fernández Barba

Research and Universities Department of the Generalitat of Catalonia

MEMBERS

Dr. Ferran Barbé Illa

Professor of medicine at University of Lleida / Head of Pneumology of the Arnau de Vilanova University Hospital in Lleida

Dr. Joan Gómez Pallarés / Dr. Teresa Sanchis Estruch

General Director of Research in the Research and Universities Department of the Generalitat of Catalonia

Mrs. Montserrat Llavayol i Giralt

Deputy General Director for Research and Innovation in the Health Department of the Generalitat of Catalonia

Dr. Rosa Maria Pérez Pérez

General Manager of the Lleida Health Region

Dr. Olga Martín Belloso / Dr. Jordi Voltas Velasco

Vice-Rector for Research at the University of Lleida

Dr. Antoni Plasència i Taradach

General Director for Research and Innovation of the Department of Health of the Generalitat of Catalonia

Dr. Laia Pellejà i Puxeu

CERCA Director

Dr. Joaquim Ros Salvador

Professor of Biochemistry and Molecular Biology, University of Lleida

Dr. Eva Martín Fuentes

Vice-Rector for Transfer and Territory

Mr. Ramon Saladrígues Solé / Ms. Maite Calderó Peralta

Manager of the University of Lleida

Dr. Alfons Segarra Medrano

Regional Manager of the Catalan Health Board in Lleida

Dr. Javier Selva Sánchez

General Director of Knowledge Transfer and Society in the Research and Universities Department of the Generalitat of Catalonia

Mr. Joan Talarn i Gilabert

President of Diputació de Lleida

Dr. Pilar Vaqué Castilla

Director of Primary Care, Catalan Health Board in Lleida

Last meeting: [03/12/2025](#)



1.2 Delegated Commission

The board of trustees appoints a delegated commission from among its members. Its functions include implementing the resolutions adopted by the board of trustees, the periodic monitoring of the management activities and of the agreements and conventions signed by the foundation, and proposing to the board of trustees the adoption of relevant resolutions within its remit, among other responsibilities

Mrs. Montserrat Llavayol i Giralt

Deputy General Director for Research and Innovation in the Health Department of the Generalitat of Catalonia

Dr. Joan Gómez Pallarés / Dr. Teresa Sanchis Estruch

General Director of Research in Research and Universities Department of the Generalitat of Catalonia

Dr. Laia Pellejà i Puxeu

CERCA Director

Mr. Ramon Saladrígues Solé / Ms. Maite Calderó Peralta

Manager of the University of Lleida

Dr. Olga Martín Belloso / Dr. Jordi Voltas Velasco

Vice-Rector for Research at the University of Lleida

Dr. Alfons Segarra Medrano

Regional Manager of the Catalan Health Board in Lleida, Alt Pirineu and Aran

Last meeting: 24/11/2025



1.3 Executive Direction

The Executive Direction is responsible for the executive leadership of the Institute. Appointed by the Board of Trustees through an open and merit-based procedure, the Director oversees scientific strategy, research and innovation activities, institutional planning, and day-to-day operations. The Executive Direction proposes strategic and financial planning documents to the Board and ensures their effective implementation.

Dr. Diego Arango del Corro

Director

Dr. Joan Sayós Ortega

Deputy Director

Ms. Eva López Truco

General Manager

Last meeting: [17/12/2025](#)



2. External Advisory Boards

2.1 External Scientific Advisory Board (eSAB)

The External Scientific Advisory Board (eSAB) is made up of several members of recognized scientific expertise and acts as an advisory body to the board of trustees in the tasks entrusted to it in order to ensure the scientific quality of IRBLLeida and to advise the Scientific Director in carrying out their duties.

The members of the External Scientific Advisory Board in 2025 were:

PRESIDENT

Dr. Ángeles Almeida Parra

Doctor of Pharmacy. Scientific assistant director of the Biomedical Research Institute of Salamanca (IBSAL). Head of the Molecular Neurobiology Group in the IBSAL and the Institute of Biology and Functional Genomics (IBFG). Associate Professor of the University of Salamanca.

MEMBERS

Dr. Antonio Andreu Pérez

Scientific Director, EATRIS-ERIC.

Dr. Joan Comella Carnicé

Director of the Sant Joan de Déu Research Institute (IRSJD).

Dr. Claudia Faria

Neurosurgeon at Hospital de Santa Maria Portugal. Coordinator of the Brain Tumor Bank in Portugal, co-director of the Biobank at Biobanco-iMM/CAML in Lisbon president of the Portuguese Neuro-oncological Association (APNO) and chair of the Young Investigators & Innovators Group of the European Society for Pediatric Oncology's Brain Tumor Group (SIOP-E BTG), among other leadership positions.

Dr. John Mariadason

Professor of the School of Cancer Medicine, La Trobe University (Honorary); professor of the University of Melbourne Department of Medicine, Austin Health (Honorary); head of the Division of Cancer Biology and Therapy, Olivia Newton-John Cancer Research Institute; head of the Oncogenic Transcription Laboratory, Olivia Newton-John Cancer Research Institute; director of Graduate Research, School of Cancer Medicine (ONJCRI), La Trobe University.

Dr. Teresa Moreno-Casbas

Senior Nursing research. Nursing and Healthcare Research Unit (Investén-ISCIII), Instituto de Salud Carlos III.

Dr. Jordi Rodón Ahnert

Associate Professor, MD Anderson Cancer Center in Houston

Last meeting: 03/11/2025



2.2 Business Advisory Board (BAB)

The Business Advisory Board (BAB) is a direct advisory body that collaborates closely with the institute's Board of Trustees and Director team. The BAB is composed of CEOs and general managers of health sector companies dedicated to health data, diagnostics or treatments and institutions related to innovation and economic promotion. Its primary mission is to actively contribute to achieving the Institute's objectives in the field of Innovation.

The members of the Business Advisory Board in 2025 were:

PRESIDENT

Dr. Lluís Blanch

President of Btcare and ITEMAS.

MEMBERS

Mr. Ramon Boixadera

Director of the economic promotion board at Diputació de Lleida.

Mr. Jordi Cabau

CTO - Innovation of Electrònica Saltó SLU.

Ms. Raquel Egea

CEO of Alma Medical.

Mr. Antoni Gelonch

Member of the Social Council of the University of Lleida

Mr. Menno Marien

CEO of Bsure Medical.

Ms. Marina Rigau

CEO and Co-founder of MiMARK.

Ms. Laura Rodríguez

Director of In vivo Capital (venture capital fund of the Barcelona Medical Association).

Ms. Jessica Vitos

Grifols Senior Manager Innovation.

Mr. Sun Yipeng

Director of Europa Infervision

Last meeting: [16/10/2025](#)



3. Internal Advisory Committees

3.1 Internal Scientific Committee

The internal scientific committee serves as IRBLleida's advisory body for its strategic and operational lines, which serves to promote and coordinate its scientific activity. The members of the internal scientific committee in 2025 were:

PRESIDENT

Dr. Diego Arango del Corro

Scientific director

MEMBERS

Dr. Marcelino Bermúdez López

Principal investigator, Vascular and renal translational research group

Dr. Ana Garcerá Teruel

Principal investigator, Neuronal Signalling Unit

Dr. Eloi Garí Marsol

Coordinator of the Cancer research area

Dr. Mariona Jové Font

Principal investigator, Physiopathology group

Ms. Eva López Truco

General manager

Dr. Anna Macià Armengol

Principal investigator, Oncological Pathology group

Dr. Rosa Maria Martí Laborda

Principal investigator, Oncological Pathology group

Dr. Manel Portero Otín

Principal investigator, Physiopathology group

Dr. Francesc Purroy García

Chair of the Training Committee

Dr. Joaquim Ros Salvador

Coordinator of the Nutrition, metabolism and cellular stress research area

Dr. Esther Rubinat Arnaldo

Principal investigator, Health care research group (GReCS)

Dr. Antonieta Salud Salvia

Principal investigator, Cancer biomarker research group (GReBIC)

Dr. Joan Sayós Ortega

Deputy director

Dr. Juan Antonio Schoenenberger Arnaiz

Principal investigator, Pharmacoepidemiology and Pharmacodynamics group

Dr. Anabel Sorolla Bardají

Principal Investigator, Biomarkers in cancer research group (GReBiC)

Dr. Albert Sorribas Tello

Principal Investigator, Systems Biology and Statistical Methods for Research Group

Dr. José Manuel Valdivielso Revilla

Chair of the Training Committee and coordinator of the research area Chronic diseases, surgery and cures in health and training

Dr. Oriol Yuguero Torres

Coordinator of the Epidemiology, Infectious Diseases and Public Health research area

Last meeting: 18/11/2025



3.2 Internal Scientific Evaluation Committee

The IRBLleida Internal Scientific Evaluation Commission (hereinafter CIAC), is the permanent evaluation body responsible for supervising the processes of evaluation and prioritization of proposals that are submitted to different calls coordinated both by IRBLleida and by external funding sources.

Functions

- To establish the appropriate evaluation criteria for applications to calls requiring prioritisation and/or selection of internal candidates
- To evaluate and prioritise received proposals in accordance with the established criteria
- To establish the terms and conditions for internal calls, which will subsequently be reviewed and, if necessary, approved by the Internal Scientific Committee (CCI)
- To communicate the results of the assessment to the IRBLleida management
- To respond to possible complaints and/or allegations related to calls evaluated or prioritised by the CIAC
- To review and approve proposals submitted to calls from the Carlos III Health Institute (ISCIII)
- To monitor periodically the internal grants that may be required
- To produce evaluation reports and provide feedback

Last meeting: 27/11/2025

MEMBERS

President

Dr. Manel Portero Otín

Secretary

Ms. Anna Verdugo Oliver

Members

Dr. Joaquín Bonelli Blasco
Dr. Milica Bozic
Dr. David de Gonzalo Calvo
Dr. Núria Eritja Sánchez
Dr. Helena Fernandez Lago
Dr. Montserrat Gea Sánchez
Dr. Xavier Gallart Palau
Dr. Robert Montal Roura
Dr. Jose Manuel Valdivielso Revilla
Dr. Ester Vilaprinjó Terre

 Contact
ciac@irbllleida.cat



3.3 Innovation Committee

The Innovation Committee (CI) is a permanent IRBLleida Committee with the mission of advising the institute's management team and collaborate with the Innovation Unit with the idea to promote an innovative culture on campus.

Main functions of CI are:

- Advise the Management Team on matters such as technology transfer agreements, spin-offs, results protection, etc.
- Collaborate with the Innovation Unit on idea prioritisation, indicator development, project evaluation and monitoring, etc.

Last meeting: 22/10/2025

MEMBERS

Dr. Joaquín Bonelli Blasco
Dr. David de Gonzalo Calvo
Dr. Fabien Delaspre
Dr. Maria Alba Gairi Brugués
Mr. Oriol Gasa Falcon
Dr. Esther Rubinat Arnaldo
Dr. Joan Sayós Ortega
Dr. Aida Serra Maqueda
Dr. José Manuel Valdivielso Revilla
Dr. Ester Vilaprinjó Terre



Contact

innovacio@irbleida.cat



3.4 Biosafety Commission

The concept of biosafety encompasses a diverse set of regulations related to the protection of living beings and the environment from biological agents and risks. These include regulations on plant health, animal health, food safety, human health and safety, environmental safety and biodiversity protection.

IRBLleida's Biosafety Commission is responsible for assessing the biosafety risk of projects initiated at the institution, providing support for training activities for users of tissue culture facilities operating at biosafety level 2 or higher, proposing improvements to procedures or protocols and advising the center's management on biosafety issues.

Functions

- To participate, while verifying the degree of compliance with current legal and internal regulations, in the assessment, identification, review and approval of facilities and research and teaching activities related to the export or import, the release into the environment, contained use, production, transport, commercialisation, packaging, destruction and/or elimination of biological agents, whether genetically modified or not, and the derivatives, products or samples that contain them.
- To carry out a prior assessment of the facilities and activities that require authorisation, before notifying the competent authority, as well as to establish a registry and custody of the legally required documentation.
- To control and ensure that the IRBLleida's activities and facilities comply with current legal and internal regulations.
- To establish the biosafety procedures to be applied by the IRBLleida Biosafety Commission.
- To issue the certificates that are required in accordance with its competences.
- To propose, when necessary, improvements of facilities and equipment in terms of biosafety.
- To register the reception and packaging of biological agents, GMOs and/or their derivatives classified as Risk Group 2 or higher.
- To review information on biological incidents or accidents and notify the competent authorities of any incident, contamination or any serious accident involving biohazardous materials.
- To disallow the initiation and suspend any activity that is not in accordance with current regulations.
- To assess and inform IRBLleida management of any complaints submitted by any member of the research community regarding possible irregularities in areas within the Commission's remit.
- To advise and train research teams working in laboratories on aspects related to biosafety.
- To ensure the confidentiality of data and information and information provided to the Commission is guaranteed.
- To guarantee the necessary coordination with the scientific and technical services of the IRBLleida, the Ethics and Animal Experimentation Committee (CEEA) and the Drug Research Ethical Committee (CEIm).
- Any other function attributed to it by law or by the governing bodies of the IRBLleida.

Last meeting: 15/12/2025

MEMBERS

President

Dr. Maria Ruiz Miró

Secretary

Dr. Núria Bahi Pla

Technician

Dr. Petya Vladeva Valcheva

Members

Dr. Eloi Garí Marsol

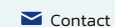
Ms. Eva López Truco

Dr. Eva Parisi Capdevila

Dr. Neus Pedraza Gonzalez

Dr. Carme Piñol Felis

Dr. Alicia Sánchez de la Torre



Contact

comitebioseguret@irblleida.cat



3.5 Equality Commission

The aim of IRBLleida's Equality commission is to support compliance with current legislation on equality and diversity. All the members of the commission are bound by a confidentiality agreement, as the commission serves as a facilitator in the management of issues related to sex, gender, race, religious beliefs or geographical origin.

Functions

- To guarantee fair selection processes, promoting equal opportunities in staff recruitment, selection and retention.
- To guarantee wage equality.
- To promote staff participation in the development of equal opportunity initiatives.
- To identify and eliminate unconscious biases and stereotypes.
- To raise awareness and provide training on equality and diversity-related issues.
- To promote the non-sexist and non-discriminatory use of language and images.
- To promote work-life balance.
- To implement measures for the prevention, detection and intervention in cases of sexual harassment and harassment based on sex or gender identity.
- To promote the integration of sex and gender perspectives in research contents.
- To provide guidance and support to researchers on integrating a gender perspective into grant applications.
- To monitor and evaluate institutional equality indicators and propose improvement actions.
- To collaborate with national equality networks and initiatives.
- To incorporate the gender perspective into the organisation's mission, vision and values.

Last meeting: 10/12/2025

MEMBERS

President

Dr. Àgueda Martínez Barriocanal

Secretary

Ms. Elena Moscatel Mendelsohn

Members

Mr. Bruno Brotons Morales

Ms. Anna Castelló Pérez

Mr. Marc Collado Catalán

Ms. Anna Fernández Bernal

Ms. Marta Molinero García

Mr. Luís Alejandro Rodríguez Guerrero

Contact

igualtat@irblleida.cat



3.6 Quality Commission

The Quality commission is the central body for IRBLleida's quality policy and assumes responsibility for the design, implementation and monitoring of the Quality Plan. It is also the assessment body and advises government bodies on quality policy issues.

Functions

- In relation to the Quality Plan:
 - a) To write the Quality Plan.
 - b) Review and verify annual compliance with the Quality Plan.
 - c) To draft an annual report on the Quality Plan.
- Other functions related to the quality management system:
 - a) To analyse non-conformities and formulate the corresponding corrective and/or preventive actions.
 - b) To propose quality improvement initiatives and objectives.
 - c) To propose quality assessment methods and instruments.
 - d) To carry out an evaluation of the actions.
 - e) To inform the IRBLleida's governing bodies of the processes and results of quality assessment.
 - f) To assess quality issues.

Last meeting: 15/12/2025

MEMBERS

President

Ms. Eva López

Members

Dr. Joaquín Bonelli
Mr. Josep Maria Bosch
Ms. Lluïsa Cortés
Mr. Albert Dalmases
Mr. Oriol Gasa
Ms. Elena Moscatel
Ms. Carme Peirau Gabarrell
Dr. Maria Ruíz
Dr. Alicia Sánchez
Ms. Meritxell Soria

 Contact
qualitat@irbllleida.cat



3.7 Education and Training Committee

IRBLleida teaching committee supports the implementation of the Institute's Training Plan and advises the Directorate on training-related matters.

Functions

- Draft the annual Training Plan for IRBLleida staff linked to the general objectives of the Institute, adapting it to the different job profiles.
- To monitor training activities (attendance register), evaluate quality (surveys) and the system of access to training activities.
- Monitor the expenditure related to training activities.
- To receive and prioritise training proposals in line with the objectives of IRBLleida and its staff.
- To advise and inform the Internal Scientific Committee about training needs and any issues that may arise.
- To prepare an annual report on compliance with the Training Plan.

Last meeting: 26/09/2025

MEMBERS

Presidents

Dr. José Manuel Valdivielso Revilla
Dr. Francesc Purroy García

Secretary

Ms. Lluïsa Cortés Gomis

Members

Mr. Fabian Andrade Lozano
Dr. Marcelino Bermúdez López
Dr. Silvia Bielsa Martín
Dr. Joan Blanco Blanco
Dr. Fabien Delaspre
Ms. Júlia Freixes Vidal
Dr. Ana Garcerà Teruel
Dr. Dolores Garcia Olmo
Mr. Oriol Gasà Falcón
Dr. David de Gonzalo Calvo
Dr. Alberto Marín Sanguino
Ms. Elena Moscatel Mendelsohn
Dr. Eva Parisi Capdevila
Dr. Joan Sayós Ortega
Ms. Meritxell Soría Yenez
Dr. Anabel Sorolla Bardaji
Dr. Oriol Yuguero Torres



Contact

formacio@irbllleida.cat



3.8 Works Council

IRBLleida Works council is the representative body of the Institute's employees. The members of the council are elected through democratic procedures for four-year terms and the number of representatives to be appointed is related to the number of employees contracted by the Institute.

Functions

- Advise and defense of workers' rights.
- Hold regular meetings with Institute management.
- Negotiate collective or other labor agreements with IRBLleida management.
- Oversee management decisions, actions, and omissions related to labor matters.

Last meeting: 22/10/2025

MEMBERS

President

Ms. Meritxell Martín Garí

Members

Dr. Montse Martínez Alonso
Ms. Aida Moroba Estor
Dr. Eva Parisi Capdevila
Dr. Irene Pociño Merino
Dr. Sara Puy López
Dr. M. Alba Sorolla Bardaji
Ms. Meritxell Soria Yenez
Dr. Izaskun Urdanibia Ascanio



Contact

comiteempresa@irbllleida.cat



3.9 Joint IRBLleida – UdL Commission

The joint commission is composed of the general manager and the executive director of IRBLleida as well as the heads of the departments of Basic Medical Sciences, Medicine and Surgery, and Experimental Medicine of the University of Lleida (UdL).

Functions

- Advise IRBLleida management on departmental matters that may lead to jurisdictional conflicts.
- Manage the allocation and distribution of spaces in the biomedicine buildings.
- Advise on the maintenance and improvement of biomedicine building facilities.
- Advise on the organisation and operation of the biomedicine buildings.
- Manage the repair, maintenance or new acquisition, if necessary, of common equipment of the biomedicine buildings.
- Carry out any additional functions mutually agreed upon that stem from the above.

Last meeting: 10/11/2025

MEMBERS

President

Dr. Diego Arango del Corro

Secretary

Ms. Eva López Truco

Members

Dr. Elisa Cabiscol Catalan
Dr. Loreta Medina Hernández
Dr. Carme Piñol Felis
Dr. Maria Ruiz Miró
Dr. Joan Sayós Ortega



3.10 Compliance and Anti-Fraud Committee

IRBLleida is committed to upholding the highest standards of legal and ethical compliance, adhering to the principles of integrity, objectivity, proportionality and honesty in the performance of its duties. To this end, it promotes a culture that deters fraudulent activity and facilitates its prevention and detection. For this reason, it will adopt all the necessary training and information measures to ensure that all IRBLleida staff also assume this commitment.

Functions

- Conduct periodic assessments of fraud risk, ensuring that there is effective internal control to prevent and detect possible fraud.
- Define and implement measures to prevent, detect, correct and pursue fraud attempts.
- Manage communications and reports of fraud, conflicts of interest or other regulatory breaches.
- Issue recommendations and propose improvements and additional preventive measures in ethical management and the application of the principles of good governance or good administration, based on the verification of the reported facts.

Last meeting: 23/12/2025

MEMBERS

President

Ms. Eva López Truco

Members

Dr. Joaquín Bonelli Blasco

Mr. Josep Maria Bosch Pons

Ms. Lluïsa Cortés Gomis

Mr. Albert Dalmases París

Mr. Oriol Gasa Falcon

Ms. Elena Moscatel Mendelsohn

Ms. Sara Palau Camarero

Ms. Carme Peirau Gabarrell

Dr. Maria Ruiz Miró

Dr. Alicia Sánchez de la Torre

Ms. Meritxell Soria Yenez

Dr. José Manuel Valdivielso Revilla



3.11 Health and Safety Committee

The Health and Safety Committee is the joint and collegiate participatory body for regular and periodic consultation on the institute's actions on matters related to occupational risk prevention.

Functions

The responsibilities of the Health and Safety Committees are related to participation in the development, implementation and evaluation of prevention plans and programmes and the promotion of initiatives on methods and procedures to make prevention effective in the organisation.

The committee shall therefore have the authority to:

- Access direct information on the situation regarding risk prevention in the workplace.
- Review documents and reports relating to working conditions.
- Analyse and assess incidents affecting workers' health.
- Review and report on the annual prevention programme submitted by the prevention service.

The Health and Safety Committee shall meet at least quarterly, although it may meet more frequently.

Last meeting: 17/12/2025

MEMBERS

3 prevention delegates (workers' representatives in health and safety matters, elected by and from among the members of the Works Committee)

Dr. Eva Parisi

Ms. Meritxell Soría

Dr. M. Alba Sorolla

3 representatives of IRBLleida

Ms. Eva López

Ms. Elena Moscatel

Dr. Joan Sayós



3.12 Patients Commission

IRBLleida promotes the participation of different social actors through the creation of the patient commission with the aim of promoting participatory and co-created research.

Functions

- Familiarise themselves with IRBLleida's mission, vision, and values, as well as other necessary characteristics (for example, research areas) to fulfil their role on the Patient Commission.
- Attend the training sessions deemed relevant by IRBLleida in the field of biomedical research to fulfil their role on the Patient Commission.
- Participate in the meetings of the IRBLleida Patient Committee, providing information about the real needs and challenges affecting the patients they represent.
- Provide their perspective in calls/meetings when requested by IRBLleida research staff in order to co-create in all phases of the research process.
- Respond to inquiries about citizen participation raised by research groups and the IRBLleida Management.
- Explore collaboration opportunities to develop research and innovation projects aimed at addressing these unmet needs or supporting related sponsorship initiatives.

Last meeting: 26/11/2025

MEMBERS

President

Ms. Marisa Pon

Secretary

Mr. Antonio Clariana

Members

Ms. Maria Bonjorn Joval

Mr. Juan Carles Baiges

Ms. Dolors Falcó

Ms. Mònica Ferrer Plana

Ms. Rocío González

Mr. Ignacio Gracia

Ms. Montse Iglesias

Mr. Sisco Maranges Granja

Ms. M. Carme Oró

Ms. Fabiola Pérez Gómez

Ms. Rosa Sol



3.13 Environmental Sustainability Committee

The Environmental Sustainability Committee of IRBLleida promotes, coordinates, and supervises the actions necessary to integrate sustainability transversally into the institution's operations.

Functions

- To design, implement and evaluate the Environmental Sustainability Action Plan. To promote environmental sustainability in the planning, execution and dissemination of research projects.
- Minimise the environmental impact of scientific events, travel and resource use.
- Encourage the use of virtual meetings and sustainable transport whenever possible.
- Promote green purchasing practices and the use of reusable or biodegradable materials.
- Raise staff awareness of sustainability in research.

Last meeting: 17/11/2025

MEMBERS

President

Dr. Irene Pociño Merino

Secretary

Ms. Elena Moscatel Mendelsohn

Members

Dr. Núria Bahí Pla

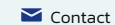
Dr. Fabien Delaspre

Dr. María Coronada García Hidalgo

Dr. Àgueda Martínez Barriocanal

Mr. Fernando Tortras Pastor

Ms. Naiara Vilagínés Joven / Mr. Marc Mariner Cortés



Contact

greenteam@irbllleida.cat



3.14 HR Excellence in Research and Governance Structure

This structure provides governance and operational support for the Institute's commitment to the HR Excellence in Research principles.

3.14.1 Steering Committee for HR Excellence in Research

The Steering Committee for HR Excellence in Research provides strategic oversight of the HRS4R process. It monitors progress, defines priorities, and ensures institutional alignment with the principles of the European Charter and Code for Researchers and the associated action plan.

MEMBERS

Dr. Diego Arango
Scientific director

Dr. Joan Sayós
Deputy director

Ms. Eva López
Management director

Dr. Jose Valdivielso
Principal Investigator (R4)

Dr. Àgueda Martínez
Principal Investigator (R3)

Ms. Elena Moscatel
Human Resources Manager

Last meeting: 20/10/2025

3.14.2 Working/technical group HR excellence in research

The Working / Technical Group for HR Excellence in Research supports the operational implementation of the HRS4R action plan. It coordinates actions, monitors indicators, and contributes to continuous improvement of human resources policies and practices.

MEMBERS

Dr. Diego Arango
Dr. Joaquin Bonelli
Dr. Milica Bozic
Dr. Maite Caus
Ms. Lluïsa Cortés Gomis
Dr. David de Gonzalo
Dr. Judith Gracia Bolivar
Mr. Julio Idrovo
Ms. Eva López
Ms. Meritxell Martín

Dr. Àgueda Martínez
Ms. Itziar Molet Arias
Ms. Elena Moscatel
Ms. Sara Palau Camarero
Ms. Carme Peirau Gabarrell
Dr. Joan Sayós
Ms. Meritxell Soría
Dr. M. Alba Sorolla
Dr. Adriano Targa
Dr. Jose Valdivielso
Ms. Naiara Vilaginés

Last meeting: 18/12/2025



4. Ethical Committees

4.1 Animal experimentation ethics committees (UdL CEEA)

The animal experimentation ethics committee (CEEA) of the UdL was created to support researchers and educators in their scientific and teaching activities involving laboratory animal experimentation. Its function is to provide information on the implementation of procedures, prior evaluation of the suitability of procedures in relation to the objectives of the study, the possibility of obtaining valid results using the minimum number of animals and consideration of alternative methodologies.

The members of the UdL CEEA in 2025 were:

PRESIDENT

Dr. Natàlia Alonso Martínez / Dr. Jordi Voltas

Vice-Rector for Research

SECRETARY

Dr. Carme Piñol Felis

Animal Welfare Advisor SCT – Rodent/Reptile Animal Facility – Department of Medicine and Surgery of the UdL

MEMBERS

Dr. Daniel Babot Gaspà

Researcher at the ETSEA, Department of Animal Science of the UdL

Dr. Frederic Casals Martí

Researcher at the ETSEA, Department of Animal Science of the UdL

Dr. Xavier Gómez Arbonés

Researcher in Medicine at the Department of Medicine and Surgery of the UdL

Dr. José A. Moreno Martínez

Animal welfare advisor at the ETSEA centre – Department of Animal Science of the UdL

Last meeting: 19/12/2025

The CEEA of the Center for Applied Biomedical Experimental Research (CREBA) is the body responsible for overseeing the welfare of animals used in teaching and scientific procedures that involve experimentation using porcine models.

The members of the CREBA CEEA in the year 2025 were:

PRESIDENT

Dr. Dolores C. García Olmo

Designated veterinarian and head of animal welfare and health at CREBA

VICE-PRESIDENT

Dr. Serafí Cambray Carner

IRBLLeida researcher and Serra Hünter lecturer at the UdL

SECRETARY

Dr. Sara Puy López

CREBA Designated Veterinarian

VOCALS

Dr. Marcelino Bermúdez López

IRBLLeida researcher

Dr. Ester Desfilis Barceló

IRBLLeida researcher

Dr. Carme Mias Carballal

General surgeon at the Arnau de Vilanova University Hospital and associate professor at the UdL

Dr. Carlos A. Rombolà

Thoracic surgeon at the Arnau de Vilanova University Hospital and associate professor at the UdL

Dr. José Manuel Valdivielso Revilla

IRBLLeida researcher and associate professor at the UdL

Last meeting: 08/07/2024



4.2 Clinical Research Ethical Committee (CEIm)

The Clinical Research Ethical Committee (CEIm) evaluates clinical drug trials in accordance with the provisions of RD1090/2015. The mission of this committee is to contribute to improving the quality and relevance of research projects, clinical trials and observational studies conducted at our institution, with reference to major international bioethical standards.

The members of the CEIm in 2025 were:

PRESIDENT

Dr. Eduard Solé Mir

Paediatrician

VICE-PRESIDENT

Dr. Xavier Gómez Arbonés

Physician

SECRETARY

Ms. Cristina Casas Pi

Biologist

MEMBERS

Ms. Núria Badia Sanmartín

Biologist

Ms. Rocío González Gutierrez

Patient representative

Ms. Maria Teresa Grau Armengol

Nurse

Mr. Josep Maria Gutiérrez Vilaplana

Nurse

Mr. Raül Llevot Pérez

Lawyer

Dr. Robert Montal Roure

Physician

Dr. Manel Portero Otín

Physician

Dr. Alexis Rodríguez Gallego

Clinical pharmacist

Dr. Francisco Ignacio Torres Bondia

Pharmacist

Ms. Marta Vilapriño Merino

Lawyer

Dr. Oriol Yuguero Torres

Representative of the Healthcare Ethics Committee

Ms. Laura Rumi Carrera

Pharmacist

Ms. Paula Céspedes Cereceda

Physiotherapist

Ms. Yolanda Riba Llana

Physician

Mr. Carlos Alberto Rombolá

Physician

Last meeting: 15/12/2025

Committees and commissions composition by gender

Total Number

Men
Women

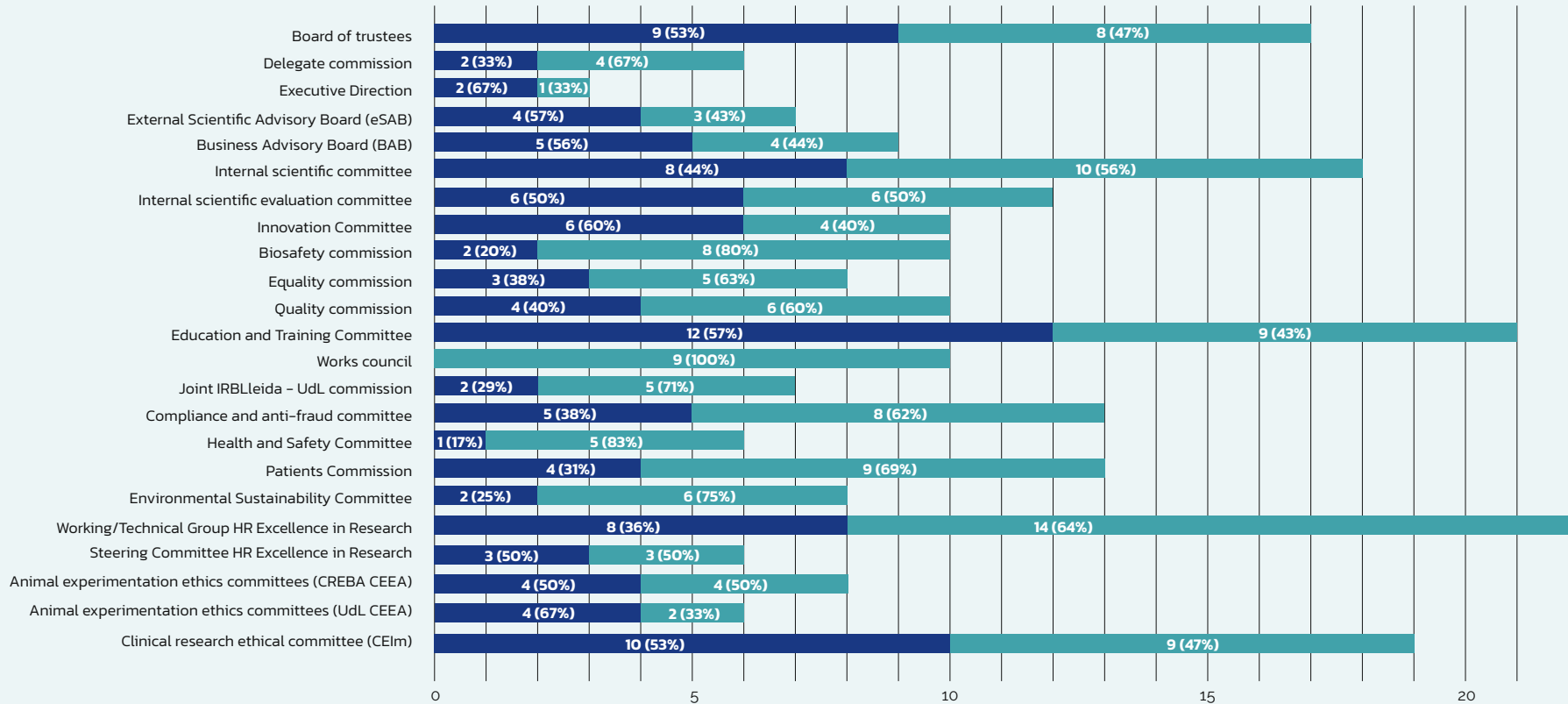


Figure 1. Total number and percentages of men and women in committees and commissions.



Centers, units and core facilities

1. Centers

1.1 Centre for Applied Biomedical Experimental Research (CREBA)

2. Units

2.1 Clinical Trials Unit

3. Core facilities

3.1 SCT Biobank

3.2 Biostatistics Core

3.3 Immunohistochemistry and Histology Core

3.4 Lipidomics Core (PLICAT)

3.5 Microscopy and Cytometry Core

3.6 Animal Housing Facility

3.7 Cell Culture Core

3.8 Proteomics and Genomics Core

3.9 Bioinformatics and Computational Biology Core (BIO2COMP)



1. Centers

1.1 Centre for Applied Biomedical Experimental Research (CREBA)

CREBA (Centre for Applied and Experimental Biomedical Research) is a leading research and training centre focused on biomedicine. Promoted by the Diputació de Lleida and the IRBLleida, the CREBA project arose from the need for high-level facilities for translational research and continuous training for healthcare professionals.

Within its facilities, our centre offers conference and simulation rooms, experimental operating theatres with advanced technological equipment, specifically designed to maximise the learning experience of open and laparoscopic surgical techniques and other interventional skills, as well as the performance of high quality scientific-technical research, with the highest ethical standards. CREBA has a swine animal facility and a staff specialised in this species to provide support to teachers and researchers.

Facilities

- Facilities for housing and handling of pigs.
- Three operating rooms equipped with 3D laparoscopic technology, indocyanine green detection, and other surgical techniques
- Surgical training room with five fully equipped tables
- Full equipment for conventional surgery, endoscopic surgery and interventional radiology
- Simulation room with devices for learning laparoscopic surgery
- Laboratory for the preservation and handling of biological samples
- Teaching room connected to a videoconferencing system (capacity: 30 people)
- Meeting room (capacity: 10 people)

www.creballeida.org

Twitter: @creballeida

Instagram: @creba_lleida

LinkedIn: [Company/creba](https://www.linkedin.com/company/creba)



Scientific Coordinator

Dr. Rafael Villalobos Mori

Core Facility Coordinator

Dr. Dolores C. García Olmo

Staff

Dr. Adrián Arruego

Ms. Sara Castañé

Ms. Teresa Escoda

Ms. Marta Farré

Ms. Sílvia López

Ms. Montse Gardeñes

Dr. Sara Puy

Ms. Leire Soteras

KPI

• Research projects: **4**

• Training activities: **16**

• Trainees: **272**

• Activities with schools and social groups: **14**



CREBA activities

Continuing education courses for health professionals:

- Number: **16 (international: 5; Spain: 4; Catalonia: 7)**
- Specialities involved: urgencies, general surgery, thoracic surgery, gynaecology, traumatology, neurosurgery, digestive system, nephrology and veterinary medicine.
- Total professionals attending: **272**

Scientific outreach activities with schoolchildren:

- Visits and workshops: **14**
- Total number of schoolchildren participating: **221**
- Origin of schoolchildren: Lleida, Mollerussa, Borges Blanques, Seròs, Torrelameu, Vallfogona de Balaguer.

Collaboration with health and biomedical institutions:

- Companies: **32**
- Foundations: **3**
- Scientific Societies: **3**
- Universities: **3**





2. Units

2.1 Clinical Trials Unit

The Clinical Research Support Unit (*USIC*) at IRBLleida is located on the ground floor of the Biomedicine II building at IRBLleida.

The SCT USIC constitutes a research **support** infrastructure whose purpose is to provide researchers with the necessary **resources**, both material and human, for the execution of clinical trials and other research projects from their initial stage and start-up to their completion, guaranteeing the **quality** of the service at all times and the compliance with the principles of Good Clinical Practice guidelines.

For this purpose, it has a team of multidisciplinary professionals with experience in the comprehensive management of clinical studies and an infrastructure equipped with clinical research support facilities:

- Fully equipped medical offices.
- Reception and waiting room for participants and family members.
- Laboratory equipped with all the necessary equipment for processing biological samples.
- Pharmacy for clinical trials.
- Room for ambient medication storage with restricted access and controlled temperature.
- Refrigeration equipment room with monitored alarm systems and centralized temperature control.
- Stores for consumables and materials.
- Meeting area available for monitoring clinical trials and/or external audits.
- Archive of active clinical trials.
- External archive for the custody of documentation in accordance with current regulations.
- Offices for clinical trial coordination.

Since 2023, the Unit has been part of the **Clinical Research Support Platform** of the Instituto de Salud Carlos III (ISCIII), which has enabled it to become one of the member units of the **SCReN Platform** (*Spanish Clinical Research Network*), coordinated and promoted by the ISCIII.

Since November 2024, the SCT USIC has been certified under the ISO 9001:2015 standard, demonstrating its commitment to excellence, integrity, and scientific rigor, positioning itself as a benchmark in the management and development of high-quality clinical trials.

Services

The main objective of the SCT USIC is to support the clinical research groups of IRBLleida, Arnau de Vilanova University Hospital and Santa María University Hospital, in the promotion and development of quality clinical research, providing comprehensive or partial technical-methodological support for the project.

To achieve this objective, the unit has a portfolio of services adapted to each study based on the needs of the researchers

Methodological support

- Design and drafting of all the necessary/essential documentation for the study (Protocol, Case Report Form (CRF), Informed Consent Form, etc.)
- Design and management of electronic CRF (REDCap)

Monitoring

- Preparation of monitoring plan adapted to risk evaluation
- Monitoring in all centers participating in multicentric studies
- Preparation, development and elaboration of site visit reports



Scientific Coordinator

Dr. Francisco Purroy García

Core Facility Coordinator

Dra. Alicia Sánchez de la Torre

Service Members

Ms. Mari Paz Alba López

Ms. Ares Alcaina Rodríguez

Ms. Alba Garcia Ribas

Ms. Melani Gramún Perera

Ms. Anna Sahuquillo Bergua

Dr. Petya Vladeva Valcheva

KPI

- Clinical areas: **15**
- Clinical studies: **57**
- Training activities:
 - Good Clinical Practice Certificate
 - Certificate IATA for Infectious Substances Transport
 - Clinical Trial Assistants Training
 - Training Clinical Trials Information System (CTIS)
 - Defibrillator & CPR First Aid Training



- Database revision and source documents verification
- Preparation and management of site files: investigator, promoter, pharmacy

Data management

- Data record in source documents and CRF
- Queries management
- Recording and updating of study information at different platforms

Administrative management / Regulation

- Management of participating sites contracts
- Management of requests, clarifications, amendments and notifications to CEIm and regulatory agencies
- Civil liability insurance policy request

Coordination and Nursery

- Participate in site and researchers team selection
- Participate in study feasibility evaluation
- Analysis of the circuits and technical needs, space and personnel of each clinical trial
- Conducting meetings with investigators
- Facilitate communication between medical services and external stakeholders involved in the study
- Maintenance of necessary site files: researcher, promoter, pharmacy
- Facilitate the process of recruitment and obtaining the informed consent
- Oversight and management of nursing procedures and complementary tests
- Coordination of visits and follow-up controls
- Comprehensive patient care support
- Pharmacovigilance: management of adverse events
- Management of possible audits
- Custody of clinical trial documentation
- Contact with monitors and preparation of documentation for external monitoring

Laboratory technician

- Processing of biological samples and management of their shipment to the central laboratory





3. Core Facilities

3.1 SCT Biobank

The IRBLleida Biobank is the unit responsible for the management of biological samples and associated data intended for research purposes. This management includes all processes related to the reception, processing, storage, and distribution of biological samples to the scientific community, ensuring quality, traceability, and compliance with current legislation at all times. This scientific and technical service was created to support biomedical research both within the healthcare system of the Lleida region and at the University of Lleida.

In 2013, the Biobank was authorized by the Department of Health and registered in the National Registry of Biobanks of the Instituto de Salud Carlos III under reference B.0000682. Since 2012, it has also maintained ISO 9001 certification. Its Quality Management System encompasses all operational processes, including the reception, processing, storage, and distribution of human biological samples and associated data for biomedical research purposes.

The Biobank is a member of the Catalan Network of Tumor Banks (XBTC) and the ISCIII Platform for Biomodels and Biobanks (PT23/00032). Its aim is to optimize access to high-quality biological samples, biomodels, and associated data for the scientific community, thereby enhancing research capacity at both national and international levels. This national platform is organized into four specialized hubs: Biobanks, Animal Models, 3D Printing, and Organoids. In addition to participating in the Biobanks hub, the Biobank also contributes to the Animal Models hub—providing the animal model services available at IRBLleida through a comprehensive service catalog—and to the Organoids hub, where the generation of organoids derived from endometrial and colon tumor tissue has been initiated.

Recently, the ISCIII Platform for Biomodels and Biobanks has been integrated into BBMRI-ERIC (Biobanking and BioMolecular Resources Research Infrastructure – European Research Infrastructure Consortium), one of the leading European research infrastructures in the field of biobanking

Collections

- Oncological diseases (breast cancer, colon, rectum, endometrium, ovary, kidney, liver, pancreas, thyroid, lung, etc.).
- Neoplastic diseases of the pleura
- Neurological diseases (stroke, Alzheimer's disease)
- Respiratory diseases (obstructive sleep apnoea, SARS-CoV2)
- Metabolic diseases (diabetes and morbid obesity)
- Inflammatory bowel disease (celiac disease)
- Cardiovascular diseases ('Bus de la Salut').

The Biobank also participates in an international, prospective, multicenter project aimed at understanding the molecular and genetic bases of cancer.

The biological samples stored at the Biobank mainly originate from the Arnau de Vilanova University Hospital and the Santa Maria University Hospital in Lleida. Currently, the Biobank houses more than 420,000 biological samples from approximately 32,000 donors. The collection includes tissue samples preserved in OCT, liquid nitrogen, or paraffin blocks, as well as peripheral blood, serum, plasma, urine, cerebrospinal fluid (CSF), pleural fluid, and other biological specimens.

The Biobank operates in coordination with the Clinical Research Ethics Committee (CEIm) of the Arnau de Vilanova University Hospital, ensuring that all activities involving human samples comply with ethical standards and applicable regulatory requirements. All samples are processed and stored according to standard operating procedures to ensure traceability, quality, and compliance with current regulations.

Collaborators



Head of service

Dr. Xavier Matias-Guiu

Core Facility Coordinator

Dr. Maria Ruiz

Service Members

Ms. Neus Alemany

Mr. Iván Hidalgo

Dr. Irene Pociño

Mr. Enric Pouso

Ms. Ingrid Prats

Ms. Sara Serrano

KPI

• Users: **47**

• Services: **117**

• Processed samples: **3.941**

• Publications Acknowledgements: **10**

• Training activities: **69**

• Consultations: **97**



3.2. Biostatistics core

Statistical methods are essential for designing studies, analyzing data and interpreting results. The Biostatistics Core has the ultimate goal of generating knowledge that contributes to improving health by working with researchers to transform their data into actionable insights. To achieve this goal, the Biostatistics Unit offers methodological guidance on study design and data analysis of studies by the research groups at IRBLLeida and external organizations. It participates in improving the processes of data collection, validation and integration for the research groups at IRBLLeida, and actively participates in Biostatistics networks in Spain and abroad. It also organizes and participates in training courses in statistics and research methodology at IRBLLeida and other institutions.

Mission

Our mission is to provide every biomedical researcher with outstanding statistical designs and methods, including the proper and efficient application and interpretation of standard and advanced statistical methods.

Vision

Our vision is to reach more biomedical researchers and maximize both service quality and user satisfaction as part of our commitment to continuous improvement.

Values

Our values are ethics, excellence, professional responsibility, transparency, innovation, rigour, integrity, knowledge sharing, social commitment and environmental responsibility.



Core Facility Coordinator

Dr. Montserrat Martínez

KPI

- Users: **56**
- Services: **82 (new: 67 of them: consultations: 11)**
- Training activities: **3**
- New users: **19**



3.3 Immunohistochemistry and Histology core

Description:

The Service offers support in the processing of:

- Tissues (human, animal) paraffin embedded
- Frozen tissues
- Cytologies
- In vitro cell cultures

Services

- Preparation of paraffin and frozen blocks
- Microtomy
- Histological staining (Hematoxylin-Eosin)
- Special stains (Histochemistry)
- Immunohistochemical protocol for the detection of proteins in human, pig, dog, cat, sheep and mouse tissues using concentrated or prediluted antibodies.
- Construction of Tissue Micro Arrays (TMA Grand Master, 3D HISTECH).
- Immunohistochemical protocol of double staining. Detection of two proteins simultaneously in the same tissue section.
- Immunofluorescence technique.
- Digital scanning of slices (Pannoramic® 250 Flash III, 3D HISTECH) and Analysis of immunohistochemical images using the specific software Quant modul (3D HISTECH).
- In situ hybridization using FISH (Fluorescent In Situ Hybridization) or CISH (Chromogenic In Situ Hybridization).
- Optical microscopy.
- Quality controls.



Head of Service

Dr. Xavier Matias-Guiu

Core Facility Coordinator

Dr. Maria Santacana

Service Members

Ms. Maria Carrelé

Collaborating Staff

Dr. Sònia Gatius

Dr. Judit Pallarés

KPI

- Users: **30**
- Services: **25**
- Consultations:
 - Collaboration in research projects:
 - Internal: **23**
 - External: **14**
- Analyzed samples:
 - Number of blocks performed: **863**
 - Number of IHQ Stainings performed: **2,379**
 - Number of tissue sections performed (microtomy): **5,546**
 - Number of TMAs performed: **7**
 - Number of used blocks for research (human samples): **1,135**
 - Number of new tested antibodies: **56**
 - Number of scanned slides: **3,172**



3.4 Lipidomics Core (PLICAT)

The Lipidomics Platform in Catalonia (PLICAT) is a reference center for the analysis of lipids in biological samples. The platform has been consolidated from the previous Metabolomics and Lipidomics service from IRBLleida.

Instrumentation for metabolomics and lipidomics applications.

- 1 mass spectrometer system with orbital ion trap Orbitrap Exploris 240® with UPLC Vanquish from Thermo Fisher Scientific coupled with TriVersa NanoMate® ion source platform from Advion;
- 2 mass spectrometers QTOF (models 6545 and 6420) from Agilent Technologies;
- 4 mass spectrometers QQQ (models 6420, 6465 Ultivo, and 6495); coupled with UPLC model 1290 from Agilent Technologies;
- 2 mass spectrometers single Q (5977B and 5973A models) coupled to gas chromatographs (Intuvo 9000 and HP6890 models);
- 1 gas chromatography system (model 7890A) with FID detector.

Bioinformatics software and high-capacity data storage server.

- MassHunter Data Acquisition, Qualitative Analysis, Quantitative Analysis, Mass Profiler, LipidAnnotator and Profinder from Agilent Technologies.
- Compound discoverer and Lipid Search from Thermo Fisher Scientific.
- QNAP NAS Server 16 bays.

It has databases with its own metabolite libraries and 500 commercial metabolite standards, as well as all types of accessory equipment for sample storage and processing: freezers, homogenizers, syndicators, incubators, agitators, centrifuges, vacuum dryers, and nitrogen evaporators. The services offered can be agreed with the researchers according to their needs. The most common services offered include:

Services

- Experimental design and advice for sampling
- Sample processing with standardized protocols and quality controls at every step
- Lipid profile analysis with GC-FID and GC-MS; Non-targeted and targeted lipidomic and metabolomic analysis with LC-MS type QTOF and QQQ; shotgun lipidomics by Nanomate-Orbitrap®
- Data processing, bioinformatics and statistical analysis
- Lipid identification, access to reference lipid databases and interpretation of results

Collaborators

IRBLleida has the support and co-financing of the European Regional Development Fund (FEDER) of the European Union, and Departament de Recerca i Universitats de la Generalitat de Catalunya, to develop and consolidate the Lipidomic Platform of Catalonia (PLICAT) - IU16-015805.



Core Facility Coordinator

Dr. Èlia Obis

Service Members

Ms. Meritxell Martín

Mr. Arnau Oronich

Mr. Omar Ramírez

Mr. Vicent Roig

KPI

• Users: **23**

• Services: **23**

• Processed samples: **2,140**

• Publications Acknowledgements: **11**

• Training activities: **5**

• New services: **4**



3.5 Microscopy and Cytometry Core

Flow Cytometry Unit

Flow cytometry is a technology that allows the analysis of multiple parameters of a heterogeneous particle suspension. Using this method, information can be obtained about different cell populations based on their fluorescence. The Flow Cytometry Service provides IRBLleida researchers with equipment and technical expertise for experimental design, data analysis, and training.

Location

- Laboratory b4.14, 4th floor of the Biomedicine II building

Equipment

- Becton Dickinson FACS Canto-II cytometer
- Beckman Coulter Cytoflex SRT cell sorter
- Automac Pro magnetic separator
- Analysis software (FlowJo, Modfit LT, FCAP Array, FlowLogic).

Services

- Consultancy
- Sample acquisition
- Training

Microscopy Unit

Managed jointly with the University of Lleida, it currently has the following microscopes and other equipment:

Location

- Laboratories b-1.1 and b-1.5, basement of the Biomedicine I building.

Equipment in the Microscopy Unit

- Olympus FV1000 confocal microscope
- Leica SPE confocal microscope
- Olympus BX51 epifluorescence microscope
- Zeiss Axio Observer Z1 epifluorescence microscope
- NIKON ECLIPSE Ti2 AX R MP confocal microscope with NSPARC
- Leica CMI950 and Leica CM3050S cryostats with automatic sectioning
- Leica RM2235 microtome
- Leica VT 1000S vibratome
- Leica EM UC6 ultramicrotome
- Jeol JEM1400 Flash transmission electron microscope (120 kV)

Services

- Consultancy (experimental design or data analysis)
- Sample preparation for electron microscopy
- Training



FLOW CYTOMETRY UNIT

Head of Service

Dr. Conchi Mora Giral

Core Facility Coordinator

Dr. Anaïs Panosa Borràs

Service Staff

Ms. María Leal Aguilar

KPI

- Users: **48**
- Acknowledgements in publications: **2**
- Training activities: **3**

MICROSCOPY UNIT

Head of Service

Dr. Jordi Calderó Pardo

Core Facility Coordinator

Dr. Anaïs Panosa Borràs

Service Staff

Ms. María Leal Aguilar

KPI

- Users: **68**
- Acknowledgements in publications: **3**
- Training activities: **12**



3.6 Animal Housing Facility

Animal models are essential for the advancement of biomedical research. The purpose of this facility is to produce and maintain the animals (rodents) required for the different research projects carried out by scientists in our center. The animal facilities occupy an area of 1,200 m² distributed in two floors, and have the capacity to house approximately 40,000 rodents. The facility includes 3 experimental areas that allow animal housing and research in different biosafety and microbiological conditions: 1) a barrier area operating under Specific Pathogen Free (SPF) conditions; 2) a conventional area operating under clean conditions; and 3) a quarantine room for animals with unsuitable or undefined microbiological profiles. These experimental areas contain 12 animal housing and husbandry rooms (5 in the SPF barrier, 6 in the conventional area and 1 in the quarantine area) and 9 fully-equipped laboratories/surgery rooms (4 in the SPF barrier and 5 in the conventional area). The facility also has 2 technical areas (sterilization/management of materials and a warehouse). Importantly, all the research projects carried out in this animal facility are supervised, evaluated and approved by the Ethics Committee for Animal Research and Welfare.

Some of the services provided by the Animal Housing Facility are:

- Breeding of different species and strains of rodents (mouse and rat) for teaching and research.
- Advice on the importation of special models from authorized external suppliers and other research centres.
- Facilities for the maintenance of rodents in the course of the experimental procedure.
- Advice for compliance with the legislation regulating the use of animals for teaching and research: facilities, operation, records, staff, ethics committees, project processing and procedures with experimental animals.
- Advice on the care, handling, and anesthesia of animals.
- Advice to researchers on issues related to animal welfare regarding their acquisition, housing, care and use.
- Advice to researchers on the application of the requirement for replacement, reduction and refinement, and information on technical and scientific advances in the application of this requirement.
- Advisory functions in relation to the state of health and treatment of animals.
- Training of animal user staff with the functions of experimenter and design of projects and procedures.



Scientific Coordinator

Dr. Carme Piñol

Appointed Veterinarian

Dr. José Antonio Moreno

Service Members

Mr. Marc Collado
Ms. Leticia Fabre
Ms. Leonor Gomes
Ms. Núria Moix
Ms. Jéssica Pairada



3.7 Cell Culture Core

The Cell Culture Facility (SCT-CC) at the University of Lleida (UdL) supports research by providing the necessary infrastructure and personnel for researchers to conduct experiments with animal cell cultures under appropriate aseptic and biosafety conditions. This service is available to the scientific community of the UdL, the Biomedical Research Institute of Lleida (IRBLleida), and other public or private institutions.

The SCT-CC is located in the IRBLleida building and includes six Biosafety Level 2 (BSL-2) laboratories specifically designed for working with animal cell cultures. The facility also includes a dissection room and a cryopreservation area for cell storage. The laboratories are equipped with incubators, laminar flow hoods, Class IIA biosafety cabinets, centrifuges, phase-contrast microscopes, fluorescence microscopes, stereomicroscopes, a fluorescence stereomicroscope, thermostatic baths, and a hypoxia chamber, among other equipment.

The SCT-CC laboratories are certified by the Ministry of Agriculture, Fisheries and Food as an accredited facility for working with genetically modified organisms (GMOs) at Biosafety Level 2, including the use of lentiviral vectors.

The SCT-CC staff is responsible for maintaining the facility and its equipment, ensuring the preservation and custody of cell lines, training users, and enforcing safety protocols in the use of animal cell cultures.



Core Facility Coordinator

Dr. Neus Pedraza

Service Members

Ms. Imma Montoliu

- Users: **155**
- Internal users: **32**
- External users: **1**
- Research groups: **34**



3.8 Proteomics and Genomics Core

This service offers technology for the study of genes, gene expression, and the proteome. The equipment of the unit integrates technological platforms to perform genotypic analysis, gene expression analysis and proteomic analysis of complex samples, techniques that are essential tools for current basic and clinical research in the field of cellular and molecular biology. This core facility is managed by the UdL.

The services provided include:

Genomic studies

- Gene and miRNA expression
- Genotyping on based on different molecular markers
- Gene copy number variation
- DNA methylations
- NGS applications
- Genotyping of SNPs by MALDI-TOF mass spectrometry
- Detection and quantification of microorganisms and GMOs
- Determination of viral load

Proteomic studies

- Quantification of proteins by Western Blot
- Protein expression studies using antibody microarrays
- Differential proteomics or expression proteomics based on two-dimensional gels
- Identification of proteins using mass spectrometry: MALDI-TOF peptide mass fingerprinting (PMF)



Scientific Coordinators

Dr. Eloi Garí
Dr. Joaquim Ros

Core Facility Coordinator

Ms. Isabel Sánchez



3.9 Bioinformatics and Computational Biology Core (BIO2COMP)

This core offers training, consultancy and analysis services in bioinformatics and computational biology.

Services

1. In Bioinformatics

Training and consultancy

- Consultancy services for researchers in planning bioinformatics activities in the application for project funding and in the planning of their experiments with a view to an adequate subsequent bioinformatics treatment.
- Personalised and group training in bioinformatics and mathematical modelling.
- Advice and support to users of bioinformatics tools and methods.

Standard analysis

- De novo assembly and annotation of prokaryotic genomes.
- Reference genome variant analysis in prokaryotes and eukaryotes.
- Gene expression analysis (Microarray & RNAseq) for identification of differentially expressed genes.
- Analysis and optimisation of expression of biological sequences (use of most frequent codons).
- Modelling and prediction of protein structures.
- Data visualization in biological network maps.

Specialised analysis

- Qualitative and quantitative analysis of results of omics experiments.
- Data analysis.
- Other non-standard projects.

2. In Computational Biology

Training and consultancy

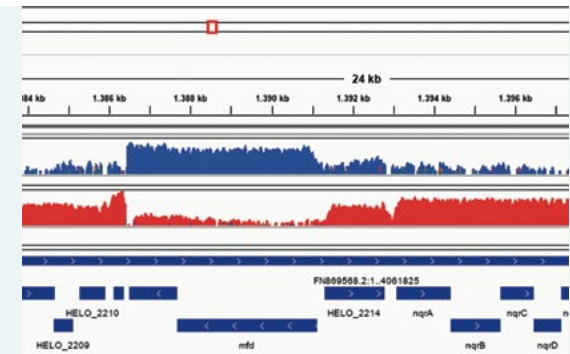
- Consultancy services to researchers for the approach of computational biology activities in the application for project funding and in the planning of their experiments with a view to an adequate subsequent bioinformatics treatment.
- Personalised and group training in computational biology methods.
- Advice and support to users in the use of mathematical modelling software in biology, biomedicine and biotechnology.

Specialised analyses

- Creation of “digital twins” of biological processes for analysis and optimisation.
- Compartmental modelling.
- Sensitivity analysis and evaluation of ‘what if...’ scenarios. (in silico experiments).

Equipment

- 2 Servers, each with 2 Intel Xeon processors (24 compute nodes) at 2.0 GHz, 124 GB RAM, for intensive calculations.
- 4 HP Z series workstations, with Intel Xeon processors and 8 computation nodes.
- 3 HP high-performance PCs.



Scientific Coordinator

Dr. Rui Carlos Vaqueiro de Castro Alves

Service Members

Dr. Alberto Marin Sanguino

Dr. Albert Sorribas Tello

Dr. Ester Vilaprinyó Terre



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Economic indicators



Revenues and Expenses

Table 1. The following table summarizes the institute's expenses and income as reported in its income statement.

	2021	2022	2023	2024	2025
Revenues	6,496,569.20	7,373,773.92	8,745,571.29	10,507,937.11	10,286,204.55
Expenses	6,578,826.75	7,415,044.02	8,774,979.46	10,625,757.60	10,371,012.33
Total	-82,257.55	-41,270.10	-29,408.17	-117,820.49	-84,807.78

Detailed revenues

Table 2. The following table shows information on the income obtained by the institute, with sources grouped by origin: trustee transfers, clinical trials and other invoices, grants, and donations.

	Trustee Transfers	Clinical Trials	Other Invoices	Grants	Donations	Total
2021	840,386.50	2,050,826.29	961,431.77	2,395,703.93	248,220.71	6,496,569.20
2022	1,006,321.93	2,094,155.39	965,835.13	2,999,034.20	308,427.27	7,373,773.92
2023	1,383,908.61	1,984,613.37	1,171,907.02	3,948,591.70	256,550.59	8,745,571.29
2024	869,670.16	3,158,767.77	1,511,980.87	4,565,612.58	401,905.73	10,507,937.11
2025	1,241,660.06	2,564,417.54	1,495,727.27	4,580,134.79	404,264.89	10,286,204.55



Revenues from Indirect Costs

Table 3. The following table shows information on the income obtained by the institute from indirect costs, with sources grouped by origin: trustee transfers, clinical trials and other invoices, grants, and donations.

	Trustees Transfers	Clinical Trials	Other Invoices	Grants	Donations	Total
2021	0	375,736.68	120,063.42	269,991.84	29,030.72	794,822.66
2022	0	387,603.94	113,170.91	254,944.17	32,176.79	787,895.81
2023	0	360,884.44	127,274.24	399,899.19	29,834.74	917,892.61
2024	0	572,220.14	141,370.70	619,350.13	37,559.40	1,370,500.37
2025	0	464,986.71	64,336.00	710,290.86	54,648.39	1,294,261.96



Balance Sheet

Table 4. The following table provides information on the institute's assets and liabilities, which are included in its balance sheet.

	2021	2022	2023	2024	2025
A) NON-CURRENT ASSETS	799,525	1,814,060	2,473,134	2,918,421	2,355,948
I. Intangible assets	74,182	41,588	16,863	69,057	118,200
II. Tangible fixed assets	725,343	1,772,472	1,909,998	2,195,401	1,943,088
VI. Long-term financial investments	NA	NA	546,272	653,963	294,660
B) CURRENT ASSETS	17,726,290	20,558,073	21,839,124	22,347,350	21,880,164
II. Stocks	11,183	14,534	NA	NA	
III. Users, sponsors and debtors of the activities and other accounts receivable	8,276,136	7,068,929	7,668,983	8,256,629	5,871,255
IV. Short-term financial investments	1,900,000	1,900,000	6,500,000	7,500,000	11,500,000
VI. Cash and other equivalent liquid assets	7,538,971	11,574,610	7,670,141	6,590,720	4,508,909
TOTAL ASSETS	18,525,816	22,372,133	24,312,259	25,265,771	24,236,112
A) NET EQUITY	3,072,226	10,366,886	10,986,467	13,066,950	13,808,263
A-1) OWN FUNDS	1,322,138	1,280,868	1,251,460	1,133,639	1,048,832
I. Endowment funds or social funds	18,030	18,030	18,030	18,030	18,030
III. Surpluses from previous years	1,386,365	1,304,108	1,262,837	1,233,429	1,115,609
V. Surplus for the year (positive or negative)	-82,257	-41,270	-29,408	-117,820	-84,808
A-2) GRANTS, DONATIONS AND LEGACY RECEIVED	1,750,087	9,086,018	9,735,007	11,933,310	12,759,431
B) NON-CURRENT LIABILITIES	2,202,595	1,174,461	888,449	693,149	204,818
II. Long term debts	2,202,595	1,174,461	888,449	693,149	204,818
C) CURRENT LIABILITIES	13,250,995	10,830,786	12,437,342	11,505,672	10,223,031
I. Short-term provisions	5,840,468	0	0	0	0
II. Short term debts	6,901,766	10,501,974	11,941,130	11,102,769	9,840,090
IV. Creditors for activities and other accounts payable	508,759	328,812	496,211	402,903	382,941
TOTAL NET EQUITY AND LIABILITIES	18,525,816	22,372,133	24,312,259	25,265,771	24,236,112



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Research activity

IRBLleida staff

IRBLleida comprises 623 professionals, of which 530 are personnel devoted to research. The research staff are distributed in the following profiles: RN Clinical Research –No PhD; Clinical Research (R1), Recognised Researcher (R2), Established Researcher (R3) and Leading Researcher (R4). The support staff are distributed in: Support office, Research technician and core facilities support (SCT).

- Universitat de Lleida (UdL)
- Hospital Universitari Arnau de Vilanova de Lleida (HUAV)
- Hospital Universitari de Santa Maria (HUSM)
- Primary HealthCare (Primary HC)
- IRBLleida

Distribution by research categories

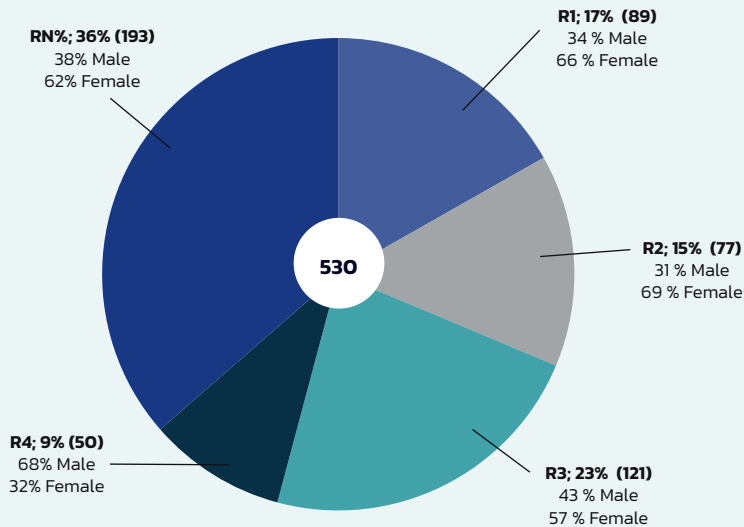


Figure 2. Classification of researchers by categories.

Distribution by affiliation

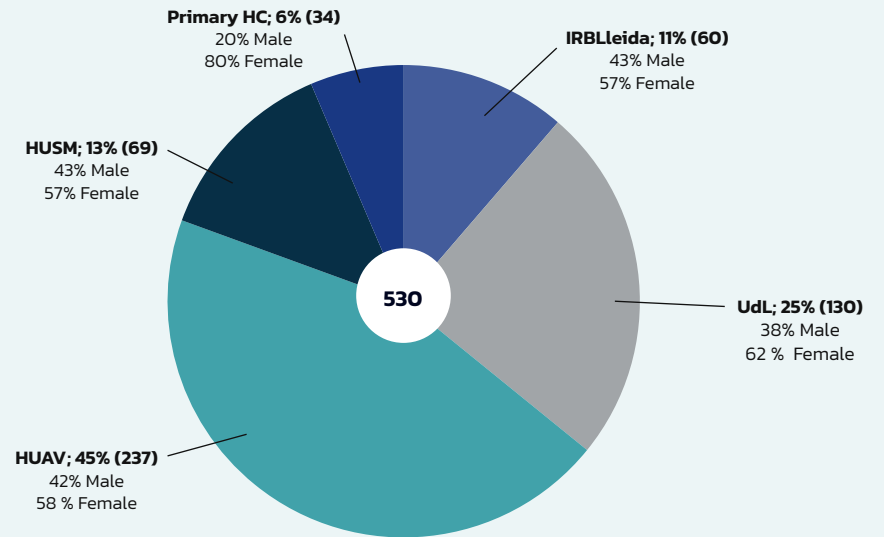


Figure 3. Classification of researchers by employers.

Table 5. Classification of support staff by categories

Category	Male	Female	TOTAL
Maintenance	1	1	2
Support office	8	21	29
Research technician	9	25	34
SCTs	5	23	28
Grand Total	23	70	93

Global data on scientific production

In 2025, IRBLleida researchers produced a total of 408 scientific publications, of which 355 are original publications, 43 are review articles, and 10 are letters.

Overall Summary

Table 6. Scientific production 2025. Number of publications and accumulated impact factor (IF), according to the 2024 Journal Citation Report.

	Publications	Average IF	IF Cumulative
Articles	355	5.70	2,022.55
Reviews	43	5.44	233.90
Letters	10	7.47	74.70
Total	408	5.71	2,331.15

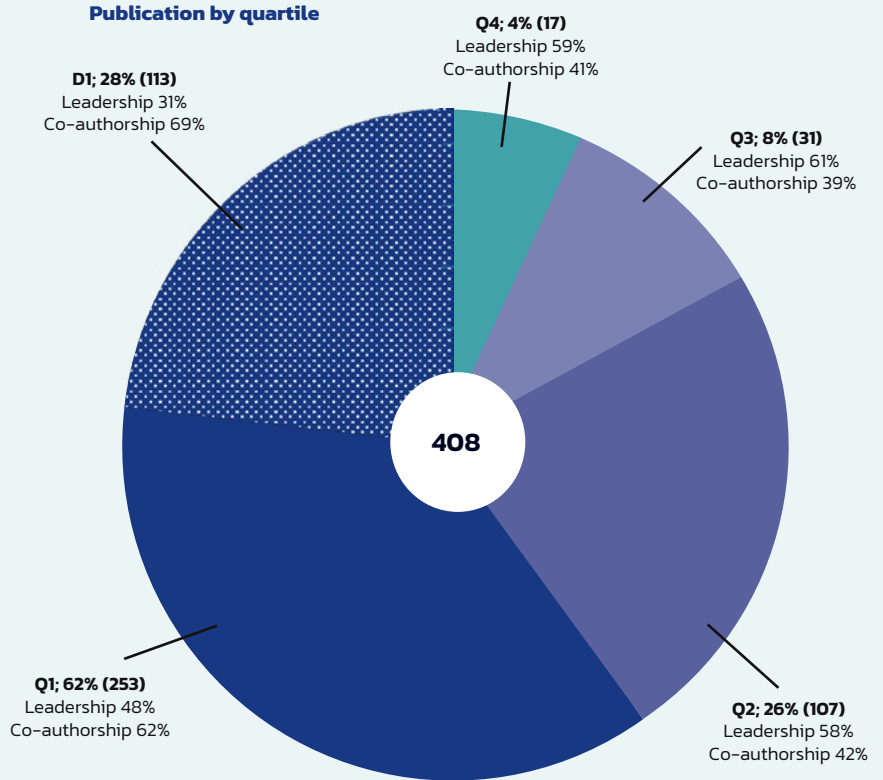
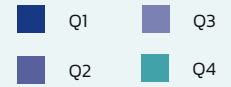


Figure 4. Scientific production by specialty quartiles. Percentage of publications per quartile (Q), total number of publications are in brackets. For each quartile leadership and co-authorship is indicated in percentage.

Historical data on quartile publications

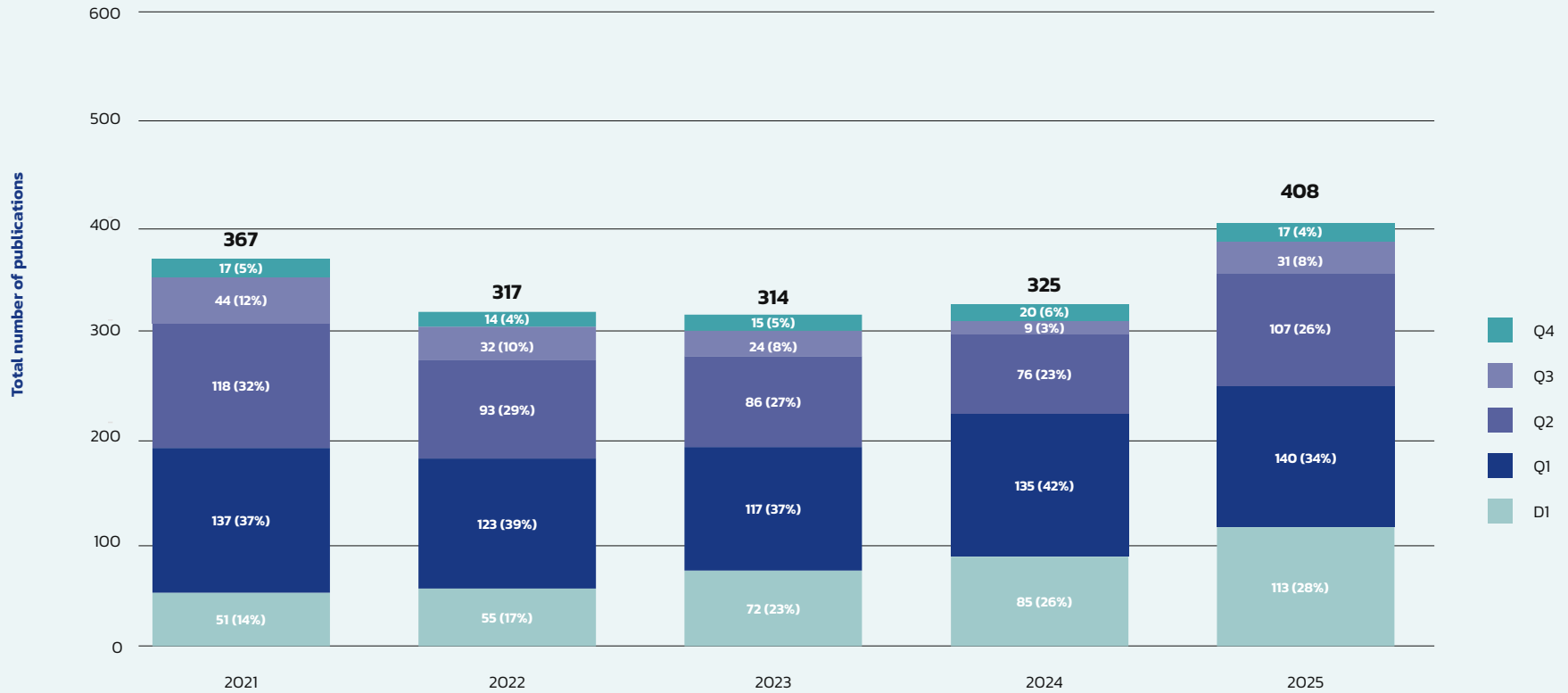


Figure 5. Total number of publications as well as the number and percentage of publications by decile/quartile. The Q1 category shown in the graph represents only the non-D1 Q1 publications. Therefore, the total number of publications in the first quartile would correspond to the sum of the categories Q1+D1 that appear in the graph.

In 2025, the number of publications increased substantially compared to previous years. This increase is mainly attributable to the inclusion of journals indexed in the Emerging Sources Citation Index (ESCI) in the catalogue of indexed journals, in accordance with Web of Science (WoS) and Fundación Española para la Ciencia y la Tecnología (FECYT) criteria. Figures 6 and 7 illustrate the trends in scientific output over the past five years, showing the number of publications as well as the average and cumulative impact factors (JCR).

Number of publications

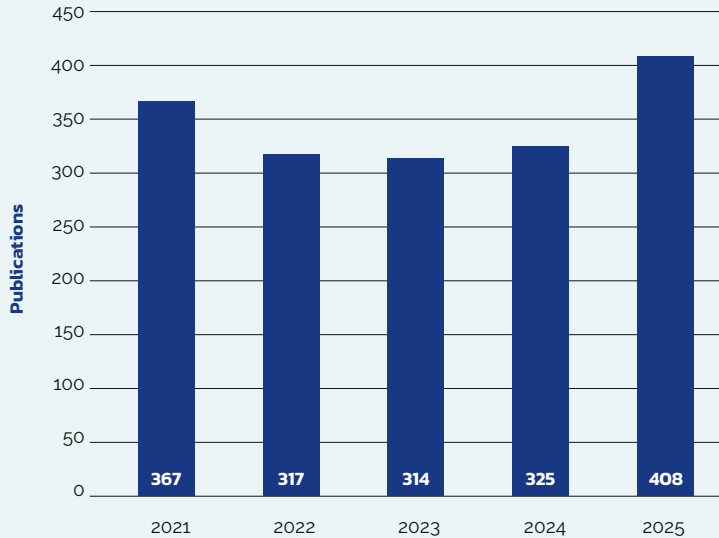


Figure 6. Total number of publications in the last 5 years.

Impact factor

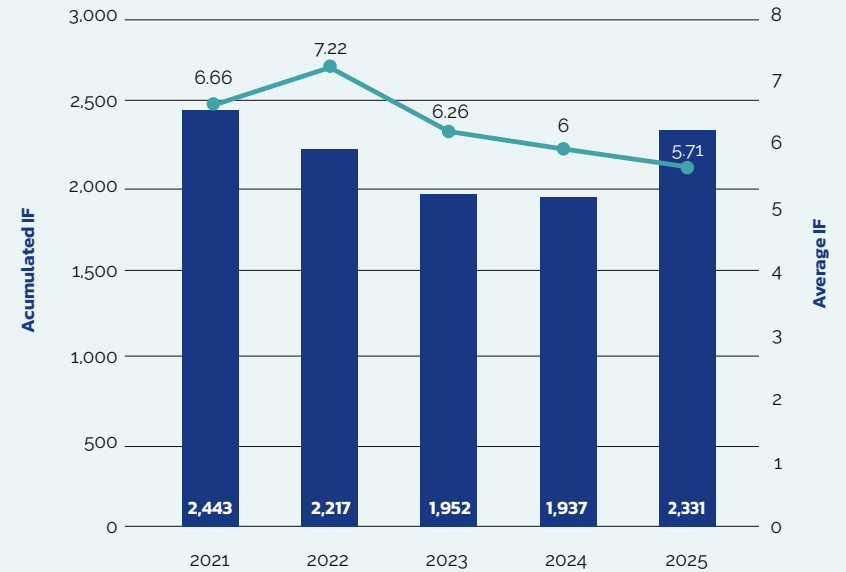


Figure 7. Evolution of the accumulated impact factor (IF)(bars) and average (blue line). The 2025 IF has been calculated according to the 2024 Journal Citation Report (JCR).

In 2025 46% of publications were led by IRBLleida researchers (Fig. 8), understanding leadership as the first and/or last author or corresponding. The remaining 54% corresponds to publications in which IRBLleida researchers participate in the research team. 42% of publications involved an international collaboration (Fig. 9).

Publication Leadership

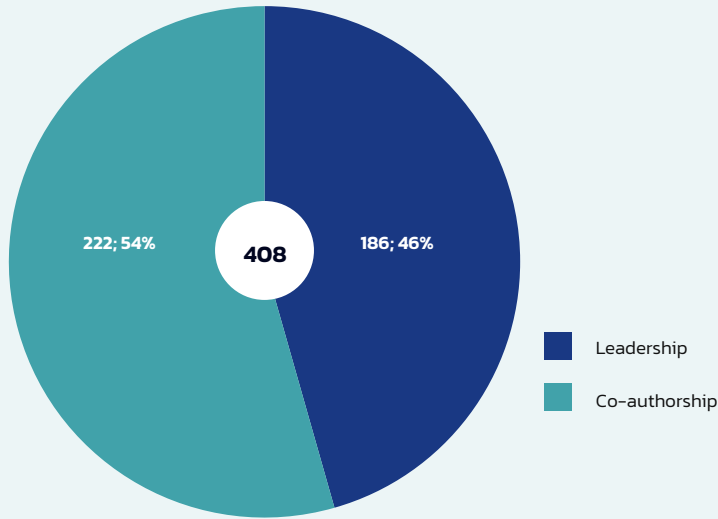


Figure 8. Distribution of publications according to IRBLleida research leadership.

Publication Collaborations

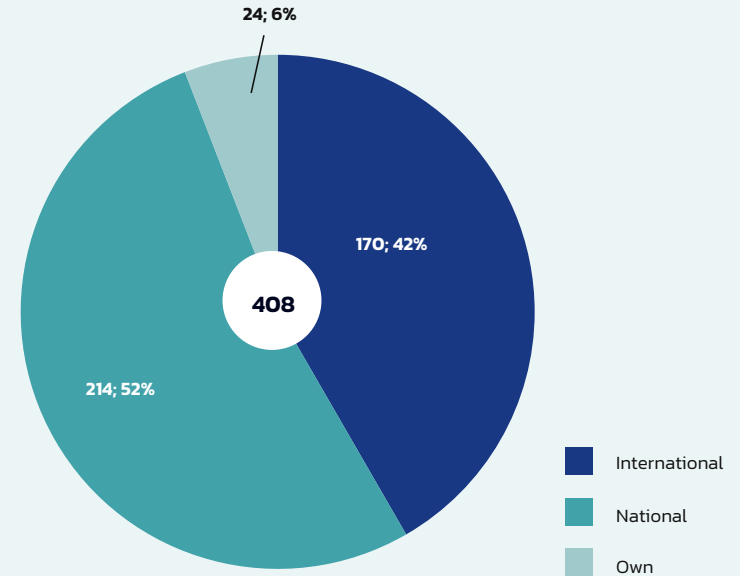


Figure 9. Distribution of publications by type of collaboration. Collaboration is classified as international, national, or internal (if all authors are affiliated with IRBLleida). For each group, leadership and co-authorship are indicated as percentages.



Scientific production by areas

Table 7. Publications, IF, quartile and decile of IRBLLeida areas.

Research areas	Number of publications	Total IF	Average IF	Q1 publications	D1 publications
Cancer	70	454.4	6.8	44 (63%)	17 (24%)
Chronic diseases, surgery and health care	151	844.8	6.2	100 (66%)	44 (29%)
Epidemiology, infectious diseases and public health	79	261.7	3.5	33 (42%)	13 (17%)
Neurosciences	81	463.3	5.3	62 (77%)	30 (37%)
Nutrition, metabolism and cellular stress	34	195.4	7.4	27 (79%)	13 (38%)
Other research lines	42	111.6	3.6	16 (38%)	4 (10%)



Scientific production by group

Table 8. Publications, IF, quartile and decile of IRBLLeida groups

Group	Total Publications	Total IF	Average IF	Q1 Publications	D1 Publications
Cancer					
Cell Cycle	6	29.1	4.9	5 (83 %)	1 (17 %)
Cellular Signaling by Calcium	0	0.0	0.0	0 (0 %)	0 (0 %)
Developmental And Oncogenic Signalling	1	9.6	9.6	1 (100 %)	0
Drosophila disease models and (epi) genetic analysis	6	29.3	4.9	3 (50 %)	1 (17 %)
Molecular Oncology	1	5.1	5.1	1 (100 %)	1 (100 %)
Oncological Pathology	27	189.2	7.0	16 (59 %)	7 (26 %)
Research Group of Cancer Biomarkers	32	224.5	7.0	21 (66 %)	8 (25 %)
Chronic diseases, surgery, and health care					
Cardiac Physiology and Pathology	22	148.1	6.7	7 (32 %)	3 (14 %)
Clinical & Experimental Surgery group (CESurG)	5	19.4	3.9	3 (60 %)	1 (20 %)
Digestive Diseases Research Group – DdRG	20	148.0	7.4	16 (80 %)	8 (40 %)
Immunology and Metabolism Research Group	9	61.1	6.8	9 (100 %)	3 (33 %)
Precision Medicine in Chronic Diseases group	34	139.9	4.1	19 (56 %)	8 (24 %)
Research group of health care (GRECS)	49	366.0	7.5	39 (80 %)	17 (35 %)
Translational Research in Respiratory Medicine	15	64.6	4.3	11 (69 %)	5 (35 %)
Vascular and Renal Translational Research Group	1	2.6	2.6	1 (100 %)	0 (0 %)



Scientific production by group

Group	Total Publications	Total IF	Average IF	Q1 Publications	D1 Publications
Epidemiology, infectious diseases and public health					
Applied Epidemiology	16	42.3	2.6	2 (13 %)	0 (0 %)
ERLab, research in emergency medicine	9	50.3	5.6	7 (78 %)	4 (44 %)
Health Education, Nursing, Sustainability and Innovation Research Group (GREISI)	13	37.4	2.9	5 (38 %)	4 (31 %)
Indicators and specifications of the quality in the clinical laboratory	4	19	4.8	3 (75 %)	1 (25 %)
Intensive Medicine	16	75.7	4.7	12 (75 %)	1 (6 %)
Multidisciplinary Group of clinical research in musculoskeletal diseases, frailty and pain management	3	6.4	2.1	1 (33 %)	0 (0 %)
Pharmacology & Molecular Microbiology	11	32.1	2.9	2 (18 %)	1 (9 %)
Research in clinical microbiology and antibiotic resistance	12	45.4	3.8	2 (17 %)	2 (17 %)
Neurosciences					
+Pec Proteomics	5	38	7.6	4 (80 %)	3 (60 %)
Biologic Basis of Mental Disorders	10	36.9	3.7	6 (60 %)	3 (30 %)
Clinical Neurosciences	24	197.1	8.2	20 (83 %)	11 (46 %)
Cognition and Behavior Study Group	21	144.2	6.9	17 (81 %)	8 (38 %)
Evolutionary and Developmental Neurobiology	6	15.2	2.5	6 (100 %)	3 (50 %)
Experimental Neuromuscular Pathology	2	9.1	4.6	1 (50 %)	0
Neurocognition, psychobiology of personality and behavioural genetics	3	9.2	3.1	1 (33 %)	0
Neuroimmunology	10	43.9	4.39	7 (70 %)	1 (10 %)
Neuronal Signaling Unit	1	7.5	7.50	1 (100 %)	1 (100 %)



Scientific production by group

Group	Total Publications	Total IF	Average IF	Q1 Publications	D1 Publications
Nutrition, metabolism and cellular stress					
Biochemistry of Oxidative Stress	2	19.4	9.7	2 (100 %)	2 (100 %)
Cell signalling and apoptosis group	1	4.2	4.2	0 (0 %)	0 (0 %)
Metabolic Physiopathology	17	100.5	5.9	15 (88 %)	5 (29 %)
Nutrition, Metabolism and Microbiota in patients with heart failure (NUTRIMMIC)	8	70.4	8.8	7 (88 %)	5 (63 %)
Systems Biology and Statistical Methods for Medical Research	6	19.2	3.2	2 (33 %)	0 (0 %)
Other research lines					
Other research lines	42	111.6	3.56	16 (38.1%)	4 (9.5 %)



Intramural research calls

Intramural Research Program - IREP 2025

IRBLleida is committed to promoting the research activity of the groups of our institute and dedicates a significant part of the annual budget to an Intramural Research Program (IREP) consisting of different competitive calls open to all the groups in our institute. This 2025 Intramural Research Program included calls for research grants (PIRS and Innovation Seed Projects), human resources (Master students, predoctoral and postdoctoral fellowships), and international research stay fellowships. The budget for the IREP calls for 2025 was €942,468, largely (60%) financed by the Diputació of Lleida.

Intramural Research Program - IREP 2025

1**Master's Student Fellowships**
Budget: 10,000€**2****Research Initiation Contract**
Budget: 24,000€**3****PhD Student Fellowships**
Budget: 291,000€**4****Postdoctoral Contracts**
Budget: 175,000€

Projects

5**Projects to promote Health
Research (PIRS)**
Budget: 250,000€**6****Innovation Seed Projects in
Biomedicine**
Budget: 20,000€**7****ProBiGene**
Budget: 40,000€**8****Biomedical Research Projects,
High Pyrenees and Aran
Modality (PIRS - Territory)**
Budget: 10,000€

International Mobility

9**Research Stay in Foreign
Institutions**
Budget: 28,000€**10****Incoming
Mobility Call**
Budget: 20,000€

Support to Groups

11**Support to Clinical
Associated Groups
(AGA)**
Budget: 53,500€**12****Bridge funding for
Consolidated Groups**
Budget: 20,000€



External competitive calls

Competitive Non-Human Resources Projects

Table 9. Competitive non-human resources projects obtained in IRBLLeida and UdL

Center	Scope	Number of grants	Funds (€)
IRBLLeida	REGIONAL	6	518,771.20
	NATIONAL	19	1,299,665.69
	EUROPEAN	1	36,300.00
	INTERNATIONAL	1	75,978.98
UdL	LOCAL	2	2,450.00
	REGIONAL	5	87,900.00
	NATIONAL	2	256,250.00
	INTERNATIONAL	1	132,531.00
	Grand Total		36

Competitive Human Resources Projects

Table 10. Competitive human resources projects obtained in IRBLLeida and UdL

Center	Scope	Number of grants	Funds (€)
IRBLLeida	REGIONAL	3	326,440.16
	NATIONAL	4	270,600.00
	INTERNATIONAL	2	132,000.00
UdL	LOCAL	6	283,203.86
	REGIONAL	3	237,143.37
	NATIONAL	3	375,600.00
Grand Total		21	1,624,987.39



External competitive calls

Table 11. Competitive projects obtained in IRBLLeida and UdL.

Center	Scope	Call	Number of grants	Funds (€)	
IRBLLeida	REGIONAL	2025: RECERCA SOBRE MALALTIES RESPIRATÒRIES	3	507,762.60	
		FOMENT I ÚS DE LA LLENGUA CATALANA EN L'ÀMBIT DE LA RECERCA	1	9,008.60	
		Premi Millor comunicació oral presentada a la XXV Jornada de la SCQA	1	1,000.00	
		Premi Millor comunicació presentada al 37è Congrés de la Societat Catalana de Cardiologia	1	1,000.00	
	NATIONAL	AES 2022: Proyectos de investigación de Medicina Personalizada de Precisión	1	22,000.00	
		AES 2023: PROYECTOS DE INVESTIGACION EN SALUD	1	14,500.00	
		AES 2025: PROYECTOS DE DESARROLLO TECNOLÓGICO EN SALUD (DTS25)	1	155,955.69	
		AES 2025: PROYECTOS EN INVESTIGACIÓN EN SALUD	7	657,250.00	
		AJUTS A LA RECERCA BÀSICA EN DIABETIS 2024	1	10,000.00	
		AYUDAS A LA INVESTIGACIÓN EN NEFROLOGÍA 2025	1	24,000.00	
		AYUDAS PARA LA PREPARACIÓN Y GESTIÓN DE PROYECTOS EUROPEOS GPE2025	1	143,960.00	
		AYUDAS70%CHALLENGE	1	5,000.00	
		Beca Fernández-Bañares AEG 2025	1	6,000.00	
		CONVOCATORIA DE AYUDAS PARA EL FOMENTO DE LA CULTURA CIENTIFICA, TECNOLÓGICA Y DE LA INNOVACIÓN	1	25,000.00	
		III CONVOCATORIA DE AYUDAS A PROYECTOS DE INVESTIGACIÓN EN ELA UNZUÉ-LUZÓN	1	160,000.00	
		IX Convocatoria de los Premios Jóvenes Investigadores	1	46,000.00	
		PROYECTOS DE INVESTIGACIÓN EN ESCLEROSIS MÚLTIPLE	1	30,000.00	
		EUROPEAN	ERASMUS-SPORT-2025	1	36,300.00
		INTERNATIONAL	FARA Research Grant	1	75,978.98



External competitive calls

Center	Scope	Call	Number of grants	Funds (€)
UdL	LOCAL	CONVOCATÒRIA DE SUPORT A ESTUDIS SOBRE DESENVOLUPAMENT D'ORGANITZACIONS I TERRITORIS SALUDABLES I SOSTENIBLES	2	2,450.00
	REGIONAL	Ajuts per desenvolupar projectes amb impacte social orientats a l'abordatge de reptes en salut mental i benestar emocional (BENES 2024)	1	20,000.00
		BECA DE RECERCA 2025	1	25,400.00
		CONVOCATÒRIA MILLOR PROJECTE DE RECERCA EN CURS O PLANIFICAT	1	2,500.00
		Programa Indústria del Coneixement - Modalitat A. Llabor: per a projectes innovadors amb potencial d'incorporació al sector productiu	2	40,000.00
	NATIONAL	PROYECTOS GENERACIÓN DE CONOCIMIENTO	2	256,250.00
	INTERNATIONAL	Concentrating Solar Power (CSP)	1	132,531.00

Historical data on funds obtained from competitive calls

In 2025, researchers obtained in IRBLLeida 1.93M and UdL 0.48 from competitive projects.

Funded Projects non-HR IRBLLeida

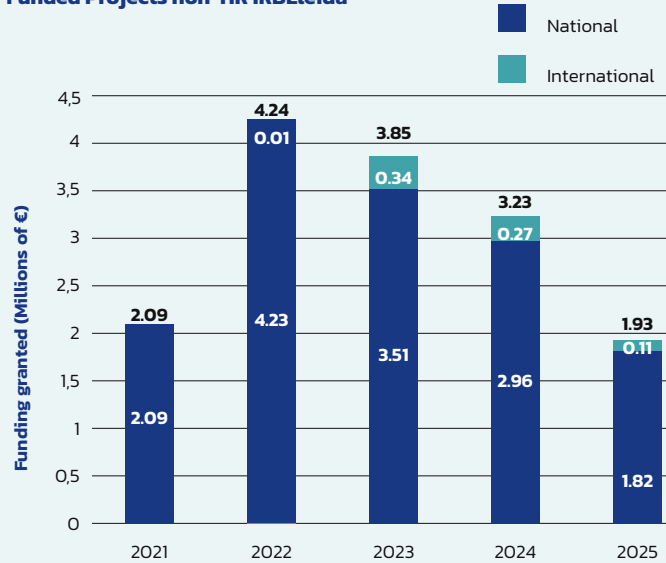


Figure 10. Historical data on funds obtained by IRBLLeida from competitive projects, by national/international source.

Funded Projects non-HR IRBLLeida & UdL

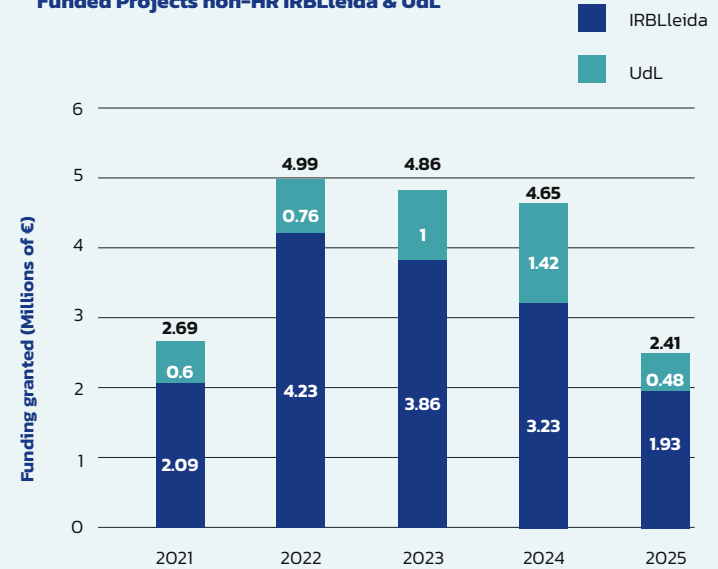


Figure 11. Historical data on funds obtained by IRBLLeida groups, indicating whether they are handled by IRBLLeida or UdL grants office.

Historical data on funds obtained from human resources competitive calls

In 2025 researchers obtained in IRBLLeida 0.73M€ and UdL 1.71M € from human resources competitive calls.

Funded Projects HR IRBLLeida

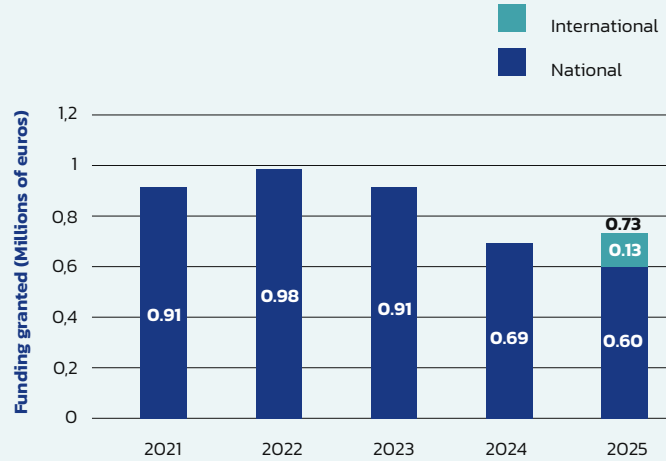


Figure 12. Historical data on funds obtained by IRBLLeida from competitive human resources, by national/international source.

Funded Projects HR IRBLLeida & UdL

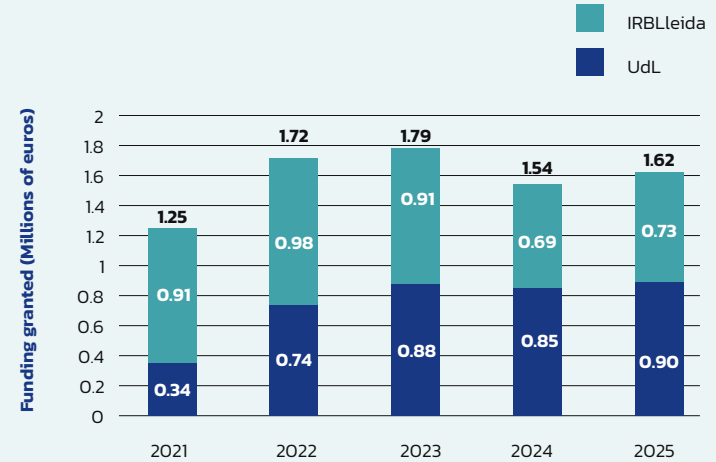


Figure 13. Historical data on funds obtained by IRBLLeida groups, indicating whether they are handled by IRBLLeida or UdL grants office.

Clinical trials and observational studies

The total number of clinical studies initiated in 2025 was 51 (28 clinical trials and 23 observational studies). The number of active clinical studies was 246 (150 clinical trials and 96 observational studies).

Active clinical trials and observational studies

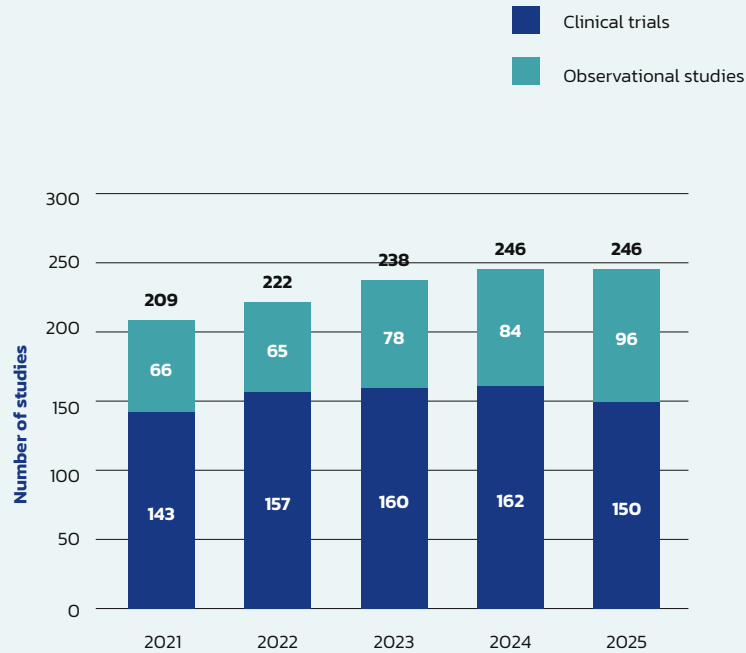


Figure 14. Historical data on active clinical trials and observational studies.

New clinical trials and observational studies

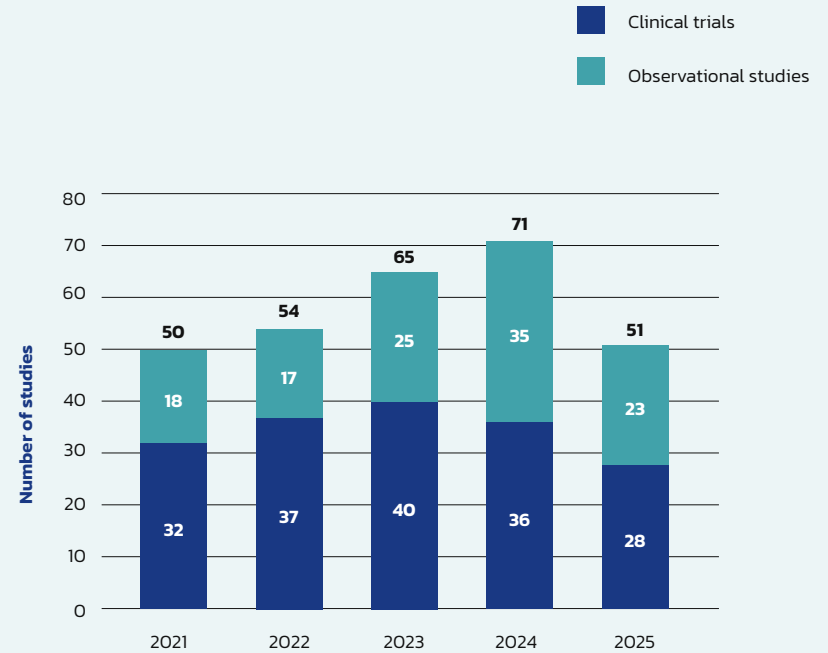


Figure 15. Historical data on new clinical trials and observational studies.

Clinical trials and observational studies

The total income from clinical trials and observational studies was 2,564,418 €.

Funds from clinical trials and observational studies

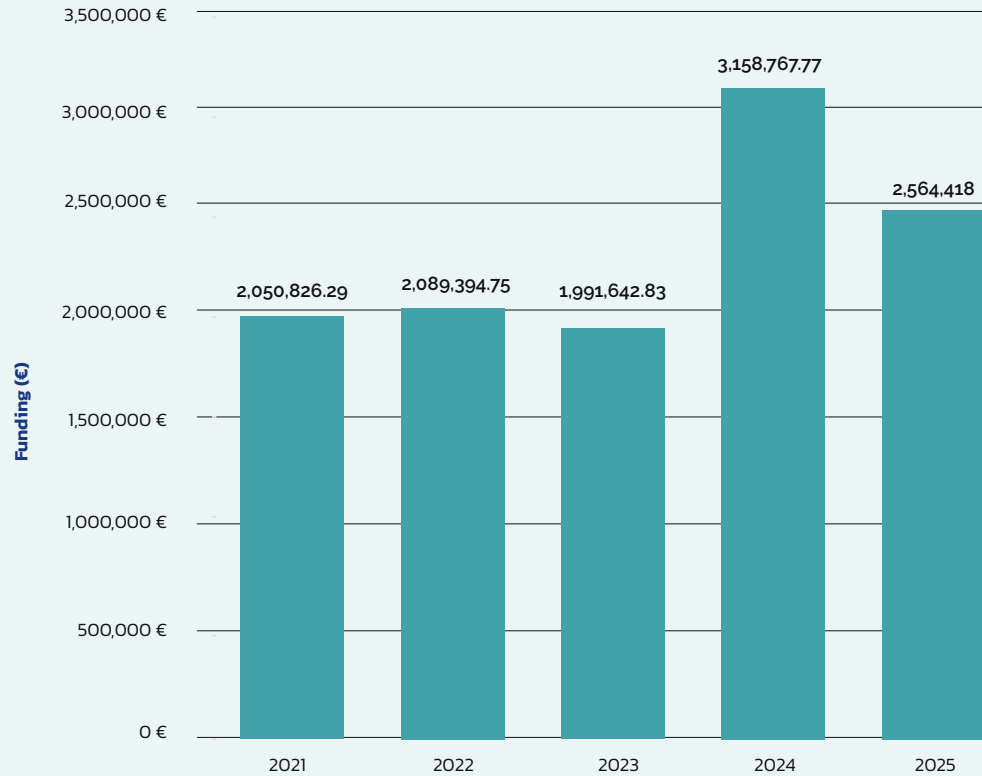


Figure 16. Historical data on funds obtained from clinical trials and observational studies.

Clinical trials and observational studies

Number of active clinical studies by medical area during 2025.

Active clinical trials by medical area

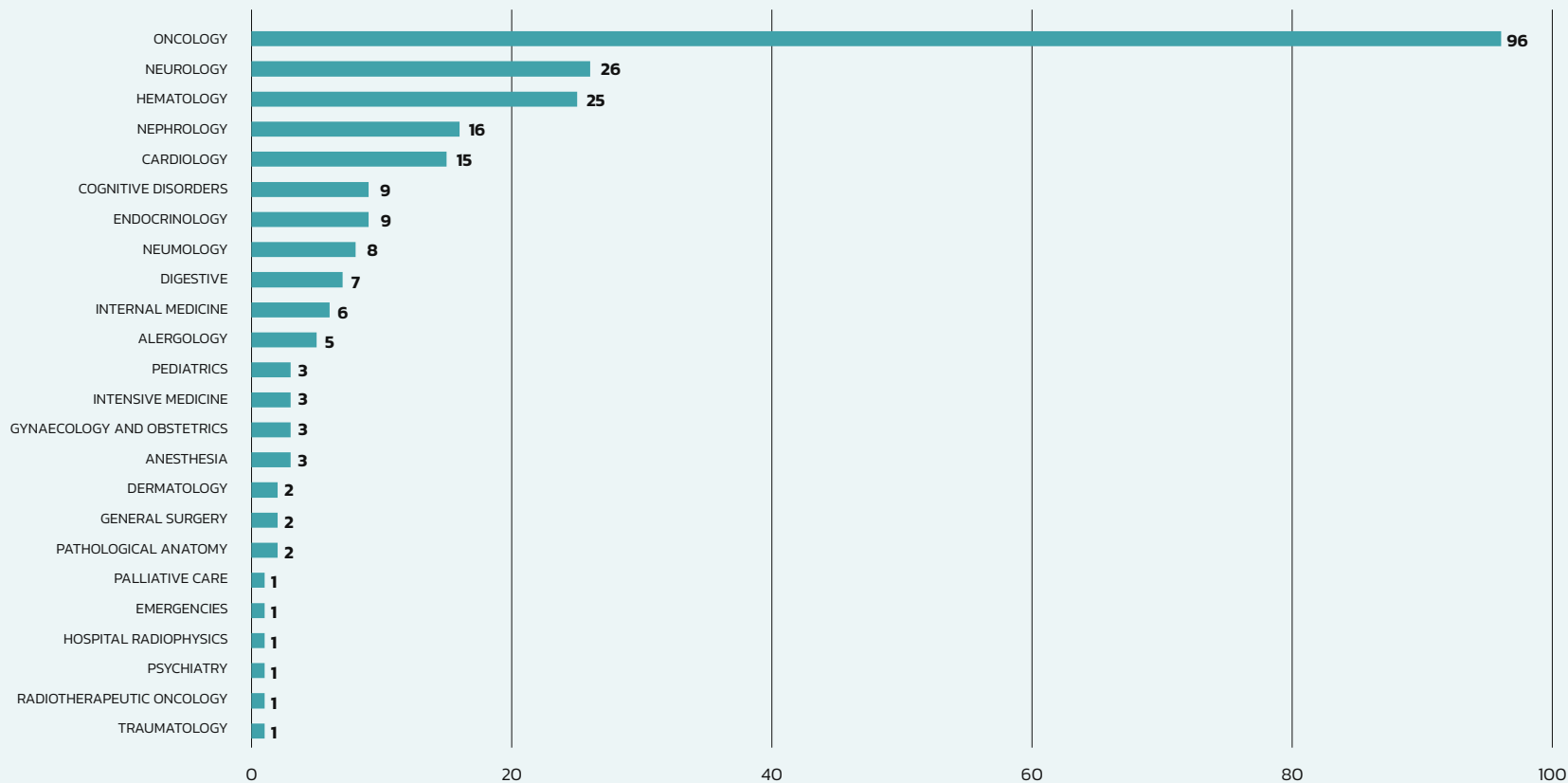


Figure 17. The figure presents the number of active clinical studies by Medical Area during 2025.



Clinical practice guidelines

IRBLleida researchers have published 8 clinical practice guidelines during 2025.

Table 12. Clinical practice guidelines published in 2025

Type of document	Title	Researcher	Research Group	Impact	Additional Info
Cancer					
Article	Resumen ejecutivo de la reflexión estratégica de la Sociedad Española de Medicina Interna 2025-2029 para garantizar la asistencia integral a la persona enferma en un Sistema Nacional de Salud de alto valor	Porcel Pérez, Jose Manuel	Research group of Cancer Biomarkers (GReBiC)	National	10.1016/j.rce.2024.08.001 / 10.1016/j.rceng.2024.09.005
Article	Current Trends in Treating Malignant Pleural Effusion: Evidence, Guidelines, and Best Practice Recommendations	Porcel Pérez, Jose Manuel; Salud, Antonieta	Research group of Cancer Biomarkers (GReBiC)	International	10.1200/OP.24.00387
Article	Incidental Findings Identified by Prenatal Microarray Analysis and Consensus Reporting Criteria of the Catalan Public Health Network XIGENICS	Lopez Ortega, Ricard; Foj, Laura	Drosophila disease models and (epi)genetic analysis	National	10.1002/pd.6746
Article	Homologous recombination deficiency in ovarian cancer: Global expert consensus on testing and a comparison of companion diagnostics	Matias-Guiu Guia, Xavier	Oncological pathology	International	10.1016/j.ejca.2024.115169
Article	ESGO-ESTRO-ESP guidelines for the management of patients with endometrial carcinoma: update 2025	Matias-Guiu Guia, Xavier; Gatus Calderó, Sonia	Oncological pathology	International	10.1016/S1470-2045(25)00167-6
Article	Digital transformation of pathology – the European Society of Pathology expert opinion paper	Matias-Guiu Guia, Xavier	Oncological pathology	International	10.1007/s00428-025-04090-w
Epidemiology, Infectious Diseases and Public Health					
Clinical Guide	ICO-ICS PRAXI pel tractament mèdic i amb irradiació del limfoma difús de cèl·lules B grans	Rius Perera, Judith	Pharmacology & Molecular Microbiology	National	ISBN: 978-84-128170-2-7

Theses

Throughout 2025 the IRBLleida researchers have directed 20 doctoral theses.

Doctoral theses

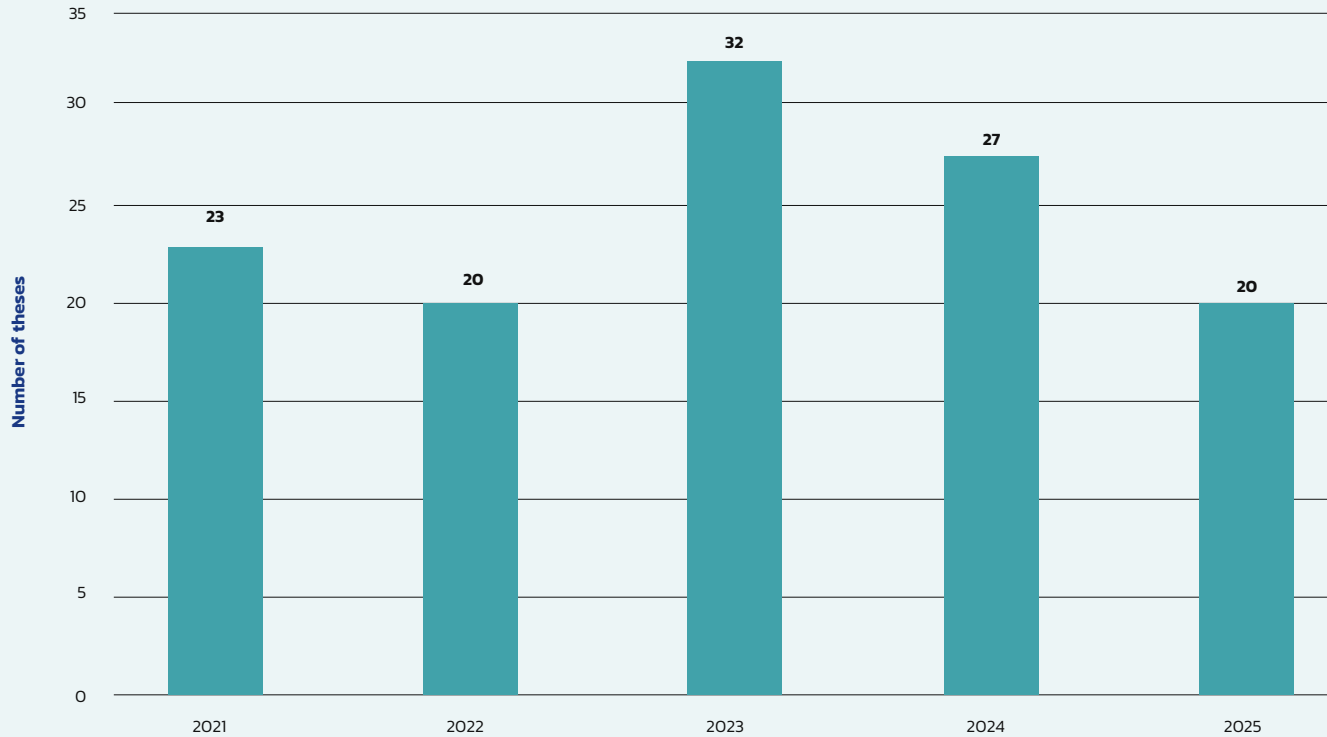


Figure 18. Historical data on doctoral theses defended by PhD students under the supervision of IRBLleida researchers.



Theses directed by IRBLleida researchers

During 2025, 20 PhD students supervised by IRBLleida researchers defended their doctoral theses.

Table 13. List of doctoral theses defended during 2025 directed by IRBLleida researchers.

PhD Student	Thesis	Director/s	Group	Area de recerca
Silvia Gras Artells	Envel·liment i alteracions en el circuit motor: mecanismes patològics, teràpies nutricionals i aspectes patològics comuns amb l'atrofia muscular espinal.	Tarabal Mostazo, Olga & Caldero Pardo, Jordi	Experimental neuromuscular pathology	Neurosciences
Lia Alza Blanco	Modulación de canales iónicos para el tratamiento del glioblastoma: modelos celulares, glioblastoma-on-chip y glioma en Drosophila	Herreros Danes, Judit & Canti Nicolas, Carles	Calcium cellular signalling	Cancer
Maria Vidal Sabanes	Models preclínic en càncer: rol del miRNA-424(322)/503 en tumors deficients en PTEN i modelització del càncer d'endometri d'alt risc	Dolcet Roca, Francesc Xavier	Developmental and Oncogenic Signaling	Cancer
Carlos Tersa Miralles	Effectiveness of workplace exercise interventions for spinal pain management among sedentary office workers	Rubi Carnacea, Francesc Josep & Rubinat Arnaldo, Esther	Research group of health care (GReCS)	Chronic diseases, Surgery and Health Care
Vicente Llorca Bofi	Predictive value of white blood cell counts, ratios and C-reactive protein in schizophrenia spectrum disorder	Mur Lain, Maria & Bioque, Miquel	Biological foundations of mental disorders	Neurosciences
Ana Maria Fite Serra	Análisis de la precariedad laboral de profesionales de Enfermería que trabajan en residencias para personas mayores de Cataluña	Mateos García, José Tomás & Muntaner Bonet, Carlos	Research group of health care (GReCS)	Chronic diseases, Surgery and Health Care
Virginia Garcia Reglero	Hipofraccionamiento en cáncer de mama: análisis de resultados y seguridad en nuestro medio	Salud Salvia, Maria Antonia & Mira Flores, Moises Jose	Research group of Cancer Biomarkers (GReBiC)	Cancer
Maria d'Alao Gatius Puchercos	Novel molecular insights into the cholinergic C-type synapse: implications in healthy and diseased motor neurons	Caldero Pardo, Jordi & Tarabal Mostazo, Olga	Experimental neuromuscular pathology	Neurosciences
Luis Alejandro Rodríguez Guerrero	Inseguridad alimentaria en personas trabajadoras temporeras agrícolas de origen extranjero de cuatro regiones españolas	Brones Vozmediano, Erica Tula & Mateos García, José Tomás	Research group of health care (GReCS)	Chronic diseases, Surgery and Health Care
Joan Codina Fabra	Ubiquitin dependent control of RNA polymerase I by blocks in transcriptional elongation	Belli Martinez, Gemma & Torres Rosell, Jordi	Cell Cycle	Cancer
David Barranco Reixachs	Metodologies d'aprenentatge actiu en el grau de fisioteràpia. Ús de l'aprenentatge basat en simulació, Casos clínics interactius i casos clínics creats amb generació de contingut procedimental	Rubi Carnacea, Francesc Josep & Bravo Navarro, Maria Cristina	Research group of health care (GReCS)	Chronic diseases, Surgery and Health Care



Theses directed by IRBLleida researchers

PhD Student	Thesis	Director/s	Group	Area de recerca
Núria Vivancos Guiu	Estudio de la vía de señalización de la GTPasa pequeña RhoA en Cáncer Gástrico	Arango Del Corro, Diego & Martinez Barriocanal, Agueda	Molecular Oncology	Cancer
Graciela Elisenda Bagüeste Morán	Evaluación de la producción científica durante el periodo de formación sanitaria especializada	Porcel Perez, Jose Manuel & Bielsa Martin, Silvia	Research group of Cancer Biomarkers (GReBiC)	Cancer
Mario Elías Henríquez Beltrán	Sleep and Circadian Rest-Activity Rhythm Trajectories Following a Critical Illness: A Longitudinal Post-Intensive Care Unit Study	Targa Dias Santos, Adriano & Benítez Iglesias, Iván David	Translational research in respiratory medicine group	Chronic diseases, surgery and health care
Alba González Alonso	Otp neurons of the medial extended amygdala: from origin to function	Desfilis Barcelo, Ester & Medina Hernandez, Loreta Maria	Evolutionary Developmental Neurobiology	Neurosciences
Pere Bosch Barceló	The Efficacy of a Gamified Virtual Reality Environment combined with tDCS in Treadmill-Based Gait Rehabilitation for Parkinson's Disease	Pakarinen, Anni & Fernandez Lago, Helena	Research group of health care (GReCS)	Chronic diseases, Surgery and Health Care
Núria Torreguitart Mirada	Identificació de perfils biològics d'estenosi carotídia ateromatosa en funció de la clínica i la vulnerabilitat ecogràfica	Purroy Garcia, Francisco	Clinical neurosciences	Neurosciences
Cristina Garcia Vázquez	PROICTUS: proyecto socioasistencial y estudio de la continuidad asistencial y seguridad en pacientes con enfermedades cerebrovasculares	Purroy Garcia, Francisco	Clinical neurosciences	Neurosciences
Alexandra Pascual Garcia	Hidratació segura i eficaç de la gent gran amb disfàgia a líquids: anàlisi del problema i disseny d'una intervenció	Botigue Satorra, Maria Teresa &	Health Education, Nursing, Sustainability and Innovation Research Group (GREISI)	Epidemiology, Infectious Diseases and Public Health
Agnès Huguet Feixa	Vacil·lació a la vacunació en la població i anàlisi dels missatges antivacunes a les xarxes socials	Ortega Bravo, Marta & Artigues Barbera, Eva Maria	Applied epidemiology	Epidemiology, Infectious Diseases and Public Health



Research networks and platforms

Table 14. Research networks and researchs platforms with IRBLLeida researchers.

Reference	Acronym	Funder/Entity	Researcher Member	Research Group
Cancer				
RED2022-134164-T	INGEN	Ministerio de Ciencia e Innovación	J. Torres	Cell Cycle
CB16/12/00231	CIBERONC	ISCI (CIBER)	X. Matias-Guiu	Oncological pathology
-	IMPACT-GENÓMICA	INSTITUTO DE SALUD CARLOS III/ FONDO EUROPEO DE DESARROLLO REGIONAL	D. Arango	Molecular oncology
Chronic diseases, Surgery and Health Care				
CB07/06/2008	CIBERES	ISCI (CIBER)	F. Barbé, Torres G., Benitez I., Targa A., Belmonte T., Gracia E., Gort C., de Batlle J., de Gonzalo D., M. Sanchez, L. Pinilla.	Translational research in respiratory medicine group, Precision medicine in chronic diseases group
-	APORED	Various Organizations	J. Ribas	Pharmacology unit
COST CA21153	-	European Cooperation in Science & Technology (COST)	D. De Gonzalo	Translational research in respiratory medicine group
CB15/00071	CIBERDEM	ISCI (CIBER)	E. Rubinat / M. Granados	Research group of health care (GReCS)
CB16/10/00468	CIBERFES	ISCI (CIBER)	J. Blanco / M. Gea	Research group of health care (GReCS)
2025 XARDI 00006	NEUROAGE	AGAUR	M. Gea	Research group of health care (GReCS)
2025 XARDI 00020	TECSAM	AGAUR	M. Gea/F.Bellón	Research group of health care (GReCS)
Epidemiology, infectious diseases and public health				
-	EFLM	Laboratory medicine credit points, working group. European Federation of clinical chemistry and laboratori medicine.	M. Ibarz	Indicators and specifications of the quality in the Clinical Laboratory
-	EFLM	Preanalytical phase, working group. European Federation of clinical chemistry and laboratori medicine	M. Ibarz	Indicators and specifications of the quality in the Clinical Laboratory
2025 XARDI 00006	NEUROAGE	AGAUR	T. Botigué	Health Education, Nursing, Sustainability and Innovation Research Group (GREISI)



Research networks and platforms

Neurosciences				
CB/07/09/0037	CIBERSAM	Centro de investigación biomédica en red de salud mental	S. Miret	Biological foundations of mental disorders
RD21/0006/0023	RICORS-ICTUS	ISCIII (RETICS)	F. Purroy	Clinical Neurosciences
EXOPSYCOG2023	IKUR-EXOPSY-COG2023	IKUR Neurobiosciences – Basque Government	X. Gallart	+Pec Proteomics Research Group
COST CA23106	COST ACTION	European Cooperation in Science & Technology (COST)	L.Medina	Evolutionary Developmental Neurobiology
2025 XARDI 00006	NEUROAGE	AGAUR	G. Piñol	Cognition and Behavior Study Group
2025 XARDI 00020	TECSAM	AGAUR	X. Gallart/ A. Serra; M. Mur	+Pec Proteomics Research Group; Biological foundations of mental disorders
2025 XARDI 00008	XARTEC	AGAUR	X. Gallart/ A. Serra	+Pec Proteomics Research Group
-	investigAME	Various Organizations	R. Soler	Neuronal Signalling Unit
Nutrition, Metabolism and Cellular Stress				
COST CA19105	EpiLipidNET	European Cooperation in Science & Technology (COST)	R. Pamplona	Metabolic physiopathology
-	INFECMOL	Campus Iberus	G. Bellí	Molecular biology of yeast
2025 XARDI 00006	NEUROAGE	AGAUR	R.Pamplona	Metabolic physiopathology
Transversal Platforms				
PT23/00121	Plataforma de investigación clínica	ISCIII (Plataformas)	A. Lecube	Clinical Research Support Unit (USIC) IRBLleida
PT23/00032	Plataformas de biomodelos y bio-bancos	ISCIII (Plataformas)	X. Matias-Guiu	Biobank IRBLleida



INTRODUCTION

ORGANIZATION

CENTERS,
UNITS AND
CORE FACILITIES

ECONOMIC
INDICATORS

RESEARCH
ACTIVITY


KNOWLEDGE
TRANSFER AND
INNOVATION

RESEARCH ACTIVITY
BY AREAS AND
GROUPS

COMMUNICATION

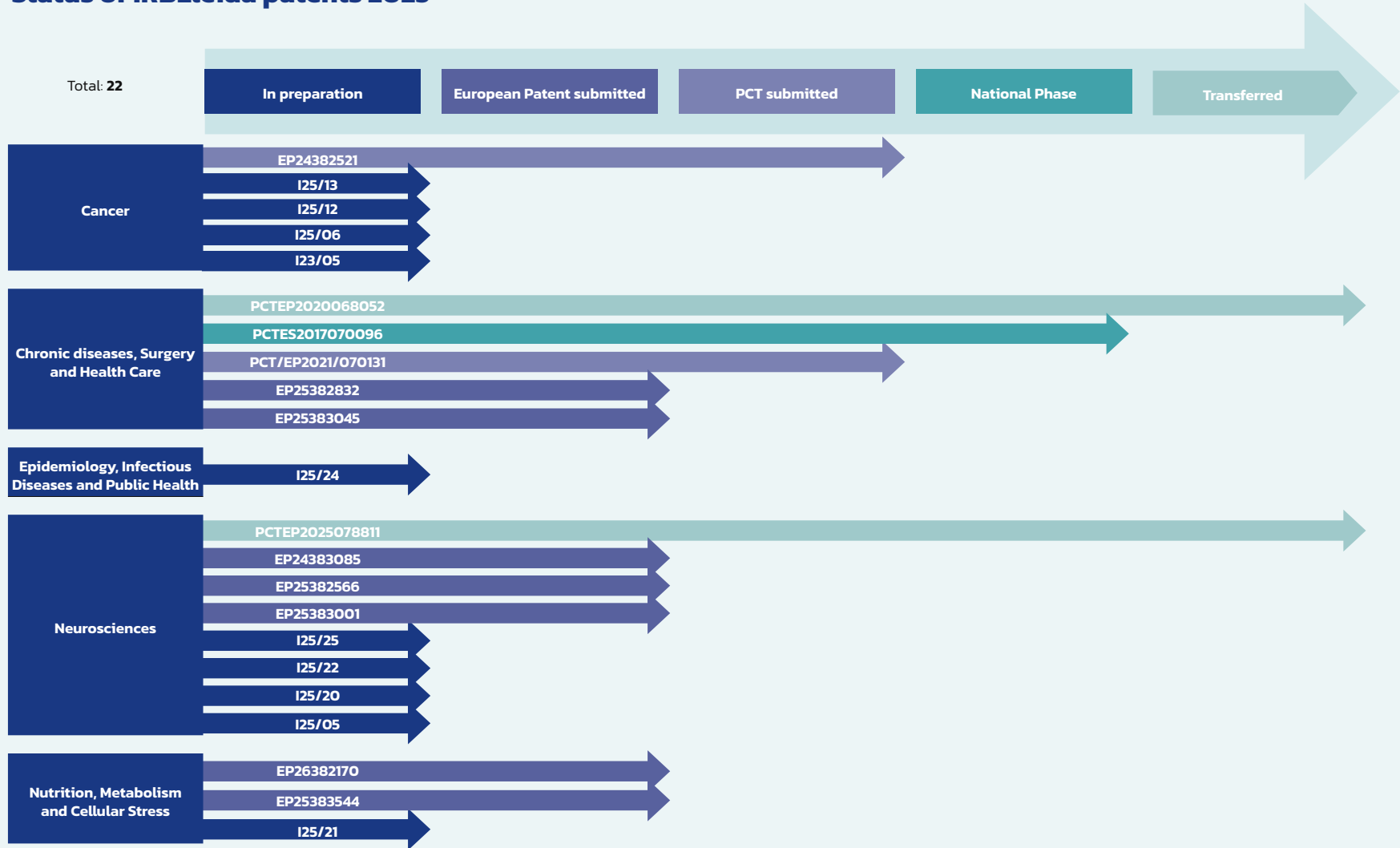
FUNDRAISING

MAIN FUNDERS



Knowledge transfer and innovation

Status of IRBLleida patents 2025



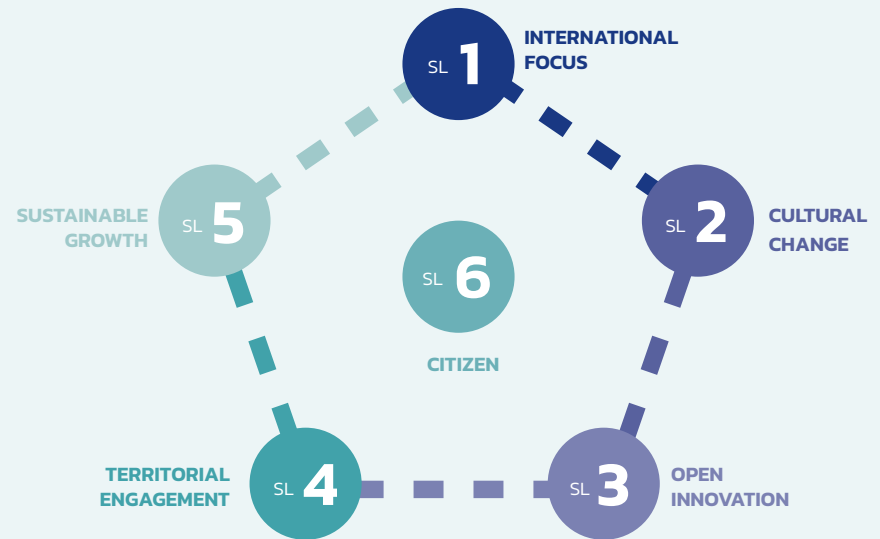
Innovation unit: 2023–2025 Plan

Within the IRBLleida Strategic Plan, innovation is identified as one of the strategic pillars of the Institute. This recognized need led to the preparation and development of the Innovation Plan 2023–2025. An outline of the model that will facilitate the acceleration of innovation at the institute can be found below.

Milestones 2025

- 93% compliance rate achieved for activities planned in the 2025 Innovation Plan (2023–2025).
- Support and training for grant application of CaixaImpulse, DTS, Plataforma ITEMAS, Proves de validació
- 3rd call of the intramural Innovation Seed Grant : ISP 2025
- Participation in Innovation networking: Renewed participation in NEUROAGE and XARTEC AGAUR R+D+i networks
- Continuation of the patient commission activity and presentation of >25 project ideas for their review, discuss feedback and approval during the ideation phase
- Specialized patent and innovation training for support office personnel
- Participation in innovation forums to position the center and create synergies: Comunitat i àgora d'innovació CERCA, Biocat, annual ITEMAS nodes meeting at VHIR, BIOSpain, I3PT Bring-It Demo Day
- Launch of two spin-offs: ARDEA and IRUNDIT
- Promotion of collaborative projects with hospitals and companies to validate innovative solutions in a real environment and presentation of projects in national calls: Biocat's INNOPass, ISCIII's Public-Private Collaborations, UdL's Innolmpuls
- Submission of 5 new priority patents.

Strategic lines



Innovation unit: 2023-2025 Plan

Innovative Researchers

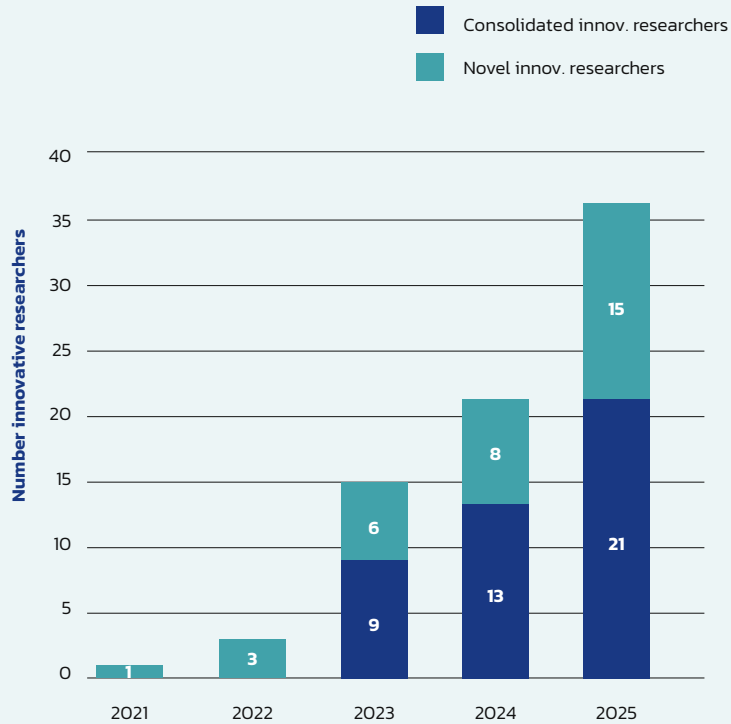


Figure 19. Innovative researchers.

Ideas and Industrial and Intellectual property



Figure 20. Ideas and Industrial and Intellectual property.

Note: Active innovative researchers are the investigators at the institute that have already submitted an idea in Fundanet and are actively working on the innovation process; Innovative researchers are the researchers that are on the radar of IRBLLeida (based on conversations, interactions, trainings, projects, etc.) with a potential innovation idea but have not yet made the submission of the idea in Fundanet software.

Innovation unit: 2023–2025 Plan

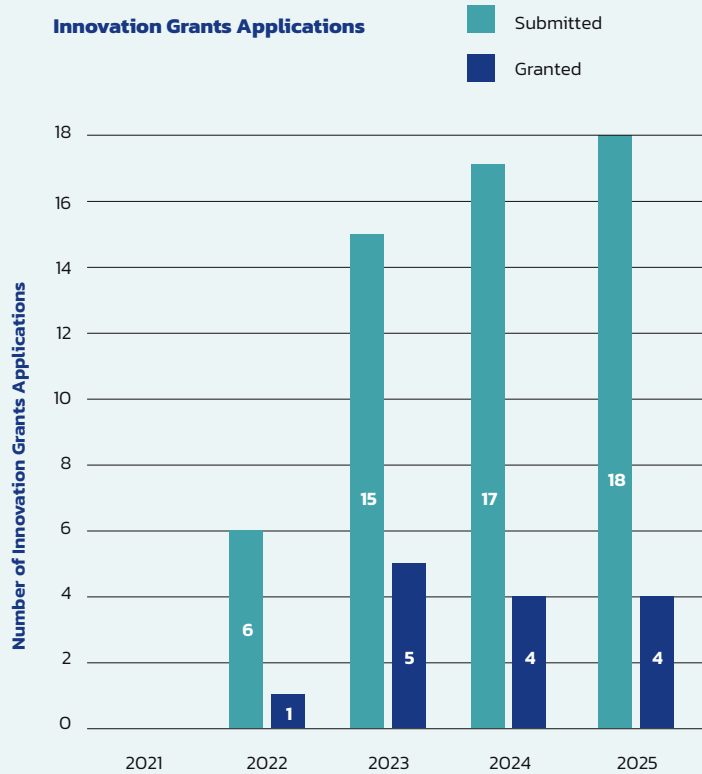


Figure 21. Number of innovation grants applications.

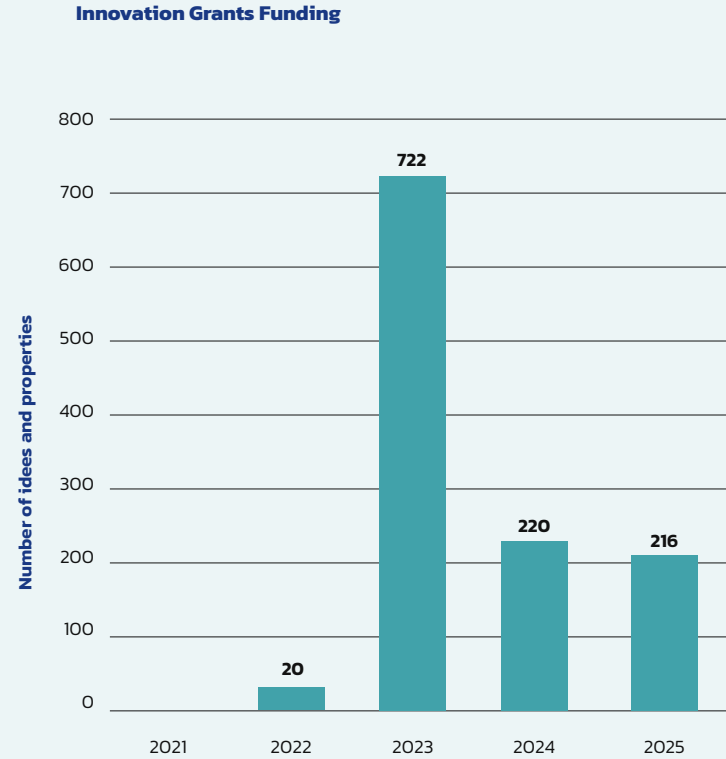


Figure 22. Funding obtained from innovation grants.

Note: Requested innovative projects are IRBLleida projects that have been submitted to different grants with the support of the innovation department of the administration office of the institute. Awarded counts the total amount of those grants that had a positive resolution for IRBLleida.



Research activity by areas and groups

- Area 1. Cancer
- Area 2. Chronic diseases, surgery and health care
- Area 3. Epidemiology, infectious diseases and public health
- Area 4. Neurosciences
- Area 5. Nutrition, Metabolism and Cellular Stress
- Area 6. Other research areas



Area 1. Cancer

Area coordinators: Dr. Eloi Garí Marsol & Dr. Águeda Martínez Barriocanal

The cancer area includes research staff trained in different specialties of Medicine and Biology. The common goal is oncology research integrating basic (model organisms), translational, and clinical research (trials).

Groups

1.1 Calcium cellular signalling

1.2 Cell cycle

1.3 Developmental and Oncogenic Signaling

1.4 Drosophila disease models and (epi)genetic analysis

1.5 Molecular Oncology

1.6 Oncological pathology

1.7 Research group of Cancer Biomarkers (GRBiC)

7

Groups

94

Researchers

Male 46%

Female 54%

3

Funded grants

Male 50%

Female 50%

275,750 €

Grants funding

Male 48%

Female 52%

53

Active projects

70

Publications

454.35

Total IF

6.78

Average IF

62.9

%Q1

24.3

%D1



1.1. Calcium cellular signalling

During tumor progression, cancer cells adapt to changes in the microenvironment (lack of nutrients and /or oxygen) through the activation of stress pathways and autophagy. These processes are relevant in the resistance of the tumor to treatment and therefore important in the fight against cancer. Our group studies the relationship between calcium signaling and these adaptive processes, with the aim of proposing antitumoral strategies. The reason for this relationship stems from our findings that showed that T-channel deficiency activates processes of death or proliferative arrest in tumor cells. Currently our working model is Glioblastoma, an aggressive brain tumor that is characterized by its rapid growth, high invasiveness, plasticity and resistance to treatment. Recent studies on this complex tu-

mor show its functional integration with the surrounding nervous tissue (including neurons and glia) and the hijack of brain mechanisms in benefit of the tumor. Ion channels directly participate in this intercommunication between the different cellular elements constituting the tumor and its environment. We use primary glioblastoma cultures derived from human biopsies, established cell lines, biochemical and cell biology techniques, gene silencing, and preclinical models of glioblastoma. The group is formed by two senior researchers, a postdoctoral researcher, two predoctoral researchers and technical staff.

Active projects

PI	Funding agency	Project	Budget (€)
Carles Cantí Nicolás i Judit Herreros Danés	Ministerio De Ciencia e Innovación	Disrupción del contexto protumoral del glioblastoma: modulación de canales iónicos en las distintas poblaciones celulares implicadas	180,000

RESEARCH TEAM

Group leaders

Carles Cantí Nicolás
Judit Herreros Danés

Researcher

Anna Visa Pretel

Phd Student

Maria Casals Sánchez

Research Technician

Roser Pané Domenech

Laboratories

Laboratory 2nd floor. Lab b2.11
973 702 214
973 702 950

Email

carles.canti@udl.cat
judit.herreros@udl.cat



1.2. Cell cycle

Cell Cycle group studies the molecular mechanisms that regulate the division of eukaryotic cells, in particular:

- (A) the mechanisms dependent on SUMO and SMC complexes that ensure genome stability during the cycle and in response to DNA damage.
- (B) the mechanisms involved in the control of Cell Cycle entry and its relation to polarity, cell adhesion and migration.

Mouse embryonic fibroblasts, cell lines and primary cultures of human keratinocytes are used as models of cell adhesion and polarity whereas budding yeast and human cell lines are employed for chromosome replication, cohesion and segregation studies.

The overall goal of this work is to contribute to a better understanding of the processes that are altered during the loss of genome integrity and in diseases such as cancer.

Publications

- Ceravalls J, Ruiz R, Armesto S, Fernández JM, Riera J, Gracia T, Quintana M, Iglesias M, Salleras M, Moya AI, Ramos FJM, Ferran M. Anti-IL-23 therapy for the treatment of moderate-to-severe inverse psoriasis: A 52-week multicentre study. *J. Eur. Acad. Dermatol. Venereol.* 2025. 39. (3):p. 290–292. IF:8,000. (D1)(Q1).
- Garbayo P, Molina A, Porta A, Soto A, Fornons R, Gamissans M, Garcias J, Gracia I, Martin G, Verdaguer J, Mora V, Aguayo RS, Vilarrasa E, Masferrer E, Corral O, Galvany L, Rodrigo A, Saus E, Moreno M, Carreras A, Feliu C,

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Funded projects

PI	Funding agency	Project	Budget (€)
Jordi Torres Rosell i Neus Colomina Gabarrella	Ministerio De Ciencia e Innovación	Respuestas moleculares a bloqueos en las horquillas de replicación y en la transcripción de RNA Polimerasa I	256,250

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1.2. Cell cycle

Active projects

PI	Funding agency	Project	Budget (€)
Eloi Garí Marsol i Sonia Gatius Caldero	Diputació de Lleida	Clinical and functional identification of metastatic colonization biomarkers	50,000
Gemma Belli Martinez	Centre de Recerca en Agrotecnologia Agrotecnio	Designing functional food containing active ingredients with potential anti-obesity properties	3,823
Jordi Torres Rosell i Neus Colomina Gabarrella	Ministerio De Ciencia e Innovación	Mecanismos moleculares de transacciones dependientes del complejo Smc5/6 sobre cromosomas eucarióticos	229,900



1.3. Developmental and Oncogenic Signaling

The team's goal is to study the molecular mechanisms that take place during embryonic development to form a complete and functional organism and how these mechanisms are affected in pathological situations such as cancer. We believe that if we know these mechanisms we will better understand how our organism functions and, moreover, we hope that this knowledge will lay the foundations for the design of new therapeutic approaches in different diseases.

We use genetically modified mice as an animal model for our studies. The advantage of this model is that it is a vertebrate with a physiology very similar to ours. The possibility of making genetic modifications allows us to evaluate the relevance, in vivo, of the molecular mechanisms that we study in development and to create animal models of pathological situations that allow us to better understand the disease and thus propose new therapeutic approaches. In our studies, we use different techniques that cover various levels of experimentation: from animal behaviour and the analysis of different tissues of these genetically modified mice using specialised microscopy to primary cell cultures, biochemical and molecular

assays that include cutting-edge techniques in gene manipulation such as CRISPR/Cas technology.

In our research we have defined three study models: the embryonic development of the genitourinary system (coordinated by Dr. Encinas), the embryonic development of the nervous system (coordinated by Dr. Egea) and the generation of mouse models of endometrial carcinogenesis (coordinated by Dr. Dolcet). In this way we aim to have a broader and more integrative view of the molecular mechanisms involved in embryonic development and which, if affected, can give rise to diseases such as cancer.

Publications

– Vidal M, Bonifaci N, Navaridas R, Egea J, Encinas M, Rodriguez R, Silva JM, Matias X, Llobet D, Dolcet X. Endometrial cancer progression driven by PTEN-deficiency requires miR-424(322)~503. Cell Death Dis. 2025. 16. (1):p. 705-705. IF:9,600. (D2)(Q1).

Active projects

PI	Funding agency	Project	Budget (€)
Francisco Javier Dolcet Roca	Ministerio De Ciencia e Innovación	Análisis funcional de genes supresores de tumores implicados en el cáncer de endometrio de alto riesgo mediante edición CRISPR/Cas9 in vivo	206,250
Francisco Javier Dolcet Roca i Dolors Cuevas Sanchez	Diputació de Lleida	Analysis Of Molecular Alterations And Therapeutic Targets For P53/Pten-Deficient Endometrial Cancers.	50,000
Joaquim Egea Navarro	Ministerio De Ciencia e Innovación	Estudio de la RhoGTPasa Rnd3/RhoE en la formación de pliegues corticales durante el desarrollo del cerebro mediante el uso de ratones modificados genéticamente	127,050
Mario Encinas Martin i Marta Vaquero Susagna	Diputació de Lleida	Exploring vulnerabilities of medullary thyroid carcinoma beyond Ret kinase inhibition	50,000

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1.4. Drosophila disease models and (epi)genetic analysis

Our research group embodies a multidisciplinary approach, encompassing diverse research lines that delve into both basic and translational research. Our work primarily revolves around two key research areas.

- Utilizing *Drosophila* as a model organism to delve into the genetic and biological underpinnings of human diseases, with a particular emphasis on metastatic colorectal cancer.
- Delving into the comprehensive characterization of genetic and epigenetic alterations in complex traits, discerning their involvement in disease susceptibility and progression.

Publications

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- Montes P, Campbell K, Casali A. *Drosophila* as a Model for Metastasis. *Adv Exp Med Biol.* 2025. 1482. p. 135–154. IF:3,650. (D4)(Q2).

Active projects

PI	Funding agency	Project	Budget (€)
Andreu Casali Taberner	Ministerio De Ciencia e Innovación	Identificación de genes esenciales para el inicio de la metastasis en un modelo de <i>Drosophila</i>	200,000
Marina Laplana Lafaja i Alfredo Escartin Arias	Diputació de Lleida	MEjora del Diagnóstico en Cáncer de PÁNcreas (MEDI-CAPA)	50,000

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1.5. Molecular oncology

The main interest of our laboratory is the study of the molecular events underlying the oncogenic process in colorectal, gastric, head-and-neck and endometrial cancer. Gaining a deeper understanding of the molecular mechanisms responsible for the tumorigenic process is essential to improve diagnosis, but most importantly to identify novel actionable targets for patient treatment. We are also interested in the identification of predictive biomarkers and the study of drug-induced senescence to contribute to precision medicine and to the design of alternative treatment strategies for colorectal cancer patients, respectively. Finally, we explore novel therapeutic options for microvillus inclusion disease (MVID), a rare life-threatening intestinal disorder.

Active projects

PI	Funding agency	Project	Budget (€)
Agueda Martinez Barriocanal	Instituto de Salud Carlos III (ISCIII)	Turning drug-induced senescence into a novel therapeutic opportunity for colorectal cancer treatment	102,500
Diego Arango Del Corro	Agència Gestió Ajuts Universitat i Recerca (AGAUR)	Ajut per donar suport a les activitats dels grup de recerca consolidat d'Oncologia Molecular	0
Diego Arango Del Corro	Institut Recerca Biomèdica De Lleida (IRBLleida)	CHEMBAR: Chemopreventive effects of barley-based foods rich	22,500
Diego Arango Del Corro	Instituto de Salud Carlos III (ISCIII)	Nueva aproximación terapéutica para el cáncer colorectal	183,920
Diego Arango Del Corro i Marta Bonet Beltran	Diputació de Lleida	Towards precision radiotherapy for rectal cancer patients	50,000

Publications

- Luk IY, Mooi JK, Mouradov D, Tan T, Scott CM, Chionh F, Jenkins LJ, Reehorst CM, Nightingale R, Savas P, Tse JWT, Li R, Batlle E, Arango D, Dopeso H, Gibbs P, Tebbutt NC, Luwor RB, Scott AM, Basheer F, Dhillon AS, Clemons NJ, Williams DS, Firestein R, Sieber OM, Mariadason JM. Model systems and unique biological features of high and low-grade colorectal cancer (CRC) revealed by xenografting 84 human CRC cell lines. *Commun. Biol.* 2025. 8. (1):p. 875-875. IF:5.100. (D1)(Q1).

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1.6. Oncological pathology

The group studies the molecular alterations of endometrial and skin cancers, in correlation with clinical and pathological characteristics, using descriptive molecular pathology tools (immunohistochemistry, in situ hybridization, sequencing, epigenetics, gene gain and loss), as well as in vitro functional analysis in cell cultures (2D and 3D), and experimental animals. The objective is to transfer the results to clinical practice for the benefit of patients.

Publications

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1.6. Oncological pathology

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1.6. Oncological pathology

Active projects

PI	Funding agency	Project	Budget (€)
Anna Macià Armengol i Robert Montal Roura	Diputació de Lleida	Immunophenotyping of cholangiocarcinoma using liquid biopsy	50,000
Anna Macià Armengol i Rosa Maria Martí Laborda	Instituto de Salud Carlos III (ISCIII)	Abordaje proteómico de los pacientes diagnosticados de novo de melanoma: impacto en la estratificación pronóstica y la predicción de la respuesta al tratamiento adyuvante (PRO2-MEL).	152,500
Anna Macià Armengol i Rosa Maria Martí Laborda	Instituto de Salud Carlos III (ISCIII)	Análisis del microambiente tumoral del melanoma cutáneo asociado al perfil genético y/o a la aparición de resistencias	87,120
Dolors Cuevas Sánchez i Francisco Javier Dolcet Roca	Diputació de Lleida	Analysis Of Molecular Alterations And Therapeutic Targets For P53/Pten-Deficient Endometrial Cancers.	50,000
Felipe Vilardell Villellas i Anabel Sorolla Bardaji	Diputació de Lleida	Simultaneous targeting the partners in crime MYC and BRD4 in triple negative breast cancer	50,000
Marta Vaquero Susagna i Mario Encinas Martín	Diputació de Lleida	Exploring vulnerabilities of medullary thyroid carcinoma beyond Ret kinase inhibition	50,000
Núria Eritja Sánchez	Fundació La Marató de TV3	Unravelling the molecular and phenotypic complexity of endometriosis through new models and omics integration: towards a personalized clinical management	67,500
Núria Eritja Sánchez	Fundación Contigo	Implicación de ARID1A en la remodelación del microambiente tumoral y la reprogramación metabólica en el cáncer endometrial	33,638
Núria Eritja Sánchez	Institut Recerca Biomèdica De Lleida (IRBLleida)	Targeted design of edible nanostructured delivery systems containing beta-carotene as a diet supplementation strategy with antitumoral activity	22,500
Núria Eritja Sánchez i Sònia Gatius Calderó	Instituto de Salud Carlos III (ISCIII)	Papel de ARID1A en la carcinogénesis endometrial dependiente de contexto. Análisis de los mecanismos moleculares y posibles implicaciones terapéuticas	87,120
Sònia Gatius Calderó i Eloi Garí Marsol	Diputació de Lleida	Clinical and functional identification of metastatic colonization biomarkers.	50,000
Sònia Gatius Calderó i Xavier Matias-Guiu Guia	Instituto de Salud Carlos III (ISCIII)	Homologous recombination deficiency in high-grade endometrial cancers. Biomarkers and impact of intratumor heterogeneity.	115,000



1.6. Oncological pathology

PI	Funding agency	Project	Budget (€)
Xavier Matias-Guiu Guia	Agència Gestió Ajuts Universitat i Recerca (AGAUR)	Ajut per donar suport a les activitats dels grup de càncer ginecològic i afins (GinA)	40,000
Xavier Matias-Guiu Guia	Instituto de Salud Carlos III (ISCIII)	Incorporación de nuevas areas temáticas y nuevos grupos al consorcio CIBER	63,500
Xavier Matias-Guiu Guia	Instituto de Salud Carlos III (ISCIII)	Integrative genomic, digital imaging and clinical information towards Precision Oncology Optimization – INGENIO	88,870
Xavier Matias-Guiu Guia	Instituto de Salud Carlos III (ISCIII)	Plataformas Biomodelos y Biobancos	401,012



1.7. Research group of Cancer Biomarkers (GReBiC)

Our research group is translational, multidisciplinary and young. It is composed of medical doctors specialized in Medical Oncology, Internal Medicine, Radiotherapy Oncology and Clinical Analysis; and basic researchers trained in Biosciences (Biology, Biochemistry, Biomedicine and Biotechnology) with a high degree of cohesion. The work of our group focuses on three main lines of research related to cancer: i) Digestive tumors: colorectal cancer, gastric cancer and hepatocellular carcinoma; ii) Breast cancer and iii) Pleural effusion. All three lines address high-prevalence diseases in our society that are associated with a high mortality rate. We work with basic and translational research approaches to respond to the great challenges posed by these pathologies, which are: providing markers for diagnosis, stratifying the risk of recurrence or metastasis and predicting the good therapeutic response to different treatments. In addition, new highly innovative therapies based on gene editing are being developed in our group.

Publications

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1.7. Research group of Cancer Biomarkers (GReBiC)

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1.7. Research group of Cancer Biomarkers (GReBiC)

– Yang WP, Zhou Q, Porcel JM, Wang J, Wu CX, Zavialov AV. A rapid antigen test to detect adenosine deaminase 2 (ADA2) in biological fluids and its application in clinical diagnostics. *Front. Immunol.* 2025. 16. p. 1633219–1633219. IF:5,900. (D2)(Q1).

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Funded projects

PI	Funding agency	Project	Budget (€)
Noemi Tuset Der-Abraïn	Instituto de Salud Carlos III (ISCIII)	PRISMA-II: Estratificación del riesgo de cáncer de mama/ovario mediante incorporación del polygenic risk score. Validación en portadoras, cohorte prospectiva, y viabilidad de la secuenciación de genoma	14,500
Robert Montal Roura	Asociación Española Contra el Cáncer (AECC)	Neoadjuvant–adjuvant immunotherapy and cancer vaccines to improve survival in hepatocellular carcinoma (ASPIRE)	5,000

Active projects

PI	Funding agency	Project	Budget (€)
Anabel Sorolla Bardaji	INSTITUTO DE SALUD CARLOS III (ISCIII)	Development of precision therapies for triple negative breast cancers based on crispr/cas9 ribonucleoproteins.	117,370
Anabel Sorolla Bardaji	Instituto de Salud Carlos III (ISCIII)	Diseño y testaje de péptidos de interferencia para el tratamiento del cáncer de mama triple negativo	215,000
Anabel Sorolla Bardaji i Felipe Vilardell Villellas	Diputació de Lleida	Simultaneous targeting the partners in crime MYC and BRD4 in triple negative breast cancer	50,000
Antonia Salud Salvia i Eva Parisi Capdevila	Instituto de Salud Carlos III (ISCIII)	Decodificación de la metástasis del cáncer colorrectal desentrañando el señalamiento de PLA2G12A	134,621
Jose Manuel Porcel Pérez i David De Gonzalo Calvo	Diputació de Lleida	Construcción de un algoritmo diagnóstico y pronóstico del derrame pleural maligno secundario a cáncer de pulmón mediante firmas de RNA no codificante y Machine Learning	50,000
Jose Manuel Porcel Pérez i Maria Alba Sorolla Bardaji	Instituto de Salud Carlos III (ISCIII)	Exosomal short–chain non–coding RNA profiling of pleural fluid for the non–invasive diagnosis of squamous cell lung	107,500
Maria Alba Sorolla Bardaji	Agència Gestió Ajuts Universitat i Recerca (AGAUR)	Ajut per donar suport a les activitats del grup de recerca consolidat de Biomarcadors en Càncer (GREBIC)	40,000



1.7. Research group of Cancer Biomarkers (GReBiC)

PI	Funding agency	Project	Budget (€)
Marta Bonet Beltran	Bayer Hispania S.L.	MECAPER: Mejora de la Calidad de Vida en Pacientes con Cáncer de Próstata Hormonosensible Metastásico mediante Ejercicio de Fuerza y Resistencia Potenciado por una Solución Tecnológica Motivacional	15,000
Marta Bonet Beltran i Diego Arango Del Corro	Diputació de Lleida	Towards precision radiotherapy for rectal cancer patients Principal Investigator	50,000
Robert Montal Roura	Instituto de Salud Carlos III (ISCIII)	Biomarcadores de Respuesta a Inmunoterapia mediante la Inmunofenotipificación Exhaustiva del Adenocarcinoma Gástrico.	98,010
Robert Montal Roura	Instituto de Salud Carlos III (ISCIII)	Inteligencia Artificial basada en Patología y Transcriptómica Espacial para la identificación de la clase Inflamada del Adenocarcinoma Gástrico y la predicción de respuesta a Inmunoterapia.	113,750
Robert Montal Roura	Sociedad Española de Oncología Médica (SEOM)	Ayuda SEOM - Juan Rodés 2021	40,000
Robert Montal Roura	Sociedad Española de Oncología Médica (SEOM)	Biomarcadores en biopsia líquida de colangiocarcinoma avanzado para una inmuno-oncología de precisión	30,000
Robert Montal Roura i Anna Macià Armengol	Diputació de Lleida	Immunophenotyping of Cholangiocarcinoma using Liquid Biopsy	50,000
Serafin Morales Murillo	Adamed Laboratorios, S.L.U.	Selección de tratamiento con quimioterapia neoadyuvante en pacientes con cáncer de mama en estadio precoz y con receptores hormonales positivos mediante la determinación de la plataforma oncotipe, cf DNA en sangre periférica y cambios del marcador ki67 en tejido tumoral.	9,000
Serafin Morales Murillo	Pfizer S.L.U.	Development of Computer Application (Apps) for Information and Monitoring of Patients with Breast Cancer at the Hospital Arnau de Vilanova De Lleida	49,500
Silvia Bielsa Martin	Diputació de Lleida	Immunophenotyping of Cholangiocarcinoma using Liquid Biopsy	27,930



Area 2. Chronic diseases, surgery and health care

Area coordinator: Dr. José Manuel Valdivielso Revilla and Dr. Montserrat Gea Sanchez

The area contains 8 groups dedicated to investigating the pathophysiological mechanisms of vascular, renal, metabolic and pulmonary diseases. In addition, research is being conducted on new surgical methods and strategies to promote healthy aging.

Groups

2.1 Arnau Women Research Group

2.2 Cardiac Physiology and Pathology

2.3 Clinical & Experimental Surgery group (CESurG)

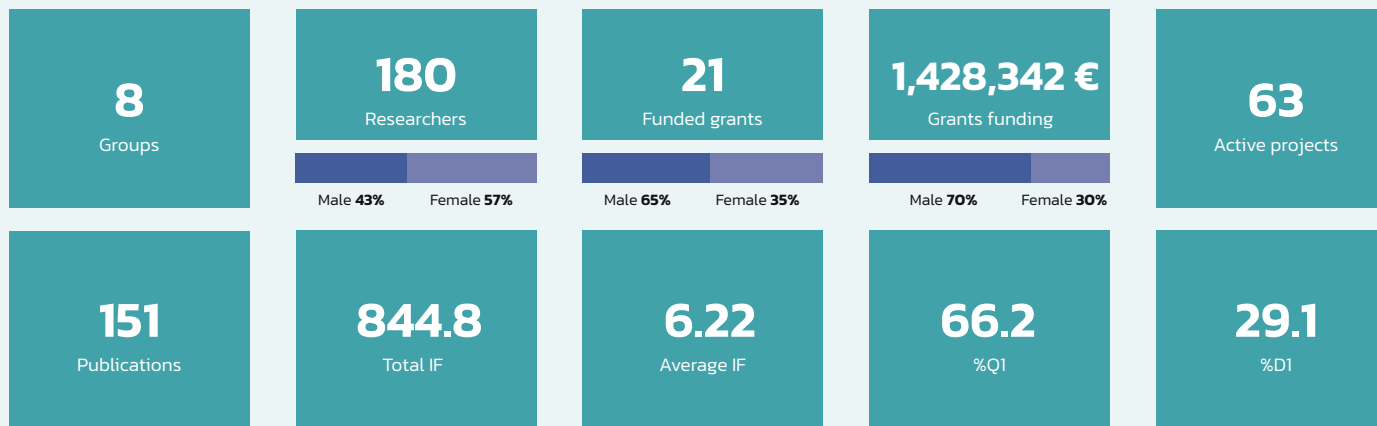
2.4 Digestive Diseases Research Group - DdRG

2.5 Research Group in Immunology and Metabolism (GRIM)

2.6 Research group of health care (GReCS)

2.7 Translational research in respiratory medicine group

2.8 Vascular and renal translational research group





2.1. Arnau Women Research Group

Arnau Women Research Group is a research group that focuses on studying women's health needs and challenges. We aim to address women's health issues in a comprehensive manner, considering the different factors that influence it and the various areas of interest in reproductive and gynaecological health, as well as women's general well-being throughout all stages of life. Our main lines of research are dedicated to the fields of minimally invasive endoscopic gynaecological surgery, reproductive medicine and endometriosis, gynaecological cancer, pregnancy and its associated maternal and foetal risks, childbirth care and maternity.

Funded projects

PI	Funding agency	Project	Budget (€)
Laura Melé Olivé i Marta Simó González	Hospital Universitari Arnau de Vilanova (HUAV)	Estudi sobre l'efectivitat de l'histero-embrioscòpia per al diagnòstic etiològic de l'avortament recurrent de primer trimestre i el seu impacte en el futur reproductiu de la dona	6,000

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Laura Melé Olivé

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2.1. Cardiac Physiology and Pathology

The Cardiac Physiology and Pathology group is formed by researchers with a strong clinical background. The group has participated in relevant clinical trials in cardiovascular disease and in multiple nationwide multi-center registries, which has allowed it to become part of a network of centers with interest in cardiovascular research. The objectives of the group in the coming years are, in addition to consolidating its clinical research base, the progressive development of translational projects that link clinical and basic research, as well as the development of animal models. Among our lines of development are, a) the study of coronary microvascular dysfunction in patients with angina, b) the search for strategies to reduce reperfusion injury and microvascular obstruction in patients with myocardial infarction, c) the analysis of advanced cardiac imaging parameters and biochemical markers involved in the evolution of atrial fibrillation, d) the study of entities related to myocardial infarction with no obstructive coronary arteries (MINOCA), such as myocarditis or spontaneous coronary artery dissection, and the study of cardiac involvement by COVID-19.

Publications

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Funded projects

PI	Funding agency	Project	Budget (€)
Carlos Tomás Querol	Fundació Privada Acadèmia de Ciències Mèdiques i de la Salut de Catalunya i de Balears Acadèmia	Premi a millor comunicació presentada al 37è Congrés de la Societat Catalana de Cardiologia	1,000



2.3. Clinical & Experimental Surgery group (CESurG)

The Clinical & Experimental Surgery group (CESurG) group is a multidisciplinary group made up of professionals from the fields of surgery, anaesthesia, veterinary medicine, technical research and management who work to develop research projects in surgical pathology, either by designing experimental models with large animals (pigs) to facilitate translational research, or by participating in multicentre clinical trials to innovate and improve clinical outcomes, and to maintain continuous training in diagnostic and surgical techniques for professionals in health and animal sciences, through hybrid simulation. The research of the Clinical & Experimental Surgery group (CESurG) is mainly carried out at the facilities of the CREBA Centre of the IRBLleida in Torrelameu, which has the necessary infrastructure to obtain experimental models in pigs, which allow, in the long run, to extrapolate the findings of the research lines to human clinical practice.

Publications

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Active projects

PI	Funding agency	Project	Budget (€)
Alfredo Escartin Arias i Marina Laplana Lafaja	Diputació de Lleida	MEjora del Diagnóstico en CÁncer de PÁNcreas (MEDI-CAPA)	50,000

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2.4. Digestive Diseases Research Group – DdRG

The Digestive Diseases Research Group gathers a combination of researchers around common objectives on the study of the epidemiology, prevention, diagnosis and treatment of digestive diseases. The research activities of our group are mainly clinical, original or collaborative, although we are eager to participate in fundamental basic research projects. Current lines of research focus on digestive endoscopy, inflammatory bowel disease, liver diseases, pancreatic diseases and gastrointestinal diseases and nutrition. Soon, we will also establish a research line in digestive motility and functional diseases.

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2.4. Digestive Diseases Research Group – DdRG

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2.4. Digestive Diseases Research Group – DdRG

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Funded projects

PI	Funding agency	Project	Budget (€)
Consuelo Ramírez Salazar	Fundación Española De Gastroenterología (FUNDEG)	Proyecto de Investigación Beca Fernández-Bañares	6,000

Active projects

PI	Funding agency	Project	Budget (€)
Francesc Xavier Molero Richard	Instituto de Salud Carlos III (ISCIII)	Contribution of dysfunctional CFTR in the development and aggressiveness of pancreatic cancer. Stimulation of pancreatic cancer growth and metastasis by CFTR down regulation in stellate cells.	141,775
Patricia Huelin Alvarez	Gilead Sciences S.L.	Estrategia de cribaje de hepatitis "D" en subpoblación inmigrante con elevada prevalencia de hepatitis "B" (provincia Lleida)	29,790



2.5. Research Group in Immunology and Metabolism (GRIM)

The Research Group in Immunology and Metabolism (GRIM) is subdivided into 2 nodes that represent the basic and clinical research of the group.

Basic node: Immunology and Immunopathology Group (GRIIP)

The GRIIP is the basic research node of the Research Group in Immunology and Metabolism (GRIM). The group of the University of Lleida (UdL) and the Institute of Biomedical Research of Lleida (IRBLleida) is currently constituted by two Principal Investigators, Joan Verdaguer and Concepció Mora, and their respective research units. Both investigators have a long history as leading researchers in R & D for more than a decade and a half in the field of immunology and autoimmunity. Both researchers are members of the same research group recognized by the Generalitat (SGR) of the UdL and IRBLleida since its inception.

The research objective of the group is the study of the mechanisms of loss of immunological tolerance in autoimmune endocrine diseases, and more specifically in Type 1 Diabetes (T1D), and in the study of tools for the diagnosis and treatment of these diseases. The group also aims to lay the foundations on a future immunotherapy of T1D and other endocrinopathies of autoimmune origin, through participation and collaboration with different research and care groups.

Clinical node: Obesity, Diabetes and Metabolism Research Group (ODIM)

The ODIM Research Group has worked in recent years on 2 main lines of research: (i) Being able to predict the response to bariatric surgery (BC), both in terms of weight and metabolic response, and (ii) The study of the mechanisms by which diabetes has a negative impact on lung function and breathing during sleep. Although both lines emerged independently, they have eventually synergised with each other. Our group's research is mainly clinical, although with a clear translational application, fostering collaboration with external groups complementary to our own.

Two of the members of the group are not principal investigators in publicly funded competitive projects. 80% have a PhD degree in health sciences or are currently working on their doctoral thesis.

Most of the team members are specialists in Endocrinology and Nutrition, but our group also includes nursing graduates and graduates in human nutrition and dietetics.

We combine funded research projects with the development of clinical trials promoted by both the researcher and the laboratory. In recent years we have become one of the most recruiting centres in our country in the studies in which we participate.

Publications

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2.5. Research Group in Immunology and Metabolism (GRIM)

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Funded projects

PI	Funding agency	Project	Budget (€)
Ferran Rius Riu I Blanca Salinas Roca	Instituto de Salud Carlos III (ISCIII)	PrOWomen: Salud circadiana durante el embarazo y el posparto: Nuevo modelo de toma de decisiones para prevenir la obesidad en mujeres	89,750
Marta Hernandez Garcia	Associació Catalana de Diabetis (ACD)	Caracterització de biomarcadors específics de les Cèl·lules Dendrítiques Tolerogèniques (tDC) obtingudes pel protocol DENDRI-THERAP com a dianes per a la immunoteràpia específica d'antigen a la diabetis tipus 1 (T1D). Acrònim: BioDendrit-Car	10,000



2.5. Research Group in Immunology and Metabolism (GRIM)

Active projects

PI	Funding agency	Project	Budget (€)
Albert Lecube Torelló	Instituto de Salud Carlos III (ISCIII)	¿Conocer la predisposición genética del paciente con obesidad ayuda a mejorar la eficacia de la cirugía bariátrica?	153,670
Albert Lecube Torelló	Instituto de Salud Carlos III (ISCIII)	¿Por qué soy un mal respondedor a la pérdida de peso? Buscando nuevos fenotipos clínicos en la obesidad.	208,750
Albert Lecube Torelló i Carolina López Cano	Instituto de Salud Carlos III (ISCIII)	Susceptibilidad genética para predecir la pérdida de peso tras la cirugía bariátrica	839,298
Albert Lecube Torelló i Francisco Purroy Garcia	Instituto de Salud Carlos III (ISCIII)	Plataforma de soporte para la Investigación Clínica	183,570
Albert Lecube Torelló i Marta Hernandez Garcia	Associació Catalana de Diabetis (ACD)	Impacto de los trastornos de la respiración nocturna en las características y evolución de la úlcera del pie diabético.	20,000
Albert Lecube Torelló i Marta Hernandez Garcia	Fundació Privada Acadèmia de Ciències Mèdiques i de la Salut de Catalunya i de Balears Acadèmia	La serine/threonine protein kinase PRK1 en l'adipòcit de pacients amb diabetes (Ajut per a la recerca de la Societat Catalana d'Endocrinologia i Nutrició)	9,000
Albert Lecube Torelló i Marta Hernandez Garcia	Fundación de la Sociedad Española de Endocrinología y Nutrición (FSEEN)	Impacto de la composición corporal en la prevalencia, gravedad, propagación y pérdida de inmunidad en la infección por COVID-19	5,000
Carolina Lopez Cano	Instituto de Salud Carlos III (ISCIII)	El efecto de la diabetes mellitus tipo 2 y la obesidad sobre la cronodisrupción. La hipoxia nocturna como nexa de unión.	62,920
Carolina Lopez Cano i Milica Bozic	Diputació de Lleida	Unraveling the role of piwi-interacting RNAs in the pathogenesis of obesity-induced kidney disease. Identification of potential biomarkers and therapeutic targets (RENOPIWI)	50,000
Juan Verdaguer Autonell	Diputació de Lleida	ANALYSIS OF A MICROBIOTHERAPY FOR TYPE 1 DIABETES TREATMENT- ajut ISP 2023	53,040
Juan Verdaguer Autonell	Instituto de Salud Carlos III (ISCIII)	OncoNeoVac, un nuevo enfoque inmunoterapéutico para el tratamiento del melanoma.	168,619
Juan Verdaguer Autonell	Ministerio de Ciencia e Innovación	Estudio del impacto generado por modificaciones en la microbiota intestinal sobre la actividad del sistema inmune en el modelo murino NOD de diabetes autoinmune.	275,000



2.6. Research group of health care (GReCS)

The group is mainly made up of nurses and physiotherapists from both clinical practice (Santa Maria University Hospital, Arnau de Vilanova University Hospital and Primary Care) and teaching (Faculty of Nursing and Physiotherapy of the University of Lleida). Her main areas of research are active and healthy ageing, Social Determinants of Health and Health Services. The GReCS group participates in several projects in Spain, Europe and worldwide. Thanks to its potential, GReCS has established a stable collaboration with the Nursing and Healthcare Research Unit (Investén-isciii), focused on Best Practice Prominent Organisations (BPSO), funded by the Ministry of Health and Long-Term Care of the Government of Ontario and the Instituto de Salud Carlos III, part of the Spanish Ministry of Economy and Finance. As part of the Spanish Collaborating Centre of the Joanna Briggs Institute, the group is involved in the implementation of Evidence-Based Nursing Practice in various clinical settings, through an agreement signed between the Instituto de Salud Carlos III (Unidad de Investigación en Enfermería y Asistencia Sanitaria: Investén-isciii) and the Spanish Regional Health Systems.

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2.6. Research group of health care (GReCS)

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2.6. Research group of health care (GReCS)

- van L, Williams S, de'Donato F, Briones E, Stratil J, Sroczynski G, Tonne C, De Sario M, Requena A. Occupational Heat Stress Among Migrant and Ethnic Minority Outdoor Workers: A Scoping Review. *Curr. Environ. Health Rep.* 2025. 12. (1):p. 16–16. IF:9,100. (D1)(Q1).
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Funded projects

PI	Funding agency	Project	Budget (€)
Cristina Bravo Navarro	Agència Gestió Ajuts Universitat i Recerca (AGAUR)	Art, consciència i salut mental: projecte Udol	20,000
Ester Garcia Martinez i Joaquim Sol Culleré	Diputació de Lleida	Deciphering the biological keys to Successful Ageing, from Electronic health records big data to Personalized Interventions (SAGE-PI)	50,000
Filip Bellon	EUROPEAN COMMISSION EU	GOLFTEGRATION: Improve the quality of life of people suffering from various diseases through the sport of golf and Pitch & Putt.	36,300
Helena Fernandez Lago	Instituto de Salud Carlos III (ISCIII)	GAMA-PARK.GAMificación Avanzada en la Rehabilitación de la Marcha en la Enfermedad de Parkinson. Ensayo Clínico Aleatorizado Multicéntrico y Estudio de la Actividad Cerebral Subyacente	65,000
Celmira Laza Vasquez	Fundació Institut Mar d'investigacions Mèdiques	Efectividad de la micropigmentación del complejo areola-pezones (cap) tras mastectomía evaluada mediante resultados relevantes para la paciente	25,400

Active projects

PI	Funding agency	Project	Budget (€)
Erica Tula Briones Vozmediano	Instituto de Salud Carlos III (ISCIII)	Trabajo Agrícola, Migración, Precariedad y Salud (Proyecto Agromisalud II)	83,750
Esther Rubinat Arnaldo	Consorci Sanitari de Terrassa (CST)	SOMCare: Integració de robots d'assistència domiciliària per millorar l'autonomia i la qualitat de vida de les persones.	22,000
Esther Rubinat Arnaldo	European Commission EU	DistriMuSe: DISTRIBUTED MULTI-SENSOR SYSTEMS FOR HUMAN SAFETY AND HEALTH	257,946
Francesc Valenzuela Pascual	Agència Gestió Ajuts Universitat i Recerca (AGAUR)	Projecte Uni-Emotican Avaluació de l'efecte d'un programa de benestar emocional mitjançant una intervenció assistida amb animals en estudiants universitaris: assaig clínic aleatoritzat.	19,999



2.6. Research group of health care (GReCS)

PI	Funding agency	Project	Budget (€)
Helena Fernandez Lago	Instituto de Salud Carlos III (ISCIII)	Efectos de la combinación del tapiz rodante en un entorno virtual gamificado con la estimulación cerebral no invasiva en la enfermedad de Parkinson: ensayo clínico aleatorizado.	62,920
Marta Trapero Bertran	Instituto de Salud Carlos III (ISCIII)	Immune4ALL Explorando la viabilidad de biomarcadores predictivos y farmacodinámicos de inmunoterapia en tumores sólidos.	38,000
Marta Trapero Bertran	Instituto de Salud Carlos III (ISCIII)	INGENIO: Integrative genomic, digital imaging and clinical information towards Precision Oncology Optimization	8,500
Marta Trapero Bertran	Ministerio de Ciencia e Innovación	Robotic-SNS: Desarrollo e Implementación de Rehabilitación Robótica Value-based en el Sistema Nacional de Salud (SNS)	102,473
Montserrat Gea Sanchez	Fundació La Marató de TV3	The effect of a workplace active pauses intervention on the reduction of cardiovascular risk factors in call center workers: a mixed methods study	193,161



2.7. Translational research in respiratory medicine group

The group consists of basic, clinical and epidemiological researchers, who work at the Lleida Biomedical Research Institute (IRBLleida), a collaborating center of the University of Lleida. The principal investigator is Ferran Barbé Illa.

Since 2008, the TRRM group has belonged to the Diseases Network Research Centre (CIBERes) platform, as Group 35. Group 35 is currently one of the leading exponents of the Spanish Sleep Network of the Spanish Pneumology and Thoracic Surgery Society (SEPAR). We work alongside researchers from many specialties in order to approach the study of the pathophysiology of obstructive sleep apnea syndrome (OSA) and its consequences. The research excellence of the TRRM group has been recognized internationally.

Publications

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2.7. Translational research in respiratory medicine group

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2.7. Translational research in respiratory medicine group

- Henríquez M, González J, Labarca G, Targa A. The Critical Role of Sleep in Enhancing Pulmonary Rehabilitation Outcomes. *Semin. Respir. Crit. Care Med.* 2025. 46. (2):p. 149-157. IF:2,700. (D5)(Q2).
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2.7. Translational research in respiratory medicine group

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Funded projects

PI	Funding agency	Project	Budget (€)
Adriano Targa Dias Santos	Fundació La Marató de TV3	RAPHAEL study:TheRapeutic StrAtegies for Obstructive Sleep Apnea in Older Adults with OverweigHt or Obesity: A RandomizEd Clinical Trial.	197,584



2.7. Translational research in respiratory medicine group

PI	Funding agency	Project	Budget (€)
Adriano Targa Dias Santos i Anna Carnes Vendrell	Diputació de Lleida	The impact of phase-locked acoustic stimulation on sleep structure, memory consolidation, and plasma p-tau217 in patients with mild cognitive impairment	50,000
Adriano Targa Dias Santos i Gerard Torres Cortada	Instituto de Salud Carlos III (ISCIII)	Estudio SAMUEL: Manejo de la Apnea ObStructiva del Sueño en Adultos Mayores con Sobrepeso U ObEsidad: Ensayo CLínico Aleatorizado	127,500
Blanca Salinas Roca i Ferran Rius Riu	Instituto de Salud Carlos III (ISCIII)	PrOWomen: Salud circadiana durante el embarazo y el posparto: Nuevo modelo de toma de decisiones para prevenir la obesidad en mujeres	89,750
David De Gonzalo Calvo	Astrazeneca Farmaceutica Spain	Caracterización multi-ómica de la respuesta del paciente pediátrico a la infección por metapneumovirus humano: identificación de biomarcadores diagnósticos y pronósticos en muestras no invasivas	46,000
David De Gonzalo Calvo	Diputació de Lleida	Noncoding RNA-based multiplex assay for early diagnosis of invasive pulmonary aspergillosis (ncRNA-IPA)	19,666
David De Gonzalo Calvo	Fundació La Marató de TV3	ASPIRA: Development of a Pathogen- and Host-Oriented Diagnostic Test for Early Detection of Invasive Pulmonary Aspergillosis	199,413
David De Gonzalo Calvo	Instituto de Salud Carlos III (ISCIII)	viRNAAlert: Método in vitro de nueva generación para detectar la reactivación viral basado en microARNs codificados por virus	155,955
Ferran Barbé Illa i Ivan Benitez Iglesias	Instituto de Salud Carlos III (ISCIII)	Impacto del manejo de los trastornos del sueño sobre el riesgo cardiovascular en sujetos hipertensos: Metasleep-2.	87,500
Jessica Gonzalez Gutierrez	Fundació La Marató de TV3	Cost-Effectiveness and Cost of Implementation of a Lung Cancer Screening Program	110,765

Active projects

PI	Funding agency	Project	Budget (€)
Adriano Targa Dias Santos	Instituto de Salud Carlos III (ISCIII)	Contrato Miguel Servet - Proyecto	40,000
Adriano Targa Dias Santos	Instituto de Salud Carlos III (ISCIII)	CRONOCRIT: Alteraciones en la salud del sueño y los ritmos circadianos tras una enfermedad crítica: del diagnóstico a la predicción	72,819
Blanca Salinas Roca	Univerditat de Lleida (UdL)	Monitorització de l'impacte en indicadors de salut i a nivell socioeconòmic de l'ús de Pasta Nutricional Enriquida en població maternoinfantil: Programa integrat en UnTeNu+23	10,543



2.7. Translational research in respiratory medicine group

PI	Funding agency	Project	Budget (€)
David De Gonzalo Calvo	Fundación Eugenio Rodríguez Pascual	Análisis de Endotipos Pulmonares en Pacientes Post-COVID: Un Estudio Integral	24,429
David De Gonzalo Calvo	Gilead Sciences S.L.	Deciphering the Pulmonary Sequelae in the POSTCOVID patient: Introducing the Endotype Concept.	49,375
David De Gonzalo Calvo	Instituto de Salud Carlos III (ISCIII)	Towards the Understanding and Diagnosis of the Persistent Pulmonary Sequelae in the Critically Ill Patient: Introducing the Endotype Concept (e-postcritical project)	215,000
David De Gonzalo Calvo i Jose Manuel Porcel Pérez	Diputació de Lleida	Construcción de un algoritmo diagnóstico y pronóstico del derrame pleural maligno secundario a cáncer de pulmón mediante firmas de RNA no codificante y Machine Learning	50,000
Ferran Barbé Illa	Agència Gestió Ajuts Universitat i Recerca (AGAUR)	Ajut per donar suport a les activitats dels grups de recerca consolidats Translational Research in Respiratory Medicine	60,000
Ferran Barbé Illa	Institut Català de Salut (ICS)	Premi a la trajectòria investigadora als hospitals de l'ICS 2022	5,000
Ferran Barbé Illa	Instituto de Salud Carlos III (ISCIII)	Impacto del Manejo de los Trastornos Respiratorios Durante el Sueño en el control de la hipertensión sistémica: Proyecto METASLEEP	2,344,100
Ferran Barbé Illa i Gerard Torres Cortada	Diputació de Lleida	Normotensive Patients with Sleep Apnea: Differential Impact of CPAP Treatment According to the Circadian Blood Pressure Pattern. A Randomized Controlled Trial. The MOISES study.	50,000
Ferran Barbé Illa i Gerard Torres Cortada	Instituto de Salud Carlos III (ISCIII)	Pacientes Normotensos con Apnea del Sueño: Impacto Diferencial del Tratamiento con CPAP según el Patrón Circadiano de Presión Arterial. Ensayo Clínico Aleatorizado. Estudio MOISÉS	147,015
Ivan Benitez Iglesias	Instituto de Salud Carlos III (ISCIII)	Caracterización de los mecanismos del daño vascular inducido por la apnea del sueño en la hipertensión nocturna y posibles dianas terapéuticas. Estudio HYPERSLEEP.	550,550
Jessica Gonzalez Gutierrez	Institut Català de Salut (ICS)	Premis de Recerca de l'ICS 2024 a la Trajectòria Investigadora	5,000
Jessica Gonzalez Gutierrez	Instituto de Salud Carlos III (ISCIII)	Longitudinal recovery trajectories after an acute respiratory distress syndrome, a new understanding. The TENACITY study.	183,750
Jordi De Batlle Garcia	Instituto de Salud Carlos III (ISCIII)	Big Data para la predicción del riesgo de complicaciones durante y después del ingreso en pacientes crónicos con monitorización intensiva en las primeras 24h de ingreso.	121,000



2.8. Vascular and renal translational research group

Vascular and Renal Translational Research (VRTR) Group from the IRBLleida is a multidisciplinary group with basic and clinical scientists working in an integrated environment. The main focus of our research group is the identification of factors involved in the progression of chronic kidney disease (CKD) and cardiovascular complications in CKD from the basic/translational and the clinical point of view. Through an array of diverse experimental approaches that include molecular biology, biochemistry, in vivo animal models of disease in rodents and swine, and state-of-the-art vascular imaging techniques, scientists of VRTR group join their efforts in solving challenging scientific problems. VRTR group has been successfully leading the NEFRONA and ILERVAS project, with main objective in investigating vascular disease and hidden kidney disease. VRTR group holds collaborations with various international research groups in the USA, Canada, Netherlands, Italy and France. Researchers from the VRTR group are actively involved in several national and international EU-funded consortia.

Publications

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- Díaz JM, Pérez A, Diego Domínguez Coral J, Manuel J. The multiple functions of insulin-like growth factor 1 in kidney disease. *Nefrología*. 2025. 45. (7)p. 501337–501337. IF:2,600. (D4)(Q2).
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2.8. Vascular and renal translational research group

- finition on the detection of atheromatosis in subjects with low-to-moderate cardiovascular risk. *Front Endocrinol (Lausanne)*. 2025. 16. p. 1689960-1689960. IF:4,600. (D3)(Q1).
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Funded projects

PI	Funding agency	Project	Budget (€)
Jose Manuel Valdivielso Revilla	Fundación SENEFFRO	Prevalencia y papel en la progresión de la enfermedad cardiovascular y renal del síndrome de hipofiltración glomerular selectiva en una muestra representativa de la población renal española. Análisis del estudio NEFRONA	24,000
Sara Bielsa Gracia I Serafin Cambray Carner	Instituto de Salud Carlos III (ISCIII)	Efectos causales de la hipertensión y la inflamación en el filtrado glomerular y en los eventos cardiovasculares en personas con enfermedad renal crónica. Un estudio de aleatorización mendeliana de dos poblaciones.	97,500

Active projects

PI	Funding agency	Project	Budget (€)
Jose Manuel Valdivielso Revilla	Agència Gestió Ajuts Universitat i Recerca (AGAUR)	Ajut per donar suport a les activitats dels grup de recerca consolidat de Translacional Vascular i Renal	0
Jose Manuel Valdivielso Revilla	European Commission EU	Calprotectin as a new companion biomarker and associated drug target for premature vascular aging in chronic kidney disease and type 2 diabetes	219,625



2.8. Vascular and renal translational research group

PI	Funding agency	Project	Budget (€)
Jose Manuel Valdivielso Revilla	Instituto de Salud Carlos III (ISCIII)	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	54,166
Jose Manuel Valdivielso Revilla	Instituto de Salud Carlos III (ISCIII)	Papel de PTEN en la reabsorción tubular renal de proteínas. Implicaciones en nefropatías proteinúricas	165,770
Jose Manuel Valdivielso Revilla	Instituto de Salud Carlos III (ISCIII)	RICORS2040-Renal	171,699
Jose Manuel Valdivielso Revilla	Instituto de Salud Carlos III (ISCIII)	SPAIN CKD CAUSE (SPACKDC)	312,400
Jose Manuel Valdivielso Revilla i Juan Miguel Díaz Tocados	European Renal Association ERA-EDTA	Crosstalk between vascular vitamin D signaling and bone homeostasis in CKD. Implications in mineral metabolism.	29,200
Jose Manuel Valdivielso Revilla i Maria Mercedes Ibarz Escuer	Diputació de Lleida	Influence of SARS-COV-2 infection in atherosclerosis development. "El BUS DE LA SALUT" study	50,000
Marcelino Bermudez Lopez	Instituto de Salud Carlos III (ISCIII)	ANGEL: A machine learning algorithm to predict atherosclerotic cardiovascular disease.	58,937
Marisa Martin Conde i Jose Manuel Valdivielso Revilla	Instituto de Salud Carlos III (ISCIII)	Papel de la señalización renal por IGF en los eventos tempranos de la enfermedad renal crónica	248,750
Milica Bozic	Instituto de Salud Carlos III (ISCIII)	Descifrando el papel de SNCA en la regulación de la autofagia y el daño renal: implicaciones mecanísticas, terapéuticas y pronósticas.	123,420
Milica Bozic	Instituto de Salud Carlos III (ISCIII)	miRNAs como Potentes Reguladores de la nefropatía asociada a Obesidad. Identificación de potenciales biomarcadores y Dianas Terapéuticas (MIR-PROTECT)	152,500
Milica Bozic i Carolina Lopez Cano	Diputació de Lleida	Unraveling the role of piwi-interacting RNAs in the pathogenesis of obesity-induced kidney disease. Identification of potential biomarkers and therapeutic targets (RENOPIWI)	50,000
Sara Bielsa Gracia i Serafin Cambray Carner	Instituto de Salud Carlos III (ISCIII)	WOMen Molecular Biology of ATtherosclerosis (WOMBAT)	63,750



Area 3. Epidemiology, infectious diseases and public health

Area coordinator: Dr. Oriol Yuguero Torres and Dr. Alba Belles Belles

In this area we aim to respond to epidemiological challenges through collaboration between clinical and basic researchers. We combine our research to see the impact on public health and the environment around us of all the pathologies we attend in our care centers.

Groups

3.1 Applied epidemiology

3.2 ERLab, research in emergency medicine

3.3 Health Education, Nursing, Sustainability and Innovation Research Group (GREISI)

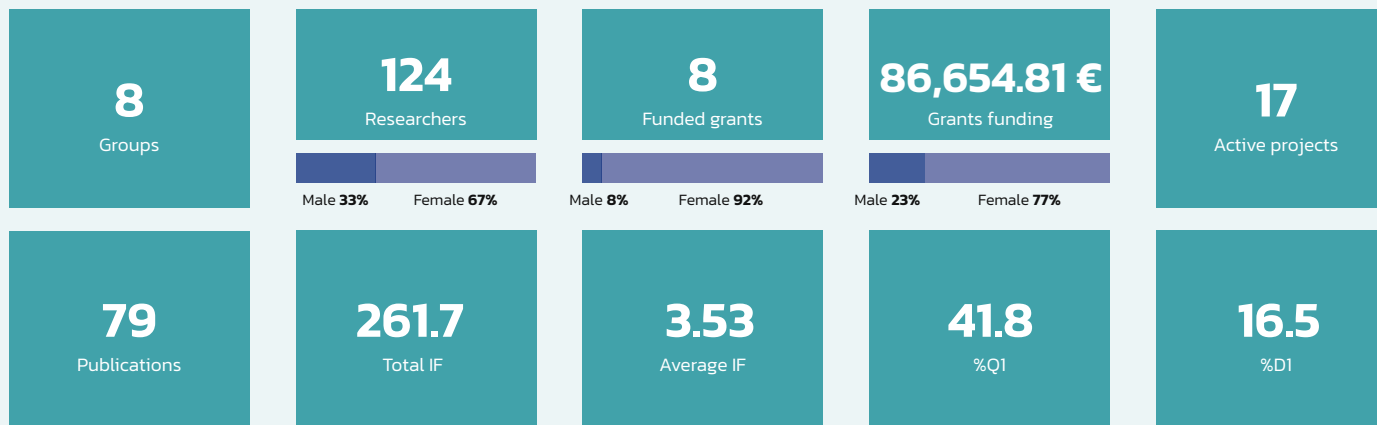
3.4 Indicators and specifications of the quality in the Clinical Laboratory

3.5 Intensive Medicine

3.6 Multidisciplinary Clinical Research Group on Musculoskeletal Pathology, Fragility and Pain Management

3.7 Pharmacology & Molecular Microbiology

3.8 Research in clinical microbiology and antibiotic resistance





3.1. Applied epidemiology

This is a multidisciplinary group set up by doctors specializing in Preventive Medicine and Public Health and specialists in Family and Community Medicine that research the applications of epidemiology in the study of epidemic outbreaks, the investigation of risk factors for transmissible diseases, the estimation of coverage of periodic preventive activities in primary health care and pharmacoepidemiology. The main lines of research are the investigation of epidemic outbreaks for Norovirus, factors for HIV infection in immigrants, risk factors for tuberculous infection in contacts with patients and vaccines and international travel.

Publications

- Artigues E, Tort G, Pollina M, Suquet YF, Pallés AA, Niubó OG, Ortega M, García E. Key factors in supporting adolescents to achieve high self-esteem and a positive body image: A qualitative community-based study. *Plos One*. 2025. 20. (2):e0318989. IF:2,600. (D4)(Q2).
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- Fuentes A, Montserrat J, Florensa D, Godoy S, Serrano J, Godoy P. The Diabetes–Pancreatic Cancer Risk Relationship over Time: A Systematic Review and Meta-Analysis. *Diabetol*. 2025. 6. (11):131.
- Godoy P, Pardos J, García M, Parrón I, Martínez I, Ferras J, Rius C, Godoy S, Toledo D, Sanz I, Follia N, Miret C, Alsedà M, Plans P, Carol M, Bes N, Sala MR, Caylà J, Muñoz C, Castilla J, Domínguez A, SARS . Mask wearing by COVID-19 index cases reduces SARS–CoV-2 transmission to household contacts. *Epidemiol. Infect*. 2025. 153. e125. IF:2,200. (D5)(Q2).
- Godoy P, Toledo D, Casas I, Colmenares K, Vilella A, Prat A, Mormeneo S, Bartolome R, Ibarz M, Domínguez A, Working GRP. Documented vaccination as proof of immunity compared to serology in medical students. *Hum. Vaccines Immunother*. 2025. 21. (1):p. 2556584–2556584. IF:3,500. (D4)(Q2).
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- Huguet A, Ahmed W, Artigues E, Sol J, Gomez X, Godoy P, Bravo MO. Mapping Vaccine Sentiment by Analyzing Spanish–Language Social Media Posts and Survey–Based Public Opinion: Dual Methods Study. *JMIR Infodemiology*. 2025. 5. e63223.
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- Montserrat J, Castilla PV, Zaldúa YC, Alòs F, Deniel J, Simonet P, Olivares P, Diaz JJ, Garcia SM, Fuentes A, Paredes E, Godoy P. Clinical Characteristics and Risk Factors for Severe Exacerbation in Never-Smokers with Chronic Obstructive Pulmonary Disease: A Retrospective Cohort Study. *Healthcare (Basel)*. 2025. 13. (18):2374. IF:2,700. (D3)(Q2).
- Murillo ER, Mora JRM, Bachiller MM, Santiago LG, Braqué NN, Bravo MO. Factors associated with low adherence to inhaled therapy in patients with chronic respiratory diseases: a cross-sectional study. *BMC Pulm. Med*. 2025. 25. (1):p. 94–94. IF:2,800. (D5)(Q2).
- Redondo JM, Comas C, Pons MC, Serrano CG, Salud JP, Closas MC, Bravo MO, Peruga JMP. Lung ultrasound is cost-effective for early diagnosis of COVID-19 pneumonia in primary care. *BMC Pulm. Med*. 2025. 25. (1):p. 300–300. IF:2,800. (D5)(Q2).
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Pere Godoy Garcia

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3.1. Applied epidemiology

Active projects

PI	Funding agency	Project	Budget (€)
Jesus Pujol Salud	Hospital Universitari Arnau de Vilanova de Lleida (HUAV)	Efecto de la cronosincronización en la evolución metabólica de la Diabetes Mellitus tipo 2	6,000
Marta Ortega Bravo i Mariona Jove Font	DIPUTACIÓ DE LLEIDA	Development of dynamic models for the personalized prevention and treatment of age-related diseases	50,000
Pere Godoy Garcia	Instituto de Salud Carlos III (ISCIII)	Factores asociados a la transmisión de SARS-CoV-2 en los convivientes de Cataluña y Navarra y efectividad de las vacunas y de las medidas no farmacológicas para reducir la transmisión.	76,230



3.2. ERLab, research in emergency medicine

ERLab is the only research group linked to emergency pathology research in Catalonia and the rest of the country. It is made up of healthcare professionals from Hospital Emergency Departments, Primary Care Emergency Departments and the out-of-hospital area. Ours is a group made up of professionals with a great dedication to care, which is why the COVID-19 pandemic has meant that our tasks have been greatly reorganised. Even so, we have been able to carry out research and publish the results of our work. And over the years of the group's trajectory, we have been awarded various competitive projects. We have always maintained a public health vocation, since Arnau de Vilanova is the only 2nd level hospital in our health region and territory. Our group has established working alliances with other research groups of the IRBLleida, as well as with the Department of Legal Medicine of the Faculty of Medicine of the University of Lleida or with the Chair of Social Innovation, also of the University of Lleida. With the Medical Emergency System, we work on joint projects in Catalonia. Faced with the challenge of the situation of emergency professionals, we also collaborate with the Galatea Foundation to find solutions to improve emotional well-being and carry out research projects in this field. We are currently carrying out two competitive projects and other small projects aimed at improving our care for the patients we attend throughout the emergency process.

Publications

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- Yuguero O, López I, Martínez M, Vena A, Bernal M, Purroy F. Development and internal validation of the goliat score to predict 48-hour complications after minor/moderate traumatic brain injury in the emergency department: a single-center cohort study. BMC Emerg. Med. 2025. 26. (1):33. IF:2,600. (D1)(Q1).
- Yuguero O, Ruiz P, Esquerda M, Terribas N, Aymerich M. Applying the principle of justice in digital health. npj Digit. Med. 2025. 8. (1):p. 467-467. IF:15,100. (D1)(Q1).

Active projects

PI	Funding agency	Project	Budget (€)
Oriol Yuguero Torres	Agència Gestió Ajuts Universitat i Recerca (AGAU)	Ajut per donar suport a les activitats dels grups de recerca consolidats en Urgències i Emergències.	0
Oriol Yuguero Torres	INSTITUT CATALÀ DE LA SALUT (ICS)	Premi investigador/a jove ICS 2021	5,000

RESEARCH TEAM

Group leader

Oriol Yuguero Torres

Researchers

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Carmel Vidal Sans

César Pardos Molina

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3.2. ERLab, research in emergency medicine

PI	Funding agency	Project	Budget (€)
Oriol Yuguero Torres i Aida Serra Maqueda	DIPUTACIÓ DE LLEIDA	Extracellular vesicles profiling for the discovery of specific biomarkers associated to the initiation and early development of atrial fibrillation	50,000



3.3. Health Education, Nursing, Sustainability and Innovation Research Group (GREISI)

The research group in Health Education, Nursing, Sustainability and Innovation (GREISI) develops its activity in these four areas with a common point, the generation of scientific evidence in the field of health sciences. Its members lead and participate in several competitive research projects, focused on improving the care and sustainability of the health of people in the different stages of life (childhood, adulthood and senescence) and in the different health care settings (primary care, hospital and socio-sanitary), as well as providing tools and scientific evidence to health science professionals and improving the training of students in this field through teaching innovation. As a result of this research, in the last five years more than 50 scientific articles, more than 10 books, book chapters and monographs, almost 40 divulgation articles and 100 participations in national and international congresses have been derived. They have developed stable lines of research, such as the one focused on dehydration in the elderly, and have addressed important challenges of society in recent years, such as COVID-19 or climate change, cooperating with research personnel from other disciplines and/or regional, national and international institutions.

Publications

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- Canet O, Naves SG, Roca J, Torné A, Torralbas J, Sanromà M. Bachelor Thesis in nursing: A qualitative study of the teaching-learning process from the experience of the students, academic tutors and nurses. *Nurse Educ. Today.* 2025. 147. p. 106567-106567. IF:4,200. (D1)(Q1).
- Carmona B, Diaz L, El Bachiri HA, Nieto N, Muriel G, Zarza L, Caro C, Monistrol O. Segregation and Recycling in the Operating Room. An Intervention to Accelerate the Decarbonisation Process in the Health Sector. *J. Clin. Nurs.* 2025. 34. (11):p. 4735-4746. IF:3,500. (D1)(Q1).
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- García J, Tort G, Torné A, Roca J, Esqué S, Sanromà M. Constructing Applied Knowledge in Nursing Students: A Learning Experience Centered on Evidence-Based Practice. *Nurs. Rep.* 2025. 15. (2):41.
- Godoy J, Illesca M, Barallat E, Botigué T. Nursing teachers' perceptions of the implementation of a competency-based educational model. *Enfermería Global.* 2025. 24. (3):p. 1-15.
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- Jimenez M, Gutierrez AD, Monistrol O, Marcet CM, Badia MP, Garrido I, Ruiz AC, Roda OP, Esquinas C, Puig GF. Immersive Virtual Reality eHealth Intervention to Reduce Anxiety and Depression in Pregnant Women: Randomized Controlled Trial. *JMIR Hum. Factors.* 2025. 12. e71708.
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- Roca J, Sanromà M, Cemeli T, Tort G, Santamaría AL, Espart A, Cantos C, Campoy C. Health Interventions for the Prevention of Dehydration in Agricultural Workers Exposed to Heat Stress: A Systematic Review. *Healthcare (Basel).* 2025. 13. (11):1232. IF:2,700. (D3)(Q2).
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- Tort G, Galbany P, Subías M, Monistrol O, Roy M, Romeu M. The Relationship Between Breast and Gynecological Cancers and a Diagnosis of Serious Mental Illness: A Scoping Review. *Nurs. Health Sci.* 2025. 27. (1):e70043. IF:1,600. (D5)(Q2).

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Faty Awa Seck Mboup



3.3. Health Education, Nursing, Sustainability and Innovation Research Group (GREISI)

Funded projects

PI	Funding agency	Project	Budget (€)
Alba Torné Ruiz	CÀTEDRA + COMMON UDL – AECC	Desenvolupament i validació d'una nova intervenció NIC	2,500
Anna Espart Herrero i Laia Selva Pareja	Universitat de Lleida (UdL)	DE-FERB: Revisió de la legislació i els protocols entorn dels disruptors endocrins i la salut reproductiva: una aproximació bioètica per a la promoció d'entorns saludables	1,250
Laia Selva Pareja	Universitat de Lleida (UdL)	CCADOG: Comparació de coneixements i actituds sobre la donació de gàmetes en estudiants de dret i infermeria: un enfocament bioètic per a la millora de la salut reproductiva.	625
Laia Selva Pareja i Laura Fornons Casol	UNIVERSITAT DE LLEIDA (UDL)	PASCARE: Validació d'un instrument per mesurar l'ús de pantalles en infants de 5-6 anys i anàlisi de necessitats educatives per a la implementació d'un programa d'educació per la salut.	1,200
Rosa Mar Alzuria Alós	Universitat de Lleida (UdL)	PARE – Fomentando el Vínculo Afectivo y el Cuidado en Futuros Padres	1,250
Laia Selva Pareja i Laura Fornons Casol	Universitat de Lleida UdL	PASCARE: Validació d'un instrument per mesurar l'ús de pantalles en infants de 5-6 anys i anàlisi de necessitats educatives per a la implementació d'un programa d'educació per la salut.	1,200 €

Active projects

PI	Funding agency	Project	Budget (€)
Eva Barallat Gimeno	Fundación Científica Asociación Española contra el Cáncer (AECC)	Comunicar es Humanizar: atención centrada en el paciente oncológico (+ComOn)	148,920
Laia Selva Pareja	Universitat de Lleida (UdL)	Perspectives i desafiaments dels professionals de salut: un estudi qualitatiu sobre la deshidratació en persones grans institucionalitzades	1,250
Laura Fornons Casol i Rosa Mar Alzuria Alós	Agència Gestió Ajuts Universitat i Recerca (AGAUR)	SAPIENS: Salut i Apoderament entre el Professorat Novell en Educació Superior: el difícil camí de la carrera acadèmica"	19,000
Teresa Botigué Satorra	Agència Gestió Ajuts Universitat i Recerca (AGAUR)	Abordatge interdisciplinari per mitigar la deshidratació produïda per les onades de calor en les persones vulnerables de les terres de Lleida: Projecte HIDROPONENT	225,990



3.3. Health Education, Nursing, Sustainability and Innovation Research Group (GREISI)

PI	Funding agency	Project	Budget (€)
Teresa Botigué Satorra	Agència Gestió Ajuts Universitat i Recerca (AGAUR)	Cuidar-se per poder cuidar: Intervenció multicèntrica pel benestar emocional dels estudiants del Grau en Infermeria a Catalunya (Programa Inspira)	20,000
Teresa Botigué Satorra	Instituto de Salud Carlos III (ISCIII)	Eficacia y eficiencia de GEL-AID, agua gelificada para la hidratación segura y eficaz de personas mayores institucionalizadas	42,250



3.4. Indicators and specifications of the quality in the Clinical Laboratory

Interdisciplinary group made up of specialist physicians belonging to the Clinical Laboratories of the Catalan Institute of Health (ICS) and Management of Health Services (GSS). The group's work is based on consensus and shared experience as guarantors of effectiveness and efficiency. The main objective is to establish quality indicators and specifications for the design and evaluation of strategies for continuous process improvement, in order to increase patient safety. In addition, the group actively collaborates with other clinical and basic research groups in which the laboratory plays a transversal role.

Publications

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- De Guire V, Galoro C, Ibarz M, Ivanov A, Lippi G, Zhou R, Sciacovelli L, Neogi SS, Shaw J, Shcolnik W, Smeets RL, Sumarac Z, Vermeersch P, Von A, Plebani M. Recommendations from the IFCC Working Group on Laboratory Errors and Patient Safety for the Global Adoption of an Essential Quality Indicators Panel in Laboratory Medicine. Clin. Chem. Lab. Med. 2025. IF:3,700. (D1)(Q1).
- Godoy P, Toledo D, Casas I, Colmenares K, Vilella A, Prat A, Mormeneo S, Bartolome R, Ibarz M, Dominguez A, Working GRP. Documented vaccination as proof of immunity compared to serology in medical students. Hum. Vaccines Immunother. 2025. 21. (1):p. 2556584–2556584. IF:3,500. (D4)(Q2).
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Active projects

PI	Funding agency	Project	Budget (€)
Maria Mercedes Ibarz Escuer i Jose Manuel Valdivielso Revilla	Diputació de Lleida	Influence of SARS-COV-2 infection in atherosclerosis development. "El BUS DE LA SALUT" study	50,000

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Maria Mercedes Ibarz Escuer

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3.5. Intensive Medicine

The group's research is focused on improving safety in relation to the follow-up of patients with nosocomial infection, pulmonary disorders and/or artificial nutrition, as well as monitoring the quality of life of post-ICU patients, the assessment of the severity of the patients' conditions and the construction of models to predict outcome.

Publications

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3.5. Intensive Medicine

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Funded Projects

PI	Funding agency	Project	Budget (€)
Jose Javier Trujillano Cabello i Ester Vilapriño Terre	Instituto de Salud Carlos III (ISCIII)	Predicción de la gravedad en pacientes con trauma crítico: un estudio prospectivo y desarrollo de herramientas de seguimiento clínico	40,000



3.6. Multidisciplinary Clinical Research Group on Musculoskeletal Pathology, Fragility and Pain Management

Our research group is clinical and multidisciplinary to promote patient-centered medicine encompassing diverse and complementary visions of musculoskeletal pathology.

It is composed of medical health personnel, nurses, and physiotherapists from different levels of care and two hospitals in the same territory but with differentiated patient and pathology profiles.

The doctors come from training in various specialties related to a greater or lesser extent with musculoskeletal pathology such as Orthopedic Surgery, Geriatrics, Physical Medicine and Rehabilitation or the Pain Clinic, forming 8 strongly interrelated subgroups:

- Spine
- Pain
- Rehabilitation
- Traumatology
- Prosthetics
- Upper limb
- Ortho-geriatrics and Fragility
- Neurosurgery

with many common projects and others more specific

The work of our group focuses on four main lines of research:

1. Aspects related to perioperative surgery in Orthopaedic Surgery and Traumatology.
2. Clinical measurement of treatment, surgical, semi-invasive and non-invasive results.
3. Evaluation of the repercussions of fragility, especially in the hospital setting in relation to hip fractures.
4. Risk assessment through big data analysis systems / Machine learning.

Publications

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3.6. Multidisciplinary Clinical Research Group on Musculoskeletal Pathology, Fragility and Pain Management

Active projects

PI	Funding agency	Project	Budget (€)
Jaume Peroy Garcia	Sociedad Española de Columna Vertebral (GEER)	Efectividad de la inyección de anestésicos locales en herida quirúrgica en contexto post operatorio inmediato. comparación entre la ropivacaina al 50% con suero fisiológico frente a la no administración	3,000
Jordi Colomina Morales	Hospital Universitari Arnau de Vilanova de Lleida (HUAV)	Estudi de l'impacte de la salut del son en procediments artroplàstics de genoll i maluc a Lleida	6,000



3.7. Pharmacology & Molecular Microbiology

We are a passionate group of researchers, both in the basic and clinical fields. Our main focus is understanding the molecular mechanisms behind important biological processes impacting human health and survival. These processes include autophagy, iron and sphingolipid metabolism, oxidative stress, and cell death. We study these processes in various model organisms, from yeast to humans, to gain a deeper understanding. Our ultimate goal is to apply this knowledge to improve patient outcomes through clinical research. In addition to our work on biological processes, we evaluate the effectiveness, safety, and efficiency of biomedical technology, particularly drugs, in preventing and treating diseases. We pay special attention to analyzing drug usage patterns to ensure they are implemented logically and appropriately. The group actively participates in national or international multicenter clinical trials to develop new medications in different areas of interest.

Publications

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3.7. Pharmacology & Molecular Microbiology

Funded projects

PI	Funding agency	Project	Budget (€)
Judit Ribas Fortuny	Institut de Recerca Biomèdica de Lleida (IRBLLeida)	Grups consolidats sense finançament competitiu 2025	19,829
M ^a Àngeles de la Torre Ruiz	Agència Gestió Ajuts Universitat i Recerca (AGAUR)	Iron-Enriched Postbiotic: Market Study & Pre-prototype Validation for Reducing Economic Loss in Pig Farming Due to Ferropenic Anemia	20,000

Active projects

PI	Funding agency	Project	Budget (€)
M ^a Àngeles de la Torre Ruiz	Universitat de Lleida (UdL)	YeastIDA – Pre-prototype validation of a new engineered yeast designed to orally ameliorate iron deficient anemia	20,000



3.8. Research in clinical microbiology and antibiotic resistance

Our group is made up of specialists in Clinical Microbiology and Clinical Analysis. The lines of research belong to different fields of Microbiology and include infectious diseases caused by bacteria, viruses, fungi and parasites. The work of our group focuses on two main lines of research:

- The study and characterisation of the different mechanisms of antibiotic resistance, the main virulence factors of pathogenic microorganisms isolated from clinical samples and the surveillance of the clones circulating in our environment.
- The study and active surveillance of respiratory viruses circulating in the community as well as the surveillance of other microorganisms causing emerging infectious diseases.

Publications

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3.8. Research in clinical microbiology and antibiotic resistance

Active projects

PI	Funding agency	Project	Budget (€)
Albert Bernet Sanchez	European Commission EU	RELECOV 2.0	14,083



Area 4. Neurosciences

Area coordinator: Dr. Ana Garcera Teruel and Dr. Gerard Piñol Ripoll

Neuroscience is a multidisciplinary area that studies the nervous system in terms of its structure, function, development and pathology. IRBLleida research groups investigate neurological and psychiatric diseases addressing molecular, cellular and clinical aspects.

Groups

4.1 +Pec Proteomics

4.2 Biological foundations of mental disorders

4.3 Clinical neurosciences

4.4 Cognition and Behavior Study Group

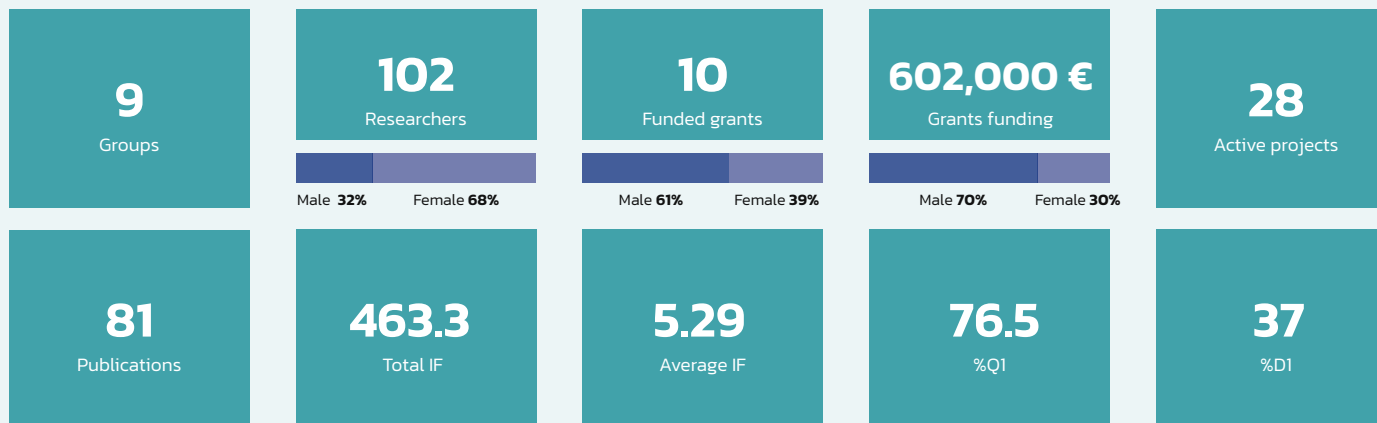
4.5 Evolutionary Developmental Neurobiology

4.6 Experimental Neuromuscular Pathology

4.7 Neurocognition, psychobiology of the personality and behavioral genetics

4.8 Neuroimmunology

4.9 Neuronal Signalling Unit





4.1. +Pec Proteomics

The objective of +PPRG is to employ state-of-the-art techniques in clinical proteomics, mass spectrometry, and systems biology to uncover pathological molecular mechanisms that contribute to the onset and progression of various major diseases. We use chromatography and mass spectrometry, supported by cutting-edge equipment, to analyze and characterize proteins and metabolites involved in pathological processes, enabling a deeper understanding of molecular alterations. The group places special emphasis on investigating the pathological molecular mechanisms involved in intercellular communication, as well as identifying biomarkers with clinical prognostic capabilities.

At +PPRG, we prioritize translational research by exploring the potential of extracellular vesicles as an intercellular communication system and as biomarkers for diagnosis, stratification, and clinical prognosis. Additionally, we investigate the use of nanoparticles and vesicles as biocompatible nanovectors for the delivery of bioactive compounds and drugs in advanced therapeutic applications in personalized medicine.

Publications

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Funded projects

PI	Funding agency	Project	Budget (€)
Aida Serra Maqueda	Institut de Recerca Biomèdica de Lleida (IRBLleida)	GLITTEN: Nanocarrier–Based Delivery of Validated Inhibitors for Diffuse Midline Glioma	20,000

Active projects

PI	Funding agency	Project	Budget (€)
Aida Serra Maqueda i Oriol Yuguero Torres	Diputació de Lleida	Extracellular vesicles profiling for the discovery of specific biomarkers associated to the initiation and early development of atrial fibrillation	50,000

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4.1. +Pec Proteomics

PI	Funding agency	Project	Budget (€)
Xavier Gallart Palau	Instituto de Salud Carlos III (ISCIII)	Marcadores de pronóstico y estratificación en vesículas extracelulares cerebrales circulantes en plasma para identificar alteraciones incipientes de la unidad neurovascular en el Alzheimer.	93,170
Xavier Gallart Palau	Instituto de Salud Carlos III (ISCIII)	Nano-Glio-Blast: mejora de diana cerebral de agentes terapéuticos para el glioblastoma mediante el uso de la plataforma tecnológica patentada BP-EVs	114,400
Xavier Gallart Palau i Aida Serra Maqueda i Maria Mur Lain	Unión Europea "Financiado por la Union Europea - NEXTGENERATION EU"	Validación de las BP-EVs como una nueva generación de nanovectores para la liberación focalizada de fármacos en el sistema nervioso central	0
Xavier Gallart Palau i Iolanda Batalla Llordes	Diputació de Lleida	Extracellular vesicles from industrial by-products: next generation nanocarriers in biomedicine	50,000



4.2. Biological foundations of mental disorders

The Group is made up mainly of members of the Psychiatry Service of the Santa Maria University Hospital in Lleida and biomedical research is organized by sub-teams that have in common the study of the biological bases of various mental disorders, mainly bipolar disorder, psychotic disorder, personality disorder as well as the study of suicidal behavior.

Publications

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Perona S, Yorca A, de la Foz V, Ayesa R. Validation and normative data for the BAC app in Spanish-speaking individuals with psychosis and healthy controls. *Eur. Psychiatry*. 2025. 68. (1):e112. IF:6,700. (D1)(Q1).

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Funded projects

PI	Funding agency	Project	Budget (€)
Maria Mur Lain	Institut de Recerca Biomèdica de Lleida (IRBLLeida)	Biomarcadores de envejecimiento acelerado y perfil inflamatorio en trastorno bipolar tipo I: estudio longitudinal retrospectivo y transversal	20,000

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4.2. Biological foundations of mental disorders

Active projects

PI	Funding agency	Project	Budget (€)
Gemma Vall Boada	Fundació La Marató de TV3	Assaig clínic de fase III, aleatoritzat, controlat amb comparador actiu, per estudiar l'eficàcia i la seguretat del programa de REMediació Cognitiva Integral (INCREM) en pacients amb Depressió.	62,187
Iolanda Batalla Llordes i Xavier Gallart Palau	Diputació de Lleida	Extracellular vesicles from industrial by-products: next generation nanocarriers in biomedicine	50,000
Maria Irigoyen Otiñano	Diputació de Lleida	Factores predictores de la letalidad en los intentos de suicidio	17,670
Maria Mur Lain	Fundació La Marató de TV3	Disentangling clinical, neurobiological, and genetic correlates of first-episode mania in Bipolar. The NOTION Project	55,607
Maria Mur Lain i Aida Serra Maqueda i Xavier Gallart Palau	Unión Europea "Financiado por la Union Europea – NEXTGENERATION EU"	Validación de las BP-EVs como una nueva generación de nanovectores para la liberación focalizada de fármacos en el sistema nervioso central	0



4.3. Clinical Neurosciences

The Clinical Neurosciences Group was created with the aim of bringing together all the neurological research carried out in the Lleida hospital environment in 2008. It is led and coordinated by Dr. Francesc Purroy. Currently, it is a translational research group formed by different professional profiles (neurologists, radiologists, psychologists, nurses, vascular surgeons, psychologists, clinical biochemists, biologists, and biotechnologists). The group aims to improve the diagnosis, prognosis and treatment of patients who have suffered a stroke through the identification of biomarkers (neuroimaging, biological) and the understanding of the molecular mechanisms involved in strokes. Currently, it is developing a clinical trial of remote ischemic tolerance in patients with ictus code criteria (study REMOTECAT- trialsgov NCT03375762). It is part of the RICORS-ICTUS Network.

Publications

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4.3. Clinical Neurosciences

- Minor Stroke A Systematic Review and Meta-Analysis. *JAMA-J. Am. Med. Assoc.* 2025. 333. (17).p. 1508-1519. IF:55,000. (D1)(Q1).
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4.3. Clinical Neurosciences

Funded projects

PI	Funding agency	Project	Budget (€)
Francisco Purroy Garcia i Manuel Portero Otin	Diputació de Lleida	Spanish Minor Stroke Perfusion Initiative: SMS-P Initiative	50,000

Active projects

PI	Funding agency	Project	Budget (€)
Francisco Purroy Garcia	Agència Gestió Ajuts Universitat i Recerca (AGAUR)	Ajut per donar suport a les activitats dels grup de recerca consolidat de Neurociències Clíniques	40,000
Francisco Purroy Garcia	Instituto de Salud Carlos III (ISCIII)	Estudio multicéntrico de la aplicación del postcondicionamiento isquémico remoto en pacientes con ictus isquémico POST REMOTE	246,250
Francisco Purroy Garcia	Instituto de Salud Carlos III (ISCIII)	PREdict: Pediatric stroke Rare Disorders: Integrative Diagnosis and Treatment using Multi-Omics and Deep Learning	211,057
Francisco Purroy Garcia	Instituto de Salud Carlos III (ISCIII)	RICORS-ICTUS	281,054
Francisco Purroy Garcia i Albert Lecube Torelló	Instituto de Salud Carlos III (ISCIII)	Plataforma de soporte para la Investigación Clínica	183,570
Francisco Purroy Garcia i Glòria Arqué Fusté	Instituto de Salud Carlos III (ISCIII)	Determinación del tiempo de inicio del ictus isquémico y el tejido recuperable mediante la firma ómica: OMIC IS BRAIN	185,130



4.4. Cognition and Behavior Study Group

The Cognition and Behaviour Study Group is a consolidated research group recognised by the Generalitat de Catalunya. It is made up of clinical and basic translational research staff from different specialities (neurology, neuropsychology, biomedical sciences, etc.) led and coordinated by Dr. Gerard Piñol-Ripoll. The group has national and international competitive funding and currently is participating in several clinical trials of anti-Alzheimer's drugs. It is part of several national and international consortia on neurodegenerative diseases.

Publications

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4.4. Cognition and Behavior Study Group

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4.4. Cognition and Behavior Study Group

Funded projects

PI	Funding agency	Project	Budget (€)
Anna Carnes Vendrell i Adriano Targa Dias Santos	Diputació de Lleida	The impact of phase-locked acoustic stimulation on sleep structure, memory consolidation, and plasma p-tau217 in patients with mild cognitive impairment	50,000
Farida Dakterzada Sedaghat i Gerard Piñol Ripoll	Instituto de Salud Carlos III (ISCIII)	El impacto de la estimulación acústica sincronizada en fase en la estructura del sueño, consolidación de la memoria y los niveles plasmáticos de p-tau217 en pacientes con deterioro cognitivo leve	150,000
Gerard Piñol Ripoll	Instituto de Salud Carlos III (ISCIII)	PMP-DEGESCO: Validación de una herramienta de medicina de precisión basada en evaluación cognitiva online, estratificación del riesgo genético y biomarcadores sanguíneos para la identificación de la Enfermedad de Alzheimer preclínica (Proyecto SCAP-AD)	22,000
Pol Andrés Benito	Fundación Francisco Luzón	Deciphering Early Cell-Intrinsic and Extrinsic Targetable Alterations Across the ALS-FTD spectrum (MAPin-out ALS-FTD)	160,000

Active projects

PI	Funding agency	Project	Budget (€)
Gerard Piñol Ripoll	Agència Gestió Ajuts Universitat i Recerca (AGAUR)	Ajut per donar suport a les activitats dels grup de recerca consolidat d'Estudi de la Cognició i la Conducta	0
Gerard Piñol Ripoll	Instituto de Salud Carlos III (ISCIII)	Importancia del sueño y los ritmos circadianos en la biología y evolución clínica de los sujetos en el continuum de la Enfermedad de Alzheimer.	32,670
Gerard Piñol Ripoll i Reinald Pamplona Gras	Diputació de Lleida	Insight into the role of lipids in frontotemporal dementia: uncovering pathophysiological alterations and biomarker	95,000 €
discovery opportunities.	50,000	Importancia del sueño y los ritmos circadianos en la biología y evolución clínica de los sujetos en el continuum de la Enfermedad de Alzheimer.	32,670 €
Pol Andrés Benito	Instituto de Salud Carlos III (ISCIII)	Caracterización de las vías moleculares subyacentes en el espectro patológico ELA-DFT en base al fenotipo clínico: estudio de la capacidad de siembra y progresión de tdp-43 (MOLESTDP-43)	165,000
Pol Andrés Benito	Instituto de Salud Carlos III (ISCIII)	SEED-ALS: Synergizing Efforts to Develop and Accelerate Breakthroughs in ALS Research	143,184



4.5. Evolutionary Developmental Neurobiology

The group's research focuses on the study of the amygdala, a very complex brain structure involved in the control of emotions, social behavior and cognition, which is altered in all psychiatric disorders. Currently it is not possible to explain the different outcomes of distinct mental conditions, posing a real challenge on their treatment. To solve this problem, the group is trying to decipher the amygdala at molecular, cellular and circuit levels using an evolutionary development biology approach. Previous research of the group has shown that the high complexity of the amygdala can be largely explained by the different embryonic origin of its neurons, which conditions their adult phenotype. With this vision in mind, the group is currently developing research to study the transcriptome and the connections of amygdalar neurons with different embryonic origin. Comparison of the results with public databases of genes involved in distinct mental disorders will help to understand the relation between different susceptibility genes to specific amygdalar neurons and networks regulating emotion and social behavior. This will be the first step to design more accurate therapeutic targets for distinct mental disorders and will open the venue for precision medicine in Psychiatry.

Publications

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- Freixes J, Abdel F, Nebbia R, Medina L, Desfilis E. Postnatal plasticity in the olfactory system of the juvenile swine brain. *Brain Struct. Funct.* 2025. 230. (8):p. 152–152. IF:2,900. (D1)(Q1).
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Active projects

PI	Funding agency	Project	Budget (€)
Ester Desfilis Barcelo i Loreta Medina Hernandez	Ministerio de Ciencia e Innovación	Neuronas glutamatérgicas y circuitos asociados a trastornos del espectro autista	162,500

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4.6. Experimental Neuromuscular Pathology

The group studies the cellular and molecular basis of neuromuscular disorders, particularly motor neuron diseases such as amyotrophic lateral sclerosis (ALS) and spinal muscular atrophy (SMA). For which we use in vitro and in vivo models, mainly chicken embryo and transgenic mice. Several lines of work are currently underway to examine the role of excitotoxicity, autoimmunity and neuroinflammation in the pathogenesis of ALS and SMA, and to identify new cellular and molecular targets for future therapies. Another important aspect of our research is the analysis of plastic changes at central and peripheral synapses in the context of normal development, aging and diseases affecting motor neurons.

Active projects

PI	Funding agency	Project	Budget (€)
Jordi Calderó Pardo	Ministerio de Ciencia e Innovación	Mecanismos subyacentes a la patología del circuito motor y la miopatía primaria en atrofia muscular espinal: identificación de dianas para terapias combinadas con nusinersen	226,200

Publications

- Barés G, Beà A, Sancho A, Valero JG, Aluja D, Inserte J, García S, Miró E, Borràs S, Hernández S, Martínez A, Olsen J, Tebar F, Cañas X, Comella JX, Pérez P, Ruiz M, Giralte A, Llovera M, Sanchis D. Mammalian TatD DNase domain containing 1 (TATDN1) is a proteostasis-responsive gene with roles in ventricular structure and neuromuscular function. *FEBS J.* 2025. 292. (19):p. 5105–5129. IF:4,200. (D4)(Q2).
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4.7. Neurocognition, psychobiology of the personality and behavioral genetics

The researchers converge in the interest in the search for the biological bases of personality and their disorders. Based on biological-factorial personality research models, the relationship between personality with the endocrine system (gonadal hormones), central nervous system (neurotransmitters and genetic polymorphisms) and neurophysiology (electrophysiology) is investigated. The current research focuses on impulsive-uninhibited personality relationships and emotions with neural monoamphatic neurotransmission (norepinephrine, dopamine, serotonin and MAO), both at a biochemical level (neurotransmitters and metabolites) and at the level of molecular genetics. The biological bases of personality are also investigated through the search of techniques of computerized electrophysiology and functional infrared spectroscopy (fNIR) applied to the study of emotions, cognitive functions and the frontal lobe (Laboratory of Human Behaviour).

Publications

- Balada F, Aymami N, García O, García LF, Aluja A. Prefrontal Oxygenation in a Subjective Decision on a Situational Danger Assessment Task: Personality Traits and Decision-Making Styles Involvement. *Behav. Sci.* 2025. 15. (5):647. IF:2,500. (D3)(Q2).
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- Le Y, Aluja A, Atitsogbe KA, Courtois R, Dahourou D, Forget K, Hansenne M, Kavitha D, Kounou KB, Lapalme M, Oltmanns JR, Rossier J, Tipandjan A, Widiger TA, Rolland JP. Cross-Cultural Validity of the Five-Factor Personality Inventory for <i>ICD-11</i> Across Nine Countries and Validation of a French Translation. *Personal. Disord.* 2025. 16. (5):p. 476-490. IF:4,200. (D2)(Q1).

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4.8. Neuroimmunology

The Neuroimmunology group is a translational group made up of clinical and basic researchers and researchers collaborating with other centres that complement our experience in neuroimmunology.

The objectives of our research team are:

- To uncover knowledge of the still unknown etiopathogenic mechanisms of multiple sclerosis.
- To identify biomarkers of clinical progression and/or treatment response that support physicians in tailoring treatments, with the ultimate goal of improving patients' quality of life.

The investigation into these clinical evolution markers has led us to delve more specifically into oxidative stress, cholesterol esters, and nutrition. Concerning treatment response markers, we are studying changes in dendritic cells of our patients after disease-modifying treatments.

- The principal investigator is Dr. Luis Brieva Ruiz, head of the neurology section of the Arnau de Vilanova University Hospital of Lleida (HUAV) and pioneer in research into multiple sclerosis (MS) and in creating a reference unit in the care of patients with MS in the province of Lleida since 2000. In this unit, the patient has been treated in a comprehensive manner, receiving clinical, pharmacological, cognitive, emotional and rehabilitative care from the moment of diagnosis.
- The current professionals who belong to this unit and who make up the Neuroimmunology group in addition to Dr. Brieva are: Dr. Cristina González, Doctor in Neurology at HUAV, Dr. Agustín Sancho, Neurologist at HUAV, Dr. Laura Quibus, Neurologist at HUAV, Silvia Peralta, nurse at the HUAV Day Hospital, Anna Gil, Neuropsychologist and coordinator of the clinical and basic research of the group and the collaborating researchers Dr. Pascual Torres, expert in Biomedicine and laboratory techniques, Dr. Hugo Gonzalo, PhD in metabolic physiopathology and scientific advisor, and Dr. Jose Vicente Hervás, neurologist at the Hospital Broggi de Sant Joan Despí.

Publications

- Brieva L, Calles C, Landete L, Oreja C. Current challenges in secondary progressive multiple sclerosis: diagnosis, activity detection and treatment. *Front Immunol.* 2025. 16. p. 1543649–1543649. IF:5,900. (D2)(Q1).
- Gómez R, de la Maza SS, Borges M, Martín J, Sotoca J, Alonso A, Caminero AB, Borrega L, Sánchez JL, Barrero FJ, Calles C, Brieva L, Blasco MR, García

- JD, Rodríguez A, Navarro L, Agüera E, Garcés M, Carmona O, Gabaldón L, Forero L, Hervás M, Castillo T, Maurino J. Threatening illness perception and associated factors in early-stage relapsing–remitting multiple sclerosis. *Front Psychiatry.* 2025. 16. p. 1565150–1565150. IF:3,200. (D4)(Q2).
- Leavitt V, Mostert J, Comtois J, Moral E, Brieva L, Repovic P, Bowen JD, Uitdehaag B, Strijbis E, Cutter G, Koch MW. Measuring cognitive change in secondary progressive MS: an analysis of the ASCEND cognition substudy. *J. Neurol.* 2025. 272. (5):p. 338–338. IF:4,600. (D2)(Q1).
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- Mostert J, Strijbis EM, D'Haeseleer M, Moral E, Brieva L, Comtois J, Repovic P, Bowen JD, Cutter G, Koch M. Extended window of relapse recovery in RRMS: an analysis of the DECIDE dataset. *J. Neurol. Neurosurg. Psychiatry.* 2025. 97. (3):p. 229–238. IF:7,500. (D1)(Q1).
- Robles MA, Amil P, Bosch C, Coll C, Arévalo MJ, Anglada E, Menéndez R, Aroca M, Merchan M, Pérez S, Arévalo AG, Montalban X, Hernando A, Llufríu S, Peralta S, Brieva L, Ramo C, Carabi M, Solà N, Zabay MC, Mañé MA, Sastre J, Ramió L, Bertran C. An expert patient program for people living with multiple sclerosis improves knowledge and empowerment: a pre-test, post-test multicenter implementation study. *Front Neurol.* 2025. 16. p. 1581038–1581038. IF:2,800. (D5)(Q2).
- Saldaña I, Tejada H, Domínguez B, Barrera MR, Sancho A, Serrano M, Marta J. Endovascular treatment of vertebrobasilar ischaemic stroke in Aragon: Clinical and radiological characteristics, management times, and prognosis at 3 months. *Neurologia.* 2025. 40. (3):p. 239–248. IF:2,900. (D4)(Q2).
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4.8. Neuroimmunology

Funded projects

PI	Funding agency	Project	Budget (€)
Cristina Gonzalez Mingot i Pascual Torres Cabestany	Asociación Esclerosis Múltiple España (EME)	PROLILEM: DesEMmascarando la Esclerosis Múltiple con biomarcadores pronósticos lípidicos	30,000
Cristina Gonzalez Mingot i Pascual Torres Cabestany	Diputació de Lleida	Novel peripheral biomarkers for early diagnosis and prognosis of Amyotrophic Lateral Sclerosis (peripherALS)	50,000
Luis Brieva Ruiz i Jose Serrano Casasola	DIPUTACIÓ DE LLEIDA	Contribución de los productos finales de la glicación avanzada (AGEs) a la fisiopatología neurocognitiva de la esclerosis múltiple: Desvelando el daño silencioso. CAGEP-EM	50,000

Active projects

PI	Funding agency	Project	Budget (€)
Cristina Gonzalez Mingot	Asociación Esclerosis Múltiple España (EME)	The Prognostic Value of Cholesterol Esters in the Progression of Multiple Sclerosis* (PROCOLEM)	250,000
Cristina Gonzalez Mingot	Fundación Francisco Luzón	Developing a Comprehensive Biomarker Panel for Monitoring Progression and Early Detection in ALS Patients	29,000



4.9. Neuronal Signalling Unit

The Neuronal Signalling Unit is a research group specialised in the study of the survival of motor neurons and the pathologies associated with the degeneration of these cells. The main focus of study is the molecular mechanisms involved in the loss of motor neuron function and the identification of new therapeutic targets in the context of Spinal Muscular Atrophy (SMA). SMA is a childhood neuromuscular disease of genetic origin characterised by the loss of motor neurons in the spinal cord due to mutation of the SMN1 (Survival Motor Neuron) gene. The SMN1 gene encodes a protein called SMN, the reduction of which causes muscle weakness, atrophy and paralysis through partially identified intracellular alterations. Recently developed therapies aim to increase SMN protein levels in cells. However, there is a percentage of patients who do not respond to such treatment. For this reason, a deeper understanding of the molecular mechanisms that take place during the development and evolution of the disease will allow the identification of new therapies that, together with the existing ones, will broaden the treatment opportunities for SMA patients.

Active projects

PI	Funding agency	Project	Budget (€)
Ana Garcera Teruel i Rosa Maria Soler Tatche	Ministerio de Ciencia e Innovación	Identificación de nuevas dianas para el desarrollo de terapias combinadas en la Atrofia Muscular Espinal	206,250
Rosa Maria Soler Tatche	Institut de Recerca Biomèdica de Lleida (IRBLleida)	Grups consolidats sense finançament competitiu 2024 - Unitat de Senyalització Neuronal	12,041

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Area 5. Nutrition, Metabolism and Cellular Stress

Area coordinator: Dr. Joaquim Ros Salvador and Dr. Ester Vilapriño Terre

We study the ageing process, myocardial differentiation, neurodegenerative diseases and cell signalling in relation to oxidative stress in various cellular, animal and human models, using experimental and theoretical methods.

Groups

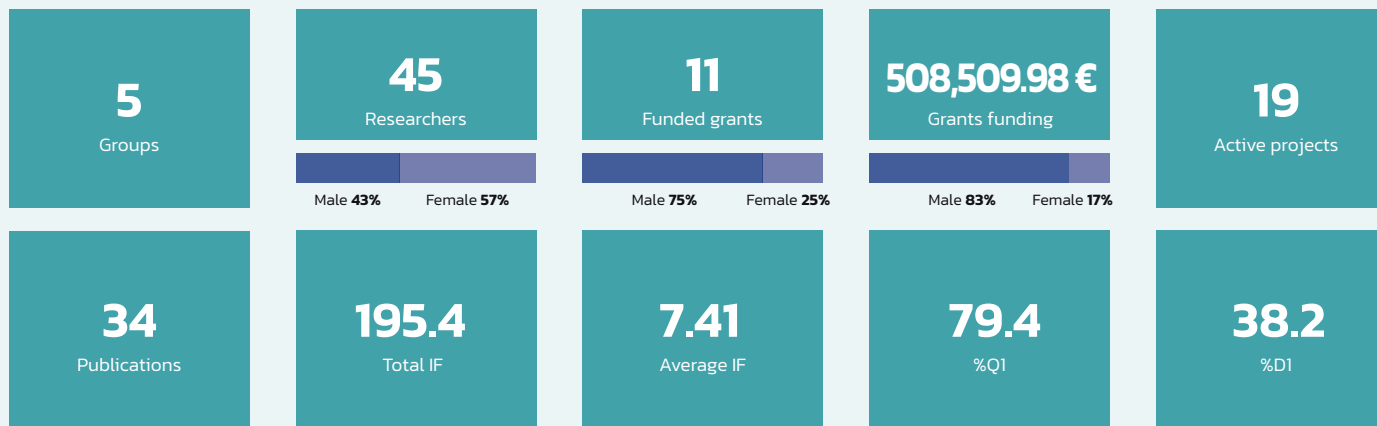
5.1 Biochemistry of Oxidative Stress

5.2 Cell signalling and apoptosis group

5.3 Metabolic physiopathology

5.4 Nutrition, Metabolism and Microbiota in patients with heart failure (NUTRIMMIC)

5.5 Systems biology and statistical methods for biomedical research





5.1. Biochemistry of Oxidative Stress

The Biochemistry of Oxidative Stress group analyzes the alteration of mitochondrial functions in Friedreich Ataxia (FA), a rare, cardio-neurodegenerative disease caused by deficient levels of frataxin, a mitochondrial protein. This deficit is due to mutations (mostly GAA triplet insertions) in the FXN gene. The most important features are, among others, ataxia, dysarthria and cardiac hypertrophy; some patients also develop diabetes.

To study this pathology, the group uses primary cultures of neurons –obtained from the dorsal root ganglion and cerebellum– as well as cardiomyocytes, which are the tissues most affected in this disease; fibroblasts cell lines derived from patients are also used to validate results obtained in primary cultures. We also use a mouse model (FXN^{151F}), with a point mutation that involves a 95% reduction in normal frataxin levels and that recapitulates functional alterations very close to those observed in FA patients.

At the molecular level, we have observed alterations in the mitochondrial proteome and transcriptome. Mitochondrial iron dyshomeostasis increases oxidative stress, alters the redox state of proteins and lipids, and drives ferroptosis. Alteration of calcium homeostasis and levels of mitochondrial calcium transporters and mitochondrial pore opening are also consequences of frataxin depletion. Moreover, the function of complexes I and II of the

electron transport chain is decreased, impairing the rate of respiration and ATP synthesis. Based on the results obtained, we have analysed the therapeutic potential of certain compounds: honokiol, forskolin and calcitriol (a pilot clinical trial was carried out in collaboration with IDIBGI). All of them improve mitochondrial functions and restore cellular parameters altered by frataxin deficiency. In collaboration with the company Minoryx Therapeutics we also tested leriglitazone, a PPAR-agonist, obtaining encouraging results. Finally, in collaboration with Dr. Sanchez (CSIC-Granada) and Dr. Magrané (Cornell University-USA) we have set up a therapeutic strategy based on protein replacement therapy using peptides able to cross the blood brain barrier covalently linked to frataxin.

Publications

- Mengual R, Bobo V, Rodríguez C, Lapresa R, García D, Jiménez D, Cabiscol E, Ros J, Delgado M, Bolaños JP, Almeida A. Endogenous mitochondrial hydrogen peroxide regulates neurogenesis during cortical development. *Redox Biol.* 2025. 88. p. 103940–103940. IF:11,900. (D1)(Q1).
- Portillo M, Sanz A, Delaspre F, Pazos M, Oliveira L, Vergara C, Rodríguez L, Pizcueta P, Tamarit J, Ros J, Cabiscol E. Leriglitazone improves iron homeostasis and ferroptotic markers in frataxin-deficient dorsal root ganglia neurons. *Biomed. Pharmacother.* 2025. 192. p. 118553–118553. IF:7,500. (D1)(Q1).

Funded projects

PI	Funding agency	Project	Budget (€)
Fabien Delaspre	Institut de Recerca Biomèdica de Lleida (IRBLleida)	CRG - STEM4FA:Friedreich ataxia human in vitro platform for disease modeling and drug screening	20,000
Joaquim Ros Salvador	Friedrich's Ataxia Research Alliance	Pre-clinical assessment of protein replacement therapy in the central nervous system of Friedreich's ataxia mouse models	75,978

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5.1. Biochemistry of Oxidative Stress

Active projects

PI	Funding agency	Project	Budget (€)
Elisa Cabiscol Catala i Jordi Tamarit Sumalla	Ministerio de Ciencia e Innovación	Alteraciones moleculares en el modelo murino FXN1151F de Ataxia de Friedreich y análisis de nuevas estrategias terapéuticas	262,500
Fabien Delaspre	Association Française Ataxie De Friedrich (AFAF)	Effet du Calcitriol dans un nouveau modèle murin pour l'AF de mutation ponctuelle 1151F	50,000
Joaquim Ros Salvador	Ministerio de Ciencia e Innovación	Desarrollo de la leiglitazona para el Síndrome de Rett y trastornos relacionados	147,800
Jordi Tamarit Sumalla	Friedrich's Ataxia Research Alliance	Uncovering the function of a conserved site in eukaryotic frataxins.	76,143



5.2. Cell signalling and apoptosis group

The group began research at the University of Lleida in 2001 when Dr. Marta Llovera and Dr. Daniel Sanchis joined to conduct studies on the signaling of survival, differentiation, and death of cells of the nervous system and myocardium. Our research has provided information on relevant aspects of the roles of Calcium / Calmodulin (J Neurochem, 2004; J Biol Chem, 2008) and Tyr-kinase Trk receptors (J Neurochem, 2008; J Neurochem, 2011) in the differentiation process. and neuronal survival, as well as the potential of histone deacetylases as therapeutic tools for the treatment of glioblastoma (Cell Death Dis, 2014). At the same time, we pioneered the loss of apoptotic genes during myocardial development, where they play an important role in the division and differentiation of myocytes (J Cell Sci, 2013; PLoSOne, 2014), and the change of an apoptotic cell death to necrotic cell death during this process, identifying relevant proteins such as EndoG (J Biol Chem, 2006). Deepening the characterization of ENDOG led to the discovery of its involvement in the process of cardiac hypertrophy (Nature, 2011; Redox Biol, 2017) and in the control of cell proliferation (Redox Biol, 2020). Recently, the group has focused an important part of its effort on investigating key and differential aspects of cardiac fibroblasts as cells essential for the proper functioning of the myocardium (FEBS J, 2022).

Our research is possible thanks to the continuous funding obtained mainly from competitive public calls of Organizations such as La Marató de TV3, the Spanish Ministries of Health (ISCIII) and Science (MICINN) and the Agency for the Management of University Grants (AGAUR), of the Generalitat de Catalunya. Our research work has involved the establishment of collaborations, both international (Eric Olson, UTSouthWestern Medical Center, Dallas, TX, USA; Chris Smith, University of Cambridge, UK; Junmei Ye, China Pharmaceutical University, Nanjing, China), as nationals, mainly with groups from Madrid (CNIC) and Barcelona (Vall d'Hebron Research Institute, IDIBAPS, IRB Barcelona), as well as from IRBLLEIDA itself (groups led by Xavier Dolcet, Manel Portero, Joaquim Ros and Andreu Casali). This has led to the publication of more than 40 articles in indexed international scientific journals and the production of 11 doctoral theses in the last 20 years.

Publications

– Barés G, Beà A, Sancho A, Valero JG, Aluja D, Inserte J, García S, Miró E, Borràs S, Hernández S, Martínez A, Olsen J, Tebar F, Cañas X, Comella JX, Pérez P, Ruiz M, Giralta A, Llovera M, Sanchis D. Mammalian TatD DNase domain containing 1 (TATDN1) is a proteostasis-responsive gene with roles in ventricular structure and neuromuscular function. FEBS J. 2025. 292. (19):p. 5105–5129. IF:4,200. (D4)(Q2).

Active projects

PI	Funding agency	Project	Budget (€)
Daniel Sanchis Morales	Ministerio de Ciencia e Innovación	Señalización celular en el corazón y metabolismo: supervivencia y nuevas funciones de los fibroblastos cardíacos y el papel de ENDOG en la homeostasis metabólica	162,500

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5.3. Metabolic physiopathology

The overall goal of our investigations concerned the role of metabolism and oxidative stress (including free radical chemistry, redox biology and antioxidants) in the aging process and age-associated diseases. We have investigated the role of metabolism and oxidative stress in animal models (vertebrates and invertebrates) and humans in which aging rate and longevity are different or are experimentally modified (e.g. caloric restriction, methionine restriction, and genetic manipulations) or pathologically affected (e.g. metabolic diseases, cardiovascular disease, cancer, neurodegenerative diseases). If the aging process could be slowed or even reverted the incidence of age-related diseases would diminish significantly.

Publications

- Andreu C, Obis E, del Olmo M. Unravelling the Molecular Responses of the Yeast *Schwanniomyces etchellsii* to Hyperosmotic Stress in Seawater Medium Using Omic Approaches. *Int. J. Mol. Sci.* 2025. 27. (1):183. IF:4,900. (D3)(Q1).
- Cruces S, Sol J, Larrañaga I, Pamplona R, Mar J, Jove M, Matheu A. Analysis of sex-specific disease patterns associated with human lifespan. *Geroscience.* 2025. 47. (3):p. 2639-2654. IF:5,400. (D1)(Q1).
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- Fernández A, Sol J, Galo JD, Mota N, Mas C, Belenguier A, Obis É, Viña J, Borrás C, Jové M, Pamplona R. Phenotypic upregulation of hexacylceramides and ether-linked phosphocholines as markers of human extreme longevity. *AGING CELL.* 2025. 24. (4):e14429. IF:8,000. (D1)(Q1).
- Fernandez I, Moral J, Kurdyukov S, Monne EO, Hartmann LM, Novais SCM, Waller MA, Mckinnon N, Chung FLCY, Castejon FJS, Rainho DP, Dekan Z, Kremsmayr T, Jandl B, Filipic KE, Pamplona R, Jové M, Fernandez MA, Anderlüh G, Muttenthaler M, Alewood P, Procházka J, Neely GG, Deplazes E, Ikonopoulou MP. The cytotoxicity of gomesin peptides is mediated by the glycosphingolipid pathway and lipid-cholesterol interactions. *Cell Death Discov.* 2025. 11. (1):538. IF:7,000. (D3)(Q1).
- Hernández C, Liu JH, Jové T, González O, Portero M, Folch JM, Quintanilla R, Ballester M. Genetic determinism of fatty acid composition in liver, muscle, backfat and plasma and its link to immunocompetence and performance in pigs. *Sci. Rep.* 2025. 15. (1):p. 43982-43982. IF:3,900. (D2)(Q1).
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- Huguet A, Ahmed W, Artigues E, Sol J, Gomez X, Godoy P, Bravo MO. Mapping Vaccine Sentiment by Analyzing Spanish-Language Social Media Posts and Survey-Based Public Opinion: Dual Methods Study. *JMIR Infodemiology.* 2025. 5. e63223.
- León J, Bermúdez M, Valdivielso JM, Pamplona R, Torres G, Mauricio D, Castro E, Fernández E, Caixàs A, Bueno M, Ciudin A, Hernández M, Simó R, Hernández C, Lecube A, ILERVAS C. Impact of the new EASO obesity definition on the detection of atheromatosis in subjects with low-to-moderate cardiovascular risk. *Front Endocrinol (Lausanne).* 2025. 16. p. 1689960-1689960. IF:4,600. (D3)(Q1).
- Llubes L, Briones E, Mateos JT, Sol J, Gea M, Rubinat E. Gender differences in self-management activation among patients with multiple chronic diseases: a qualitative study. *Arch. Public Health.* 2025. 83. (1):p. 200-200. IF:3,200. (D3)(Q1).
- Mota N, Fernandez A, Sol J, Santacreu M, Juanes A, Portero M, Jove M, Pamplona R. Mitochondrial lipidome's fatty acid profile and peroxidation index are programmed tissue-specific traits. *Redox Biol.* 2025. 86. p. 103850-103850. IF:11,900. (D1)(Q1).
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- Rodríguez R, Torres P, Fernández A, Berdún R, Ramírez Q, Martín M, Serrano J, He JC, Prat J, Pamplona R, Uribarri J, Portero M. Non-enzymatic modification of aminophospholipids induces angiogenesis, inflammation, and insulin signaling dysregulation in human renal glomerular endothelial cells in vitro. *Free Radic. Biol. Med.* 2025. 235. p. 15-24. IF:8,200. (D1)(Q1).
- Sancho A, Gil A, Quirant B, Boigues M, Canudes M, Peralta S, Solana MJ, González C, Quibus L, Martínez E, Torres P, Hervás JV, Moreno J, Brieva L. Profile of Cytokines Associated with SARS-CoV2 Seropositivity in Multiple Sclerosis Patients and Its Persistence over Six Months. *J. Clin. Med.* 2025. 14. (11):3736. IF:2,900. (D2)(Q1).

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- Santacreu M, Moreno J, Juanes A, Gil A, González C, Torres P, Brieva L. Novel Cell Models to Study Myelin and Microglia Interactions. *Int. J. Mol. Sci.* 2025. 26. (5):2179. IF:4,900. (D3)(Q1).
- Sol J, Fernández A, Mota N, Martín M, Obis É, Juanes A, Ayala V, Mayne-ris J, Ramos R, Pineda V, Garre J, Portero M, Fernández JM, Puig J, Jové M, Pamplona R. Ether lipids and sphingolipids drive sex-specific hu-man aging dynamics. *Redox Biol.* 2025. 85. p. 103779–103779. IF:11,900. (D1)(Q1).
- Torres P, Pradas I, Fernández A, Povedano M, Dominguez R, Jové M, Gon-zalez C, Ayala V, Ferrer I, Pamplona R, Portero M. Exploring platelet me-tabolomics and fatty acid profiles for ALS prognosis and diagnosis. *Sci. Rep.* 2025. 15. (1):p. 34236–34236. IF:3,900. (D2)(Q1).

Funded projects

PI	Funding agency	Project	Budget (€)
Joaquim Sol Cullere I Ester Garcia Martinez	Diputació de Lleida	Deciphering the biological keys to Successful Ageing, from Electronic health records big data to Personalized Interventions (SAGE-PI)	50,000
Manuel Portero Otin	Institut de Recerca Biomèdica de Lleida (IRBLleida)	MAP-RNA: Mapping the Hidden Roles: Subcellular Functions of TDP-43 and CSDE1 in Neurodegeneration and Cancer	20,000
Manuel Portero Otin I Francisco Purroy Garcia	Diputació de Lleida	Spanish Minor Stroke Perfusion Initiative: SMS-P Initiative	50,000
Pascual Torres Cabestany	Institut de Recerca Biomèdica de Lleida (IRBLleida)	DECRYPTALS: Deciphering the cryptic splicing in Amyotrophic Lateral Sclerosis for effective antisense oligonucleotides therapeutics	20,000
Pascual Torres Cabestany I Cristina Gonzalez Mingot	Asociación Esclerosis Múltiple España (EME)	PROLILEM: DesEMmascarando la Esclerosis Múltiple con biomarcadores pronósticos lípidicos	30,000
Pascual Torres Cabestany I Cristina Gonzalez Mingot	Diputació de Lleida	Novel peripheral biomarkers for early diagnosis and prognosis of Amyotrophic Lateral Sclerosis (peripherALS)	50,000



5.3. Metabolic physiopathology

Active projects

PI	Funding agency	Project	Budget (€)
Manuel Portero Otin	Fundació Bancària Caixa d'Estalvis i Pensions de Barcelona (La Caixa)	Targeting cryptic exons as biomarkers and ALS therapy	42,000
Manuel Portero Otin	Fundació Bancària Caixa d'Estalvis i Pensions de Barcelona (La Caixa)	The role of defects in mitochondria-associated ER membranes (MAM) to Amyotrophic Lateral Sclerosis	138,600
Manuel Portero Otin	Institut de Recerca Biomèdica de Lleida (IRBLleida)	Natural microbicides from rice against current and emerging infectious diseases	22,500
Manuel Portero Otin	Instituto de Salud Carlos III (ISCIII)	Desregulación de TDP-43, eje clave en la ELA: Caracterización de firmas lipídicas, transcriptómicas y autofágicas en muestras específicas de pacientes para biomarcadores y reposicionamiento	252,500
Manuel Portero Otin	Instituto de Salud Carlos III (ISCIII)	SEED-ALS: Synergizing Efforts to Develop and Accelerate Breakthroughs in ALS Research	90,750
Mariona Jove Font	Fundació Bancària Caixa d'Estalvis i Pensions de Barcelona (La Caixa)	From GFAP mutations in astrocytes to neurodegeneration: exploring a lipid-protein oxidation pathway (ASTROMAD)	275,000
Mariona Jove Font	Instituto de Salud Carlos III (ISCIII)	Identificación de patrones moleculares asociados a distintas trayectorias de envejecimiento	203,750
Mariona Jove Font i Marta Ortega Bravo	Diputació de Lleida	Development of dynamic models for the personalized prevention and treatment of age-related diseases	50,000
Pascual Torres Cabestany	Diputació de Lleida	Orally available antisense oligonucleotides encapsulated in extracellular vesicles for amyotrophic lateral sclerosis treatment (Evasense) - ajut ISP 2024	20,000
Pascual Torres Cabestany	Fundación Francisco Luzón	Humanised mouse models to study ATG4B cryptic exon involvement in ALS pathogenesis and its potential as disease biomarker (Hum4ALS)	57,000



5.3. Metabolic physiopathology

PI	Funding agency	Project	Budget (€)
Reinald Pamplona Gras	Agència Gestió Ajuts Universitat i Recerca (AGAUR)	Ajut per donar suport a les activitats dels grup de recerca consolidat de Fisiopatologia Metabòlica	40,000
Reinald Pamplona Gras	Ministerio de Ciencia e Innovación	Metabolismo de eter lípidos y envejecimiento humano	100,000
Reinald Pamplona Gras i Gerard Piñol Ripoll	Diputació de Lleida	Insight into the role of lipids in frontotemporal dementia: uncovering pathophysiological alterations and biomarker discovery opportunities.	50,000



5.4. Nutrition, Metabolism and Microbiota in patients with heart failure (NUTRIMMIC)

The group is composed of **basic and clinical researchers**, our research focuses on the field of Heart Failure (HF), a disease with growing prevalence in developed countries. Our research aims to know how the nutritional factors and intestinal microbiota affect the development and prognosis of heart failure. Patients with heart failure show an inflammatory status associated with iron deficit. It is hypothesized that malnutrition and alteration of the gut microbiota are responsible for perpetuating inflammation.

The objective of the **clinical line** is to determine the nutritional status, adherence to the Mediterranean diet and composition of the gut microbiota of patients with heart failure. The **basic line** aims to generate a murine experimental model of heart failure and analyze the relationships between microbiota and inflammation.

The observations obtained in the basic line about the relationships between microbiota and inflammation, will allow us to **transfer knowledge** from basic to the clinical line to design specific nutritional and supplementation strategies in order to modify the composition of the intestinal flora and reduce inflammation.

Publications

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5.5. Systems biology and statistical methods for biomedical research

This multidisciplinary group is itself composed of multidisciplinary researchers, with expertises ranging from biostatistics to systems and synthetic biology. While we also do research in biomedicine, we are currently widening our focus to include food and environmental security as well as effects of climate change on human activities, as these field will have a very strong medium term impact on human health, via the One Health concept.

Publications

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- Sandoval P, Vilaprinyó E, Alves R, Sorribas A. Beyond statistical power in designing clinical trials: Shiny/R apps to the rescue. *Teach. Stat.* 2025. 47. (3):p. 187-199.
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Funded projects

PI	Funding agency	Project	Budget (€)
Alberto Marin Sanguino	Agència Gestió Ajuts Universitat i Recerca (AGAUR)	Waste to Product	20,000
Ester Vilaprinyo Terre i Jose Javier Trujillano Cabello	Instituto de Salud Carlos III (ISCIII)	Predicción de la gravedad en pacientes con trauma crítico: un estudio prospectivo y desarrollo de herramientas de seguimiento clínico	40,000
Rui Carlos Vaqueiro De Castro Alves	Joint Genome Institute	Whole genome sequencing of the cactus crop <i>Opuntia ficus-indica</i> and its wild relative <i>Opuntia karwinskiana</i> to unravel the mechanisms that balance productivity and resilience	132,531

Active projects

PI	Funding agency	Project	Budget (€)
Ester Vilaprinyo Terre	Universitat de Lleida (UdL)	CLADIUM: Collaborative Language approach for decision making in intensive care units based on decisionrule model	4,205

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Area 6. Other research areas

Other lines of research include researchers who, although not part of a specific research group at IRBLLeida, have made significant scientific contributions in areas such as family medicine, ophthalmology, fibromyalgia, internal medicine, traumatology, and others.

Publications

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Area 6. Other research areas

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 Montse Esquerda Aresté
 Montserrat Navarra Llorens
 Montserrat Navarro Brugueras
 Montserrat Romaguera Bosch
 Montserrat Sanroma Ortiz
 Montserrat Teixido Amorós
 Núria Farran Torres
 Oihana Ortiz Pastor
 Oscar Aguila Gimeno
 Oscar Ripol Valentín
 Pau Antoni Surribas Camps
 Paula Sol Ventura
 Rosa Maria Pérez Capellades
 Tomas García Cerecedo

Phd Student

Maria Laura Batalla Peinado

Management Technician

Maria Montserrat Sánchez Fernández



Area 6. Other research areas

Funded projects

PI	Funding agency	Project	Budget (€)
Jose Serrano Casasola i Luis Brieua Ruiz	Diputació de Lleida	Contribución de los productos finales de la glicación avanzada (AGEs) a la fisiopatología neurocognitiva de la esclerosis múltiple: Desvelando el daño silencioso. CAGEP-EM	50,000
Maria Laura Batalla Peinado	Fundació Privada Acadèmia de Ciències Mèdiques i de la Salut de Catalunya i de Balears	Projecte de millora de l'atenció intermèdia	1,000
Pau Antoni Surribas Camps	Diputació de Lleida	Estudi pilot ECO-SAVE: ECOgrafia Subcutània Abdominal, Visceral i Esteatosi en atenció primària	10,000

Active projects

PI	Funding agency	Project	Budget (€)
M ^a José Ruiz Montilla	Fundación Española de Calidad Asistencial	Estudio de la accesibilidad en pacientes con discapacidad sensorial atendidos en el Hospital Universitario Arnau de Vilanova y en el Hospital Universitario de Santa María de Lleida	3,000
Montserrat Navarra Llorens	Diputació de Lleida	Avaluació i replantejament de l'estratègia de reperfusió en IAMEST a l'Alt Pirineu i Aran	10,000
Montserrat Romaguera Bosch	Diputació de Lleida	Projecte Esmolet: Prevenció de sinistres en la pràctica d'activitat física i esport	10,000
Oscar Ripol Valentin	European Commission EU	CAT-ClinART: Catalan Clinical Audit network for Quality Improvement in RT	5,177
Pau Antoni Surribas Camps	Diputació de Lleida	Eficàcia i viabilitat del cribratge d'aneurisma d'aorta abdominal des d'Atenció Primària	10,000
Rosa Maria Pérez Capellades	Diputació de Lleida	L'objecció de consciència i altres tipus d'objecció del professional sanitari front la petició d'ajuda a morir arran de l'entrada en vigor de la Llei Orgànica 3/2021 de regulació de l'eutanàsia: estudi multicèntric.	10,000

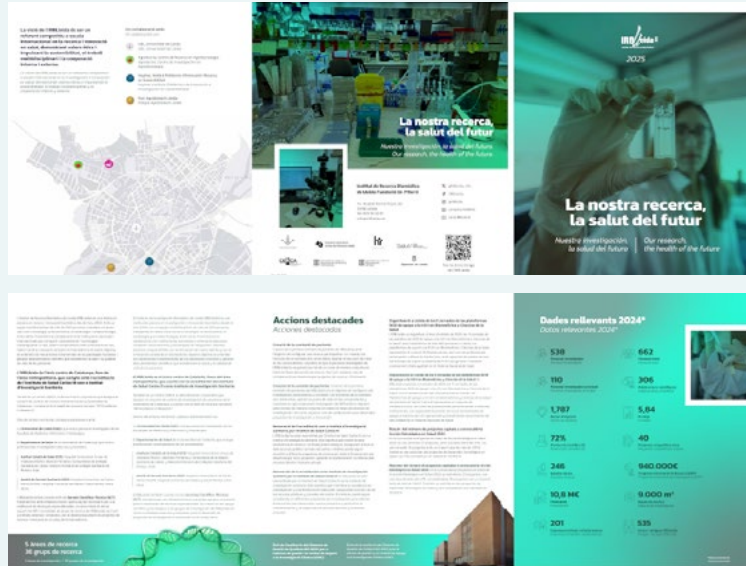


Communication

1. Promotional material
2. Outreach
3. Internal communication
4. External communication

1. Promotional material

1. IRBLleida general leaflet



2. IRBLleida's corporate social responsibility report 2024 and bookmark.



3. Institutional backpack



2. Outreach

The communication area is responsible for organising different types of events such as external visits and conferences, internal events, collaborating in the organisation of informative activities (seminars, conferences, workshops, etc.), among others.



Summary of activities 2025

VISITS

The IRBLLeida has organised 36 visits for different group profiles (educational centres, medical, nursing and physiotherapy residents) during 2025. 965 people have enjoyed these visits that have counted with the collaboration of research groups and core facilities.

EDUCATIONAL WORKSHOPS

The Institute for Biomedical Research of Lleida (IRBLLeida), with the collaboration of the La Caixa Foundation, the Department of Education and the FECYT Foundation, has followed with the organisation of workshops aimed at secondary school students to promote the biomedical research that will be carried out in Lleida's counties and to encourage scientific vocations. In 2025, 14 workshops were held and 799 students from educational institutions across the province visited us

		2021	2022	2023	2024	2025
VISITES	 Nombre de visites	2	16	16	26	36
	 Nombre de visitants	50	308	477	488	965
TALLERS	 Nombre de tallers	4	10	17	14	14
	 Nombre de talleristes	191	462	898	702	799
NIT DE LA RECERCA	 Nombre de participants	>600	>900	>800	>700	>700

CONFERENCE/WORKSHOPS

- 19/09/2025: Nit de la Recerca.
 - Talks: **2**
 - Guided tours IRBLLeida: **4**
 - Workshops: **16**
 - Total number of people attending: **700**



SYMPOSIUMS

- 12/12/2025: 4th IRBLLeida Annual Scientific Symposium. "5th Annual Scientific Symposium" was held at the Llotja de Lleida. The aim of this symposium is to improve the visibility of the research carried out by the different IRBLLeida research groups.



OTHER ACTIVITIES

- Inspiracy Lleida
- VI Jornada #SomRecerca



3. Internal communication

Monthly electronic bulletin featuring the news of the month, as well as an interview with a person from the centre and with collaborating organizations and companies.



SOCIAL ACTIVITIES



4. External communication

During the year 2025 the IRBLleida has released 66 press notes, mainly through web and newspapers. These press notes has have resulted in a total of 882 media hits. In addition, there has been a significant increase in the number of followers on social networks compared to previous years.

Press

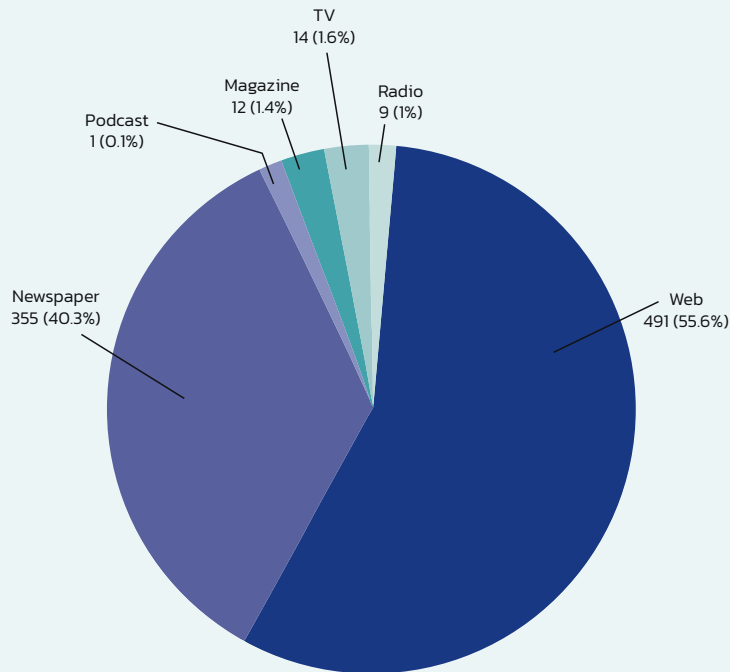


Figure 23. Press releases during 2025.

Social networks

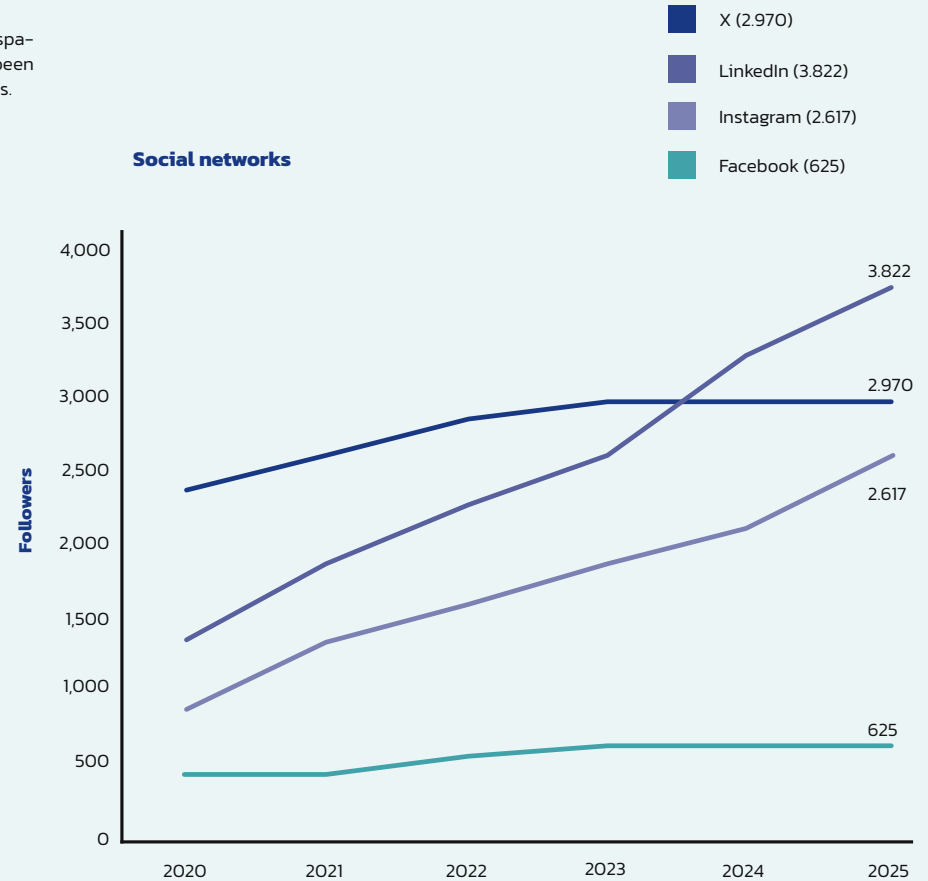


Figure 24. Historical data on social networks followers

Media Impacts (TV, Radio, Press and others) of the different Areas and Scientific-Technical Groups

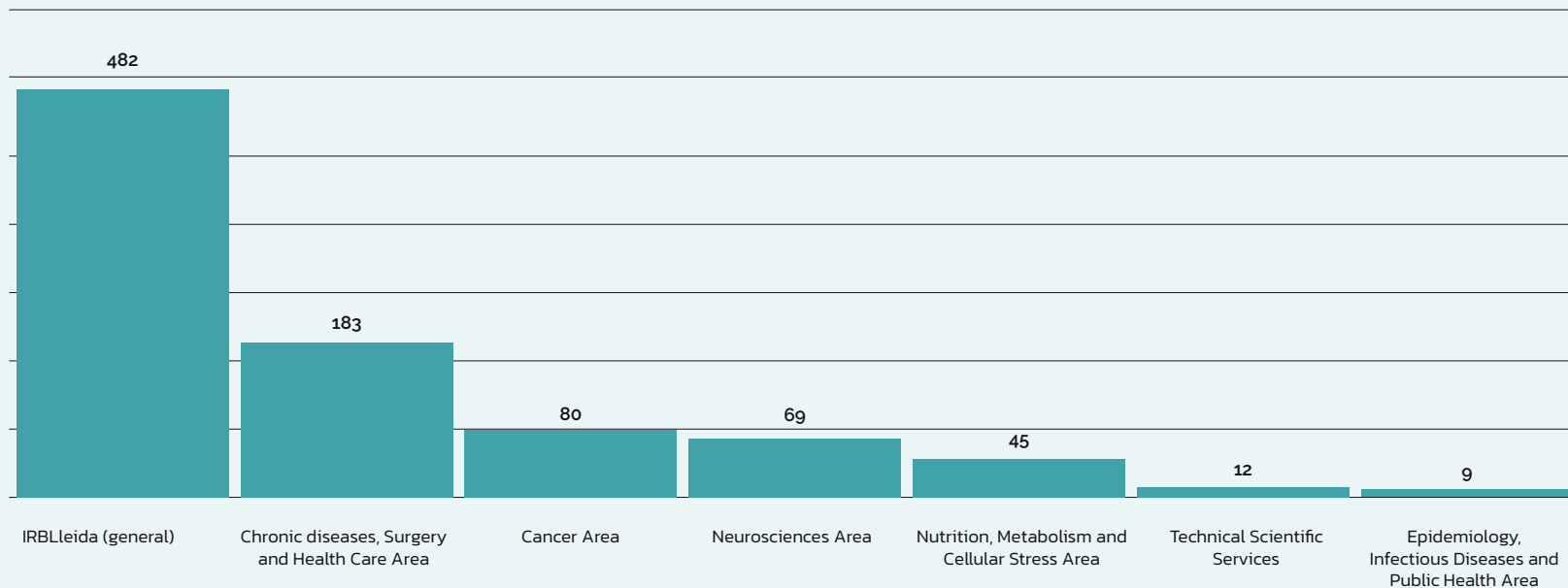


Figure 25. Media impacts (TV, radio, press and others) of the different scientific-technical groups and services in 2025.



INTRODUCTION

ORGANIZATION

CENTERS,
UNITS AND
CORE FACILITIES

ECONOMIC
INDICATORS

RESEARCH
ACTIVITY

KNOWLEDGE
TRANSFER AND
INNOVATION

RESEARCH ACTIVITY
BY AREAS AND
GROUPS

COMMUNICATION

FUNDRAISING

MAIN FUNDERS



Fundraising



Collaborating companies and organizations



The contributions made by companies and organizations that work with IRBLleida have the mission of promoting, developing, managing and disseminating biomedical research in our region. Donations allow us to investigate in our 5 research areas. IRBLleida has the support of **207** companies and organizations from Lleida.

Why donate to IRBLleida?

- To promote health research and have an impact on the quality of life of the population.
- To improve the treatment of many diseases to benefit the health of future generations.
- To collaborate with the scientific community, patients and the public.
- To promote Lleida and the region.
- To share the values of the IRBLleida: responsibility, respect, rigour, generosity in synergy, independence of judgement, fairness in the distribution of resources, social commitment, leadership and enthusiasm.

Information 2025

207

TOTAL COLLABORATION
COMPANIES

19

NEW
COLLABORATORS

284,779 €

CONTRIBUTION
TO IRBLLEIDA

Fundraising

Table 15. Total number of collaborating companies, organizations and friends.

	2018	2019	2020	2021	2022	2023	2024	2025
Number of companies and organizations	157	166	135	157	179	193	201	207
Donations	190,939	210,056	179,375	202,561	222,784	256,636	274,725	284,779
Number of IRBLleida friends						227	535	767
Donations						19,114	73,653	146,059

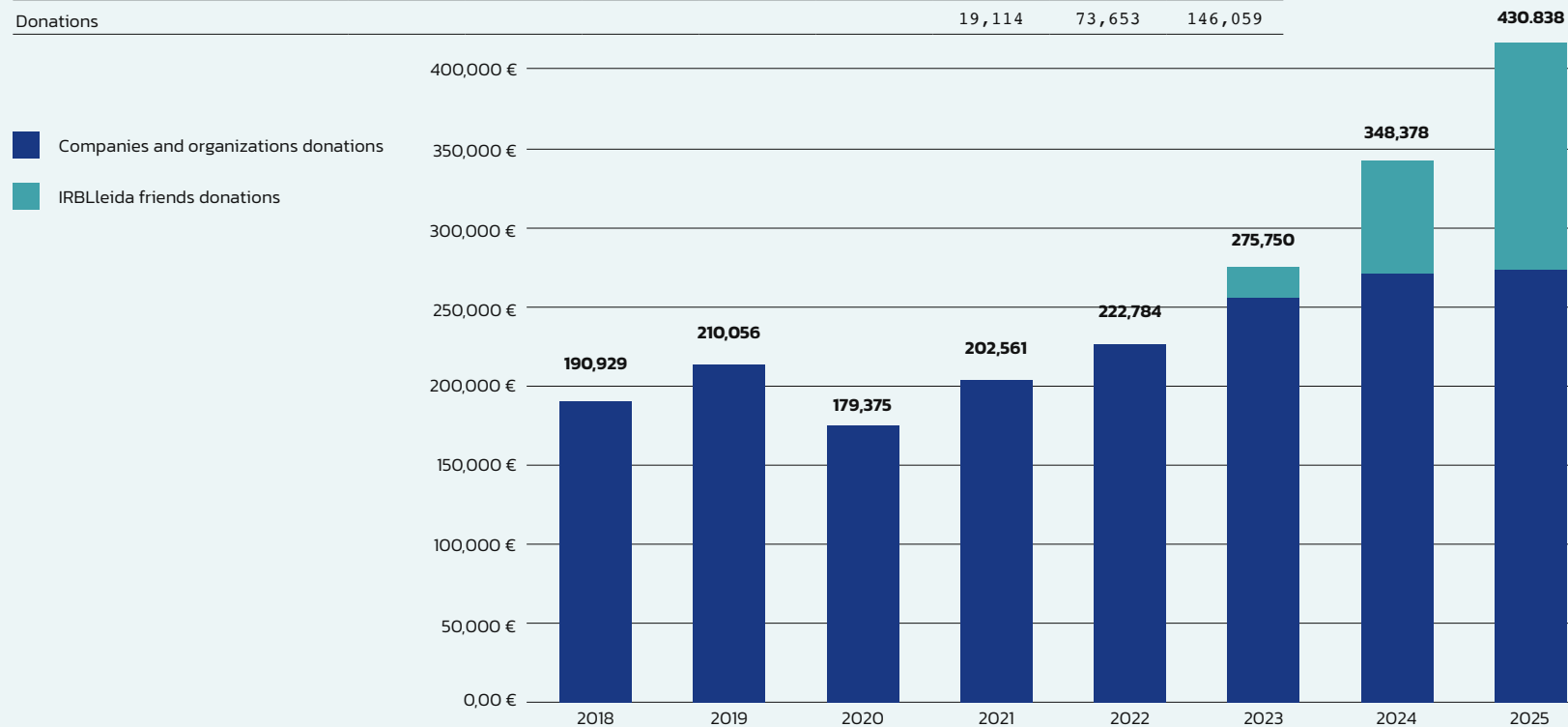


Figure 26. Donations made by companies and organizations since 2018.

Collaborating companies and organizations 2025





Main funders









Acknowledgements to the main funders



IRB Lleida [®]
Institut de Recerca Biomèdica

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Institute of Lleida**

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