



Annual

REPORT_2025



Published by:

IDIBAPS
Rosselló, 149-153
08036 Barcelona

Editorial board

IDIBAPS Scientific Coordination Office
and Communication departments

Art direction & graphic design

marcmontala.com



© IDIBAPS 2026

<http://creativecommons.org/licenses/by-nc-sa/4.0/>

This document features images from the
2025 IDIBAPS photography competition.

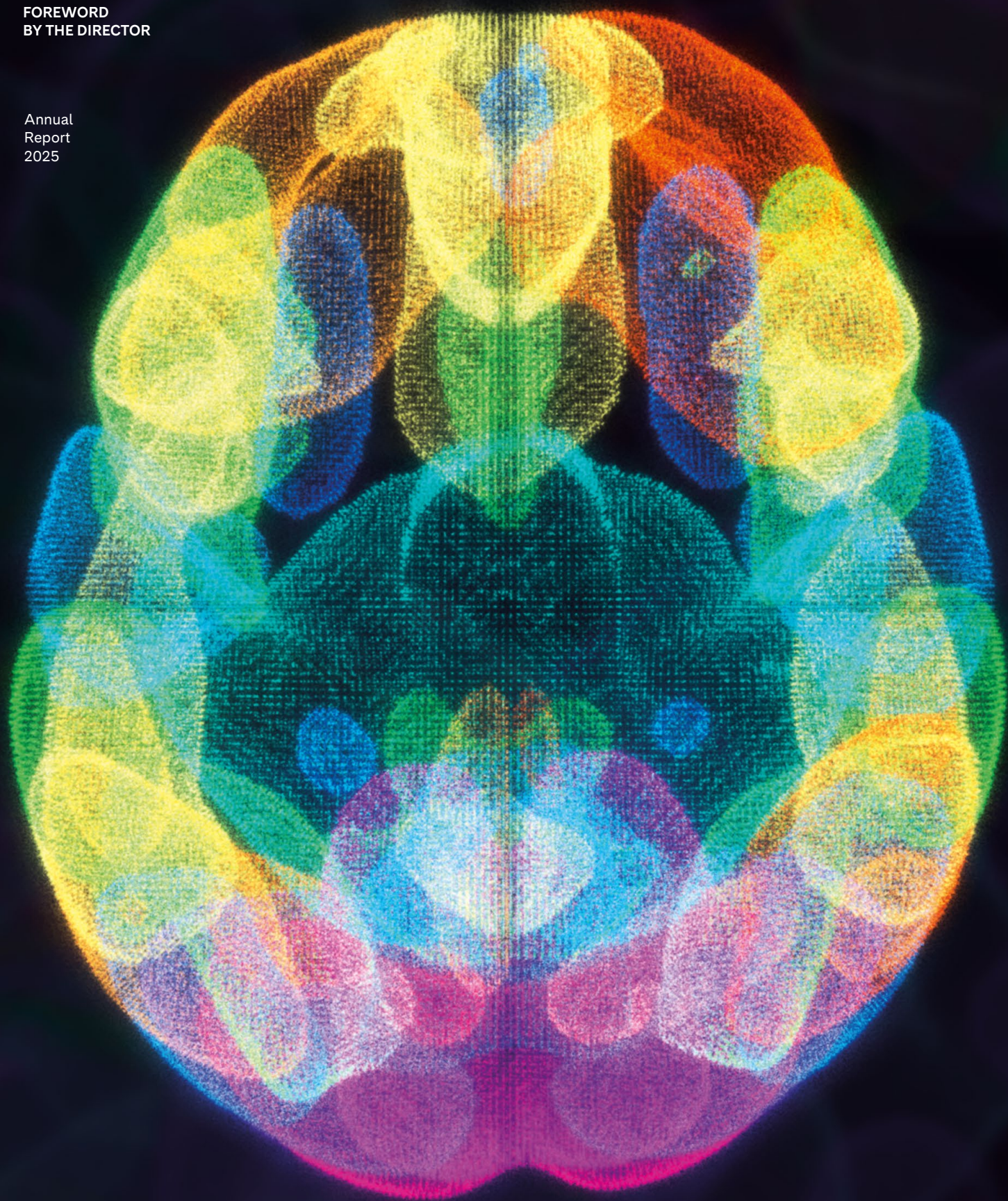


ANNUAL REPORT 2025

06	Foreward by the Director
09	Introduction About us Staff Research and innovation results Funding Competitive projects Core facilities Training Sustainability Communication and public engagement Institutional news Awards and acknowledgements
44	Area 1 Biological aggression and response mechanisms
58	Area 2 Respiratory, cardiovascular and renal pathobiology and bioengineering
76	Area 3 Liver, digestive system and metabolism
100	Area 4 Clinical and experimental neuroscience
124	Area 5 Cancer
152	Cross-cutting research groups
158	Group leaders index

FOREWORD
BY THE DIRECTOR

Annual
Report
2025



Foreword by the director



The year 2025 marked a significant milestone for the August Pi i Sunyer Biomedical Research Institute (IDIBAPS), as I had the honour of being appointed director of the Institute. I take on this responsibility with a deep sense of commitment to the people, values and mission that define IDIBAPS, and with the conviction that biomedical research must combine scientific excellence with a clear and measurable social impact.

Throughout 2025, IDIBAPS continued to consolidate its position as a centre of excellence in biomedical research, firmly rooted in translational research, in close collaboration with the University of Barcelona, and seamlessly aligned with the clinical practice at the Hospital Clínic Barcelona. In this context, the renewal of our accreditation as a centre of excellence in oncology research by the Spanish Association Against Cancer (AECC) is a clear example.

Our scientific community demonstrated, once again, its capacity to generate high-quality knowledge, to advance in diverse areas of biomedicine, and to translate research results into innovations that improve patient care and public health. The awarding of the National Research Prize in Medicine and Health Sciences to Josep Dalmau, one of the most prestigious accolades in the Spanish scientific community, illustrates the originality and impact of our groups' research.

The year was marked by intense scientific activity, with significant advances in basic, clinical and translational research, driven by the acquisition of competitive funding at both national and international levels from highly prestigious agencies such as the European Research Council (ERC) and the Horizon Europe programme. IDIBAPS' strength lies in the people who are part of it: researchers, clinical professionals, technical staff and support teams, whose talent, dedication and collaborative spirit allow for research with a real impact on major health challenges.

In order to drive the quality and impact of research, as part of our commitment to the European CoARA initiative for the reform of evaluation systems, we have launched a pilot project in the Cancer Area, which promotes a more inclusive evaluation model, based on the diversity of scientific contributors and not solely on quantitative metrics.

Equally important to scientific excellence has been our commitment to social and economic impact, and institutional responsibility. In 2025, IDIBAPS reinforced its role as an institution committed to society, actively contributing to knowledge transfer, innovation, and social dialogue. Several innovative projects have been recognized with competitive grants such as CaixaImpulse, the European Institute of Innovation and Technology (EIT), and the ERC Proof of Concept grants.

We have continued to promote responsible and innovative research, open science practices, equality, and diversity. Initiatives such as “Girem Full” (“Let’s Turn the Page”), which links cancer research with reading and the world of education, exemplify this commitment to social impact. Equally noteworthy was the success of the first Women’s Health and Biology Day, with the participation of national and international speakers, and the prominent involvement of young researchers, as the various outreach activities organized by organizations to disseminate the work of IDIBAPS to the general public.

The incorporation of new talent has also been a key element. We welcome the two new group leaders, Thomas Walle (German Cancer Research Centre [DKFZ] – Heidelberg University Hospital), and Teresa Macarulla (VHIO). We continue to promote and support young talent and researchers in the early stages of their careers in an inclusive and supportive environment.

The new international DYNAMIS doctoral programme co-funded by the European Commission, will be instrumental in attracting global talent and driving new training activities. Also worthy of note is the creation of the Postdoc Community, driven by postdoctoral researchers with institutional support, to foster professional development and well-being within the institution. This talent, along with all management and direct research support staff, will contribute directly to our founding mission and purpose.

This year has also been an opportunity to strengthen governance, transparency, sustainability, solidarity, and the alignment between our scientific mission and the obligations inherent to a foundation serving the public interest. We have launched the new Sustainability Action Plan for 2025 and 2026, and celebrated initiatives to promote environmental sustainability with the other institutions on the Campus Clínic. The decision to unify the content of the scientific report and the social report reflects our commitment to a coherent, comprehensive and responsible view of IDIBAPS’ activities and impact.

Looking to the future, my priority as director is to continue strengthening the excellence, international reach and social relevance of IDIBAPS, by promoting strategic alliances, supporting talent at all stages, and ensuring that our research continues to generate value for patients, the healthcare system and society as a whole.

I would like to express my sincere gratitude to all the members of the IDIBAPS community, as well as our institutional partners and collaborators, for their trust, commitment, and shared ambition. Together, we will continue to consolidate IDIBAPS as a centre of excellence in impactful biomedical research

Susana Puig
Director



INTRODUCTION

Annual
Report
2025

About us

The Fundació de Recerca Clínic Barcelona-Institut d'Investigacions Biomèdiques August Pi i Sunyer (IDIBAPS) is a biomedical research institute of excellence. It combines clinical and basic research to accelerate the translation of knowledge for the benefit of the patients.

IDIBAPS is the result of the integration in 2023 of the Hospital Clínic Foundation for Biomedical Research (FCRB), created in 1989, and the consortium August Pi i Sunyer Biomedical Research Institute (IDIBAPS), created in 1996.

It is a nonprofit foundation with a board of trustees representing the Catalan Government departments of Health and of Research and Universities, the Clínic Barcelona Hospital (HCB) and the University of Barcelona (UB).

The institute is a CERCA (Research Centers of Catalonia) center and holds the accreditation as a healthcare research institute by the Carlos III Institute of Health since 2009. It is also part of the Science Foundation of the Spanish Cancer Association (AECC).

The IDIBAPS research community is composed of more than 2,800 professionals, including 100 research groups organized across 5 different areas of knowledge and 7 Core Facilities to offer state-of-the-art technologies.

AREA 1

Biological aggression and response mechanisms

AREA 2

Respiratory, cardiovascular and renal pathobiology and bioengineering

AREA 3

Liver, digestive system and metabolism

AREA 4

Clinical and experimental neuroscience

AREA 5

Cancer

Additionally, 4 Cross-cutting research groups perform research in Primary Healthcare, Nursing, Clinical Pharmacology, and Multimodal Imaging Biomarkers.

IDIBAPS has five multidisciplinary research programmes to encourage collaboration among its groups.

- Translational cancer research.

- Synaptic autoimmunity in neurology, psychiatry and cognitive neuroscience.

- Lymphoid neoplasms.

- Translational research programme for brain disorders

- Metabolism and disease programme (MetaDis)

The institution also has a cluster in 3D Bio-models that includes ten research groups.

Scientific breakthroughs are never the result of chance. They are the fruit of long-term commitments involving not only researchers, technicians, managers, but also society as a whole.

IDIBAPS has made such a commitment to encourage translational research, innovation and technological progress in biomedicine, through various programmes addressing diseases with a high prevalence, morbidity and mortality in our society.

The data presented in this Annual Scientific Report detail the evergrowing scientific achievements of IDIBAPS investigators and the institute as a whole, and their capacity to attract and efficiently manage public and private funding.

This enormous potential for capturing resources and translating knowledge into applied results for clinical practice constitutes the best guarantee for securing the impact of the institute in our society.



HR EXCELLENCE IN RESEARCH





Research organization

5 AREAS > 100 GROUPS

A1
BIOLOGICAL
AGGRESSION
AND RESPONSE
MECHANISMS
12 GROUPS

A2
RESPIRATORY,
CARDIOVASCULAR
AND RENAL PATHOBIOLOGY
AND BIOENGINEERING
15 GROUPS

A3
LIVER, DIGESTIVE
SYSTEM
AND
METABOLISM
21 GROUPS

A4
CLINICAL
AND
EXPERIMENTAL
NEUROSCIENCE
21 GROUPS

A5
CANCER
27 GROUPS



Joint research lines

5 PROGRAMMES > 42 GROUPS

Translational
cancer reseach
8 GROUPS

Synaptic
autoimmunity
7 GROUPS

Lymphoid
neoplasms
8 GROUPS

Brain
disorders
10 GROUPS

Metabolism
& Disease (MetaDis)
9 GROUPS

CROSS-CUTTING
RESEARCH GROUPS
4 GROUPS



Technology

1 CLUSTER > 10 GROUPS

3D Biomodels
Technology Cluster
10 GROUPS

Organisation chart

IDIBAPS leadership ensures the institute's day to day management, as well as efficiency and quality of operations, in collaboration with various professional departments on research management and administration.

Elías Campo (Until March 2025)

Susana Puig (Since May 2025)
Director

Gemma Pedrola
Secretary

Michela Bertero
Director of Strategy

Arantxa Fernández
Secretary

David Badia
Managing Director

Laura Lopera
Secretary

Juan Abolaña
Head of European and International Projects

Daniel Arbós
Head of Communication

Sergio Camacho
Head of Economic Planning and Management Control

Núria Castro
Head of Public Hiring

Ernest Costa
Head of TIC

Marta Fernández
Head of Human Resources

Gemma Llaverias
Head of Scientific Coordination

Arnau Llobet
Head of Post-award Projects Management Office

Teresa Lloret

Head of Knowledge and Technology Transfer (KTT)

Guillem Masdeu
Head of Legal Affairs

Sònia Meléndez
Head of Accounting and Finance

Cristina Navas
Head of Assets and General Services

Gemma Pascual
Head of Academic Coordination

Sandra Pérez
Head of National Projects

Sandra Piquer
Head of Laboratories

Aina Rodríguez
Head of Core Facilities

Governance and structure

The following boards and committees provide strategic oversight, ensure financial stability, and support IDIBAPS in advancing scientific research and innovation.

BOARD OF TRUSTEES

The board of trustees consists of key representatives of diverse institutions and supervises IDIBAPS activities, budget and results. Its mission is to take strategic decisions in consultation with the Scientific Advisory Board, and to evaluate the implementation of the strategic plan.

CHAIR

Olga Pané i Mena
Health Minister, Generalitat de Catalunya

VICE-CHAIR

Núria Montserrat i Pulido
Minister of Research and Universities, Generalitat de Catalunya

2nd VICE-CHAIR

Josep Maria Campistol i Plana
CEO, Hospital Clínic Barcelona (HCB)

3rd VICE-CHAIR

Joan Guàrdia i Olmos
Rector, University of Barcelona (UB)

BOARD MEMBERS

Raquel Sánchez del Valle
Medical Director, HCB

Antoni Plasència i Taradach
General Director of Research and Innovation, Health Ministry, Generalitat de Catalunya

Teresa Sanchis i Estruch
General Director of Research, Research and Universities Ministry, Generalitat de Catalunya

Francesc Balaguer i Prunés
Head of the Hospital Clínic Gastroenterology Service and IDIBAPS Research Group Leader. Internal representative

Núria Mas i Canal
Economist specialised in the health sector. External representative

Jordi García i Fernández
Vice-rector for Research, UB

NON-TRUSTEE SECRETARY

Maria Jesús Jiménez i Hernández
Head of the Legal and Administrative
Department, Health Ministry, Generalitat
de Catalunya

DELEGATE COMMITTEE

CHAIR

Teresa Sanchis i Estruch
General Director of Research, Research
and Universities Ministry, Generalitat de
Catalunya

VICE-CHAIR

Antoni Plasència i Taradach
General Director of Research and
Innovation, Health Ministry, Generalitat de
Catalunya

BOARD MEMBERS

Josep Maria Campistol i Plana
CEO, Hospital Clínic Barcelona (HCB)

Raquel Sánchez del Valle
Medical Director, HCB

Jordi García i Fernández
Vice-rector for Research, UB

MEMBERS WITH VOICE BUT NO VOTE

Francesc Balaguer i Prunés
Head of the Hospital Clínic
Gastroenterology Service
and IDIBAPS Research Group Leader

Susana Puig i Sardà
IDIBAPS Director

David Badia i Prat
IDIBAPS General Manager

NON-TRUSTEE SECRETARY

Maria Jesús Jiménez i Hernández
Head of the Legal and Administrative
Department, Health Ministry, Generalitat
de Catalunya

SCIENTIFIC ADVISORY BOARD (SAB)

Independent leading scientists, selected by
the board of trustees, compose the SAB to
advise the institute on its scientific direction
and organization. These leading scientists
have in-depth knowledge of the Spanish,
European and international research and
innovation ecosystems as they hold relevant
positions in prestigious national and interna-
tional research institutions.

CHAIRMAN

José María Mato
CIC bioGUNE, Bilbao

BOARD MEMBERS

Jesús Ávila
Centro de Biología Molecular Severo
Ochoa (CBM), Madrid

Fernando Arenzana-Seisdedos
Institut Pasteur, París

Amparo Cano
Instituto de Investigaciones Biomédicas
“Alberto Sols”, CSIC-UAM, Madrid

Francisco Fernández Avilés
Hospital Gregorio Marañón, Madrid

Ramon Gomis
IDIBAPS, Barcelona

José López Barneo
Instituto de Biomedicina de Sevilla (IBiS)

Carlos Macaya
Hospital Clínico San Carlos, Madrid

Óscar Marín
King's College London, UK

Federico Mayor
Centro de Biología Molecular Severo
Ochoa, Madrid

Pura Muñoz
ICREA, Universitat Pompeu Fabra

Teresa Palomero
Columbia University, New York. USA

Angel Pellicer
NYU School of Medicine, New York, US

Francisco Sánchez-Madrid
Hospital La Princesa, Madrid

Eugenio Santos
Centro de Investigación del Cáncer (CIC),
Salamanca

Antonio Vidal-Puig
Cambridge Phenomics Center, UK

STEERING COMMITTEE

The Steering Committee is responsible of
supervising the IDIBAPS scientific progress,
the recruitment of new leading scientists,
and the evaluation of IDIBAPS training acti-
vities.

CHAIRMAN

Elías Campo (Until March 2025)
Susana Puig (Since May 2025)

MEMBERS

Neus Agell
Vice-Dean of School of Medicine and
Health Sciences. UB Signal transduction
and cell cycle group leader

Antoni Castells
Gastrointestinal and pancreatic oncology
group leader

Cristina Fillat
Gene therapy and cancer group leader

Juan Carlos García-Pagán
Hepatic hemodynamics and portal hyper-
tension group leader. Research Deputy
Director of Hospital Clínic de Barcelona

Josep Maria Llovet
Translational research in hepatic oncology
group leader

Gisela Sugranyes
Multimodal neuroimaging in high risk
and early psychosis group leader

David Badia

Managing Director

Michela Bertero

Director of Strategy

SECRETARY

Gemma Llaverias

Head of Scientific Coordination

INTERNAL ADVISORY COMMITTEE

The Internal Advisory Committee consists of IDIBAPS researchers representing the research areas and programmes, and it provides constructive advice to the IDIBAPS director on new strategic and scientific initiatives.

CHAIRMAN

Elías Campo (Until March 2025)**Susana Puig** (Since May 2025)

STEERING COMMITTEE REPRESENTATIVES

Antoni Castells

Gastrointestinal and pancreatic oncology group leader

Josep Maria Llovet

Translational research in hepatic oncology group leader

Juan Carlos García-Pagán

Hepatic hemodynamics and portal hypertension group leader. Research Deputy Director of Hospital Clínic de Barcelona

Cristina Fillat

Gene therapy and cancer group leader

Gisela Sugranyes

Multimodal neuroimaging in high risk and early psychosis group leader

Michela Bertero

Director of Strategy

David Badia

Managing Director

SECRETARY

Gemma Llaverias

Head of Scientific Coordination

INSTITUTIONAL REPRESENTATIVES

Elisenda Eixarch

Physicians' Representatives of Hospital Clínic de Barcelona

Neus Agell

Vice-Dean of School of Medicine and Health Sciences. UB

Roser Cortés

Director of Institut d'Investigacions Biomèdiques de Barcelona (IIBB-CSIC)

AREA REPRESENTATIVES

AREA 1

Josep Maria Miró, Coordinator**Maria Cinta Cid**, Coordinator

AREA 2

Joan Albert Barberà, Coordinator**Eduard Guasch**, Coordinator

AREA 3

Mercedes Fernández, Coordinator**Xavier Forns**, Coordinator

AREA 4

Albert Compte, Coordinator**Gisela Sugranyes**, Coordinator

AREA 5

Josep M Llovet, Coordinator**Iñaki Martín-Subero**, Coordinator**Aleix Prat**, Coordinator

GUEST MEMBERS

Montserrat Batlle

Works Committee President

Antoni Trilla

Dean of the School of Medicine and Health Sciences Universitat de Barcelona

Fàtima Crispi

Researcher of the Fetal and perinatal medicine group

Anna Novials

Pathogenesis and prevention of diabetes group leader

Carmen Peralta

Liver transplantation and graft viability group leader

Azucena Salas

Researcher of the Inflammatory bowel disease group

Antoni Sisó

CAPSBE Primary Care Research Coordinator

Javier Domínguez

PhD Community Representative

OTHER COMMITTEES**Medicine Clinical Research Ethics Committee of the HCB**

ceic@clinic.cat

Animal Experimentation Ethics Committee of the UB

ceea@ccit.ub.edu

Biosafety Committee

bioseguretat@recerca.clinic.cat

PhD and Postdoc Committee

academic@recerca.clinic.cat

Ombuds Committee

ombudscommittee@recerca.clinic.cat

Sustainability Committee

sustainability@recerca.clinic.cat

Scientific Infrastructure Committee

neusagell@ub.edu

Gender Balance Committee

comigualtatidibaps@recerca.clinic.cat

Works Council

ceidibaps@recerca.clinic.cat

Research areas and groups

Area 1

Biological aggression and response mechanisms

- Ocular inflammation: clinical and experimental studies.
- Systemic autoimmune diseases.
- Systemic vasculitis.
- Molecular and cellular bases of inflammation. Structural and biological mass spectrometry.
- Hemotherapy – hemostasis.
- Immunogenetics and immunotherapy in autoinflammatory and immune responses.
- Immune receptors of the innate and adaptive system.
- AIDS and HIV infection.
- Emergencies: processes and pathologies.
- Endocarditis. Cardiovascular infections. Experimental model.
- Inflammatory joint diseases (IJDs).
- Nosocomial infection.

Area 2

Respiratory, cardiovascular and renal pathobiology and bioengineering

- Inflammation and repair in respiratory diseases.
- Respiratory biophysics and bioengineering.
- Physiopathological mechanisms of respiratory diseases.
- Translational research in pulmonary vascular diseases: cell proliferation and apoptotic mechanisms in pulmonary arterial hypertension.
- Familial cardiomyopathies and sudden death syndrome.
- Nephrology and transplantation (LENIT).
- Vascular cell biology.
- Cardiovascular risk nutrition and aging.
- Cardiomyopathies, heart failure and secondary pulmonary hypertension.
- Arrhythmias and physical activity.
- Biopathology and treatment of cardiac arrhythmias.
- Clinical and experimental respiratory immunoallergy.
- Atherosclerosis, coronary disease and heart failure.
- Cardiac imaging.
- Applied research in infectious respiratory diseases and critically ill patients.

Area 3

Liver, digestive system and metabolism

- Steatohepatitis and liver transplantation.
- Neuronal control of metabolism (NeuCoMe).
- Inflammation and liver disease.
- Mitochondrial regulation of cell death and steatohepatitis.
- Translational control of liver disease and cancer.
- Viral, genetic and immune-mediated liver diseases.
- Liver disease and the vascular system (LiVas).
- Chronic liver diseases: molecular mechanisms and clinical consequences.
- Liver vascular biology.
- Fetal and perinatal medicine.
- Endocrine disorders: crosstalk between molecular, metabolic and therapeutic determinants.
- Gynecology, human reproduction and women's health.
- Biomarkers and laboratory precision medicine in hepatology, metabolism, and rare diseases (HEMERA-Lab).
- Pathogenesis and prevention of diabetes.
- Molecular biology of reproduction and development.
- Protective strategies against hepatic ischemia reperfusion injury.
- Lipid trafficking and disease.
- Inflammatory bowel disease.
- Liver cell plasticity and tissue repair.
- Pathogenesis and treatment of autoimmunity.
- Translational research in diabetes, lipids and obesity.

Area 4

Clinical and experimental neuroscience

- Pathophysiology and treatment of neurodegenerative disorders.
- Neuropsychology and neuroimaging.
- Systems neuropharmacology.
- Child and adolescent psychiatry and psychology.
- Cerebrovascular diseases.
- Theoretical neurobiology of cortical circuits.
- Pathogenesis of autoimmune neuronal disorders.
- Cortical circuit dynamics.
- Inherited metabolic diseases and muscular disorders.
- Neurophysiology.
- Clinical Neurophysiology.
- Neuropsychology and neuroimaging.
- Advanced imaging in neuroimmunological diseases (ImaginEM).
- Clinical addictions.
- Parkinson disease and other neurodegenerative movement disorders: clinical and experimental research.
- Schizophrenia.
- Imaging of mood- and anxiety-related disorders (IMARD).
- Alzheimer's disease and other cognitive disorders.
- Systems neuroscience.
- Multimodal neuroimaging in high risk and early psychosis.
- Neurobiology.
- Bipolar and depressive disorders.

Area 5

Cancer

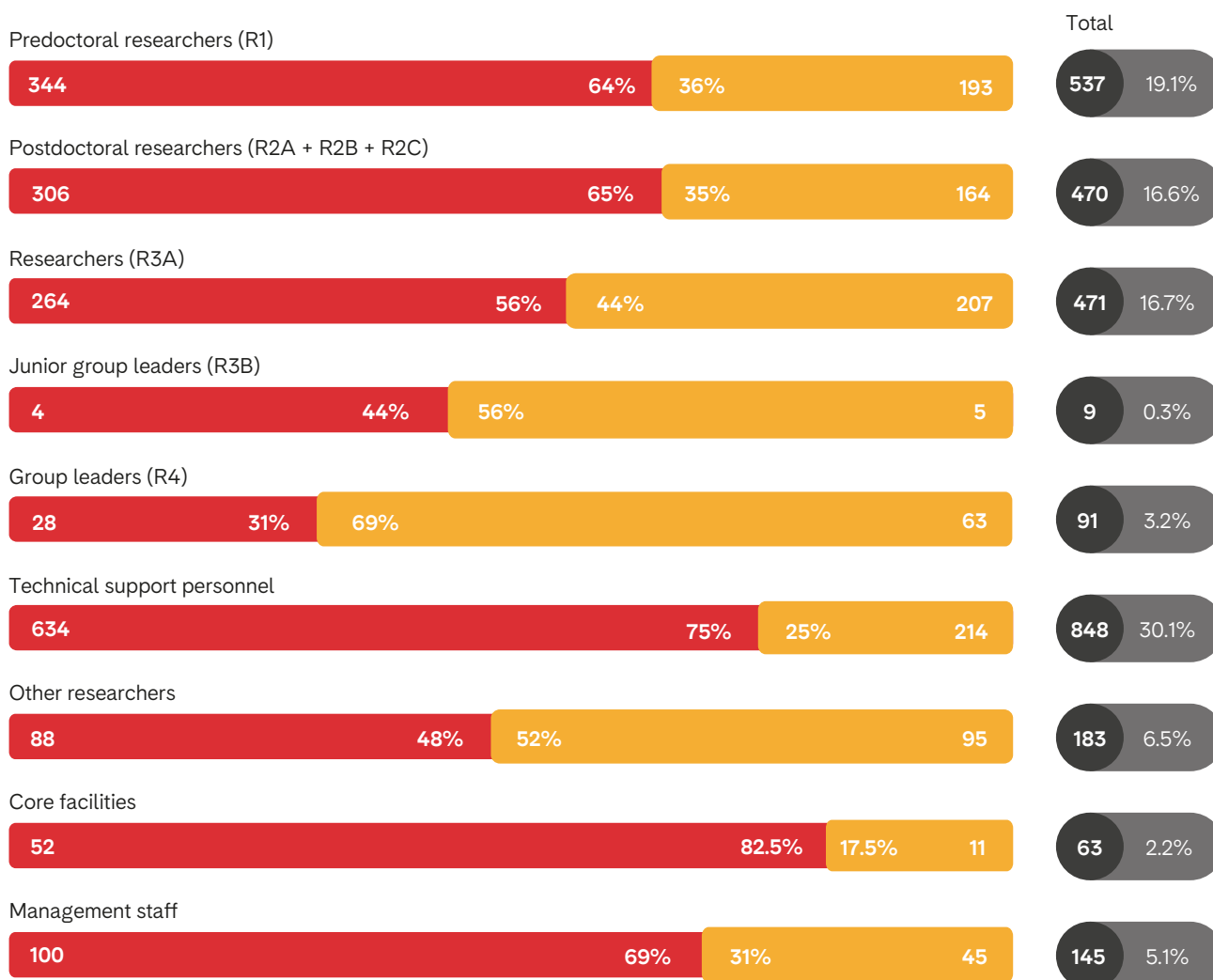
- Tumor microenvironment plasticity and heterogeneity (TMHet).
- Signal transduction, intracellular compartments and cancer.
- Genetics and urological tumors.
- Functional characterization of oncogenic mechanisms in lymphomagenesis.
- Molecular pathology of lymphoid neoplasms.
- Translational colorectal cancer genomics.
- Gastrointestinal and pancreatic oncology.
- Genetic predisposition to gastrointestinal cancer.
- Experimental therapies in lymphoid neoplasms.
- Molecular pathology of inflammatory conditions and solid tumours.
- Myeloid neoplasms.
- Myeloma, amyloidosis, macroglobulinemia and other gammopathies.
- Gene therapy and cancer.
- Cellular immunotherapies for cancer.
- Translational research in hepatic oncology.
- Lymphoid neoplasms.
- Translational oncology in upper gastrointestinal cancers
- Biomedical epigenomics.
- Hepatocellular signaling and cancer.
- Microenvironment in lymphoma pathogenesis and therapy.

- Gene regulation in stem cells, cell plasticity, differentiation, and cancer
- Translational genomics and targeted therapies in solid tumours.
- Melanoma: imaging, genetics and immunology.
- Hepatic oncology (BCLC).
- Molecular genetics of paediatric lymphomas.
- Hematopoietic progenitor cell transplantation.

Cross-cutting research groups

- Clinical pharmacology.
- Multimodal imaging biomarkers.
- Primary healthcare transversal research group.
- Research in nursing.

Staff



Talent recruitment and retention

Since 2015, IDIBAPS holds the “HR Excellence in Research” accreditation by the European Commission renewing its commitments and actions towards implementing the European Charter for Researchers and the Code of Conduct for their Recruitment, ensuring an open, transparent, and merit-based recruitment process, and fostering a supportive and high-quality research environment.

This year, IDIBAPS completed the renewal process of the award, further strengthening its alignment with the principles and practices promoted by the HRS4R strategy.



INSTITUCIÓ CATALANA DE RECERCA I ESTUDIS AVANÇATS (ICREA)



ICREA, the Catalan Institute for Research and Advanced Studies, is a Foundation supported by the Catalan Government that aims to recruit top leading scientists to carry out their activities in the Catalan research and innovation ecosystem. IDIBAPS hosts 6 ICREA Research Professors and 3 ICREA Academy Professors:

Josep M. Llovet

Translational research in hepatic oncology

José Ignacio Martín-Subero

Biomedical epigenomics

Albert Pol

Lipid trafficking and disease

Antonio Postigo

Transcriptional regulation of gene expression

María Victoria Sánchez-Vives

Systems neuroscience

Susana de la Luna

Gene therapy and cancer

David Bartrés-Faz (ICREA Academy)

Neuropsychology and neuroimaging

Rosa Faner (ICREA Academy)

Inflammation and repair in respiratory diseases

Joan Montero (ICREA Academy)

Cell biology, intracellular compartments and cancer

IDIBAPS 80/20 PROGRAMME

The 80/20 programme allows consolidated clinician scientists from Hospital Clinic Barcelona to develop innovative research at IDIBAPS.

The beneficiaries of this programme release 30 hours of their weekly healthcare activities (80% of a full-time dedication) to dedicate them to research. It is a 3-year position renewable for 2 additional years prior positive evaluation.

Josep M. Miró

Endocarditis. Cardiovascular infections. Experimental model

IDIBAPS 50/50 PROGRAMME

The 50/50 programme allows junior medical specialists (MD) with strong research experience (PhD), at least in part, in prestigious foreign research centers, to dedicate 50% of their time to develop competitive research at IDIBAPS. It is a 5-year position renewable for 5 years prior positive peer-review evaluation.

These junior clinician scientists shall be the future translational research group leaders who will push forward excellent translational research at the institute.

Gisela Sugranyes

Multimodal neuroimaging in high risk and early psychosis

Carlos Fernández de Larrea

Mechanisms of progression in monoclonal gammopathies

Eduard Guasch

Arrhythmias and physical activity

Sara Llufrí

Advanced imaging in neuroimmunological diseases

Georgina Espígol

Systemic vasculitis

Rosa M. Muñoz

Clinical and experimental respiratory immunoallergy

Virgínia Hernández-Gea

Liver disease and the vascular system (LiVas)

BITRECS PROGRAMME

WEB

www.clinicbarcelona.org/en/idibaps/working-idibaps/bitrecs



The second edition of BITRECS, funded by the La Caixa Foundation, code number LC-F/PR/SP3/52950012, is a research and training programme for postdoctoral fellows aimed at boosting their careers as clinician scientists.

In 2025, one fellow starts the BITRECS fellowship after being selected through a competitive international peer-reviewed call.

Lina Youssef

PROJECT

Machine learning-based identification of personalized intervention strategies to prevent preeclampsia and its consequences on cardiometabolic health.

PRINCIPAL INVESTIGATOR

Eduard Gratacós



The third edition of the programme is part of the Program of Excellence, code number EPAEC246711CLIN, from the Fundación Científica Asociación Española Contra el Cáncer" (AECC). This edition competitively selected 3 outstanding post-doctoral clinician-scientists to be fully devoted to research during 28 months in the field of immunotherapy.

Since October 2025, each position is focused on a specific research line: Pioneering Strategies to Maximize Immunotherapy Efficacy in lymphoid malignancies; Pioneering Strategies to Maximize Immunotherapy Efficacy in liver cancer; Pioneering Strategies to Maximize Immunotherapy Efficacy in breast cancer.

Juan-José Rodríguez

PROJECT

Uncovering the Role of Clonal Haematopoiesis of Indeterminate Potential in Immunotherapy Resistance and Toxicity in Lymphoid Malignancies.

PRINCIPAL INVESTIGATORS

Iñaki Martín-Subero
and Armando López-Guillermo

Ezequiel Mauro

PROJECT

Identification of determinants of neoadjuvant immunotherapy response in hepatocellular carcinoma and discovery of candidate biomarkers to maximize treatment efficacy.

PRINCIPAL INVESTIGATOR

Josep M. Llovet

Alberto Orta

PROJECT

Discovery and validation of therapeutic targets for the development of an antibody drug conjugate to overcome resistance to current treatments in metastatic breast cancer.

PRINCIPAL INVESTIGATOR

Aleix Prat

EMERALD PROGRAMME

WEB

<https://emerald-mdphd.eu>



EMERALD, co-funded by the European Commission, recruits and trains excellent predoctoral researchers previously trained as medical doctors. They all carry out a PhD research thesis in one of the 8 participating European research institutes, including IDIBAPS, with the leadership of the Centre for Genomic Regulation (CRG) in Barcelona. IDIBAPS hosts 2 of the EMERALD researchers.

Nina Visocnik

PROJECT

Role of GM-CSF in inflammatory activity and fibrosis in ANCA-associated vasculitis.

PRINCIPAL INVESTIGATOR

Maria Cinta Cid

Drilon Miftari

PROJECT

Understanding the Impact of Exercise on Cardiovascular Health: Using a Translational Approach.

PRINCIPAL INVESTIGATOR

Eduard Guasch

DYNAMIS DOCTORAL PROGRAMME

WEB

www.clinicbarcelona.org/en/idibaps/working-idibaps/dynamis



DYNAMIS, The Doctoral Programme Yielding Novel Advancements in Medicine and Innovative Solutions, is a Marie Skłodowska-Curie programme promoted by IDIBAPS and co-funded by the European Commission. DYNAMIS aims to recruit and train 10 excellent predoctoral researchers in translational medicine to address real-world medical challenges.

DYNAMIS fellows will carry out their PhD research under the joint supervision of a clinical and a basic researcher, and will receive comprehensive training through programme-tailored doctoral schools and secondment opportunities.

DYNAMIS Call 1 was launched in October 2025 to recruit the first five fellows through a six-month, multi-stage selection process. A second call will be launched later, while the first cohort begins their fellowships.

ASSISTANT RESEARCHERS PROGRAMME

The Assistant researchers programme is an institutional initiative that aims at incorporating staff scientists in senior highly competitive research groups to provide a strategic critical contribution, and to support and increase the research activities and leadership of the hosting laboratories. Three assistant researchers were hired in 2023 and two more in 2024 upon a competitive call evaluated by IDIBAPS SAB.

Diana Casas

Systems neuroscience
Mavi Sanchez-Vives' group

Marliés Cortés

Gene Regulation in Stem Cells, Cell Plasticity, Differentiation, and Cancer
Antonio Postigo's group

Alicia Garcia

Neuronal control of metabolism (NeuCoMe)
Marc Claret's group

Marta Kulis

Biomedical epigenomics
José Ignacio Martín-Subero's group

Roser Pinyol

Translational research in hepatic oncology
Josep M. Llovet's group

Research and innovation results

Scientific publications

Complete list of IDIBAPS scientific publications in 2025



Publication output and indicators

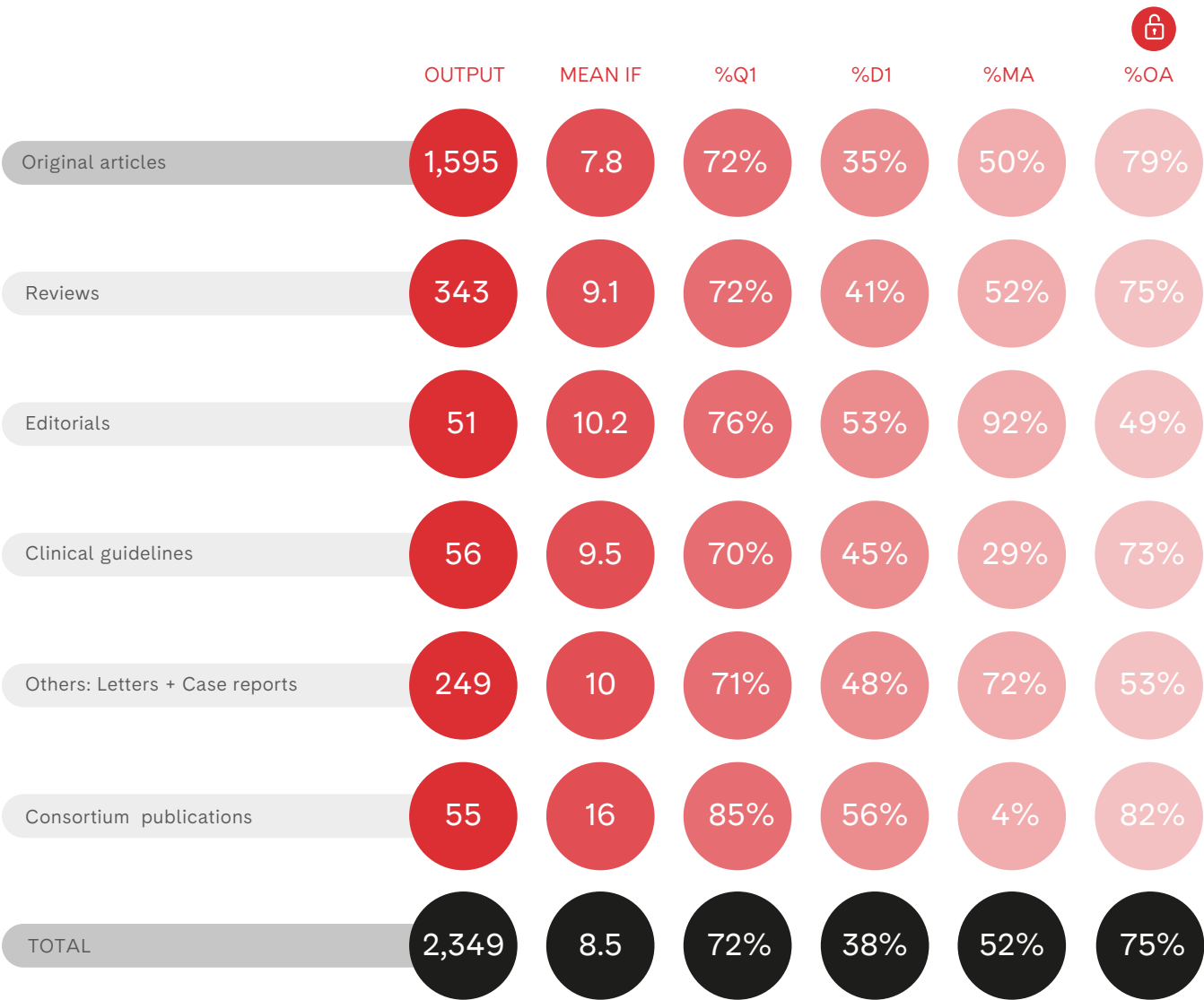


FIGURE LEGEND

Output
Total number of documents published in scholarly journals indexed in the ISI Web of Science.

Mean IF
Mean impact factor (2024 Journal Citation Reports).

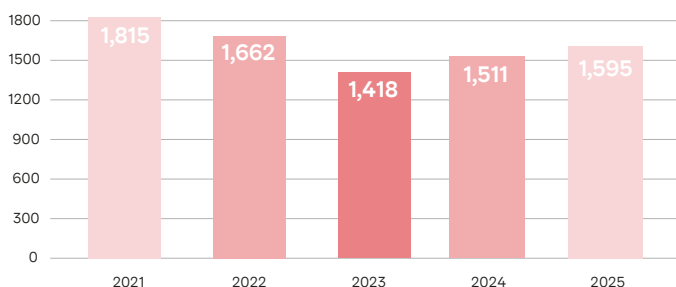
% Q1
% of publications published in journals ranked in the first quartile (top 25%) of their category as ordered by the 2024 Journal Citation Reports.

% D1
% of publications published in journals ranked in the first decile (top 10%) of their category as ordered by the 2024 Journal Citation Reports.

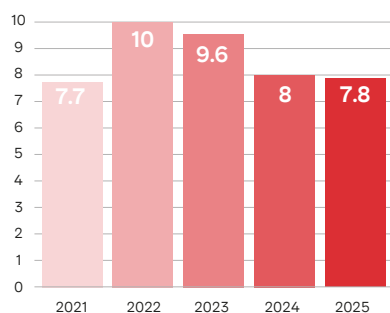
% MA
% of publications with main authorship (first, last or corresponding author is an IDIBAPS researcher).

% OA
% of publications in Open Access considering gold, green, hybrid and bronze route publications. Results have been obtained in June 2026 by means of the Unpaywall – Simple Query Tool.

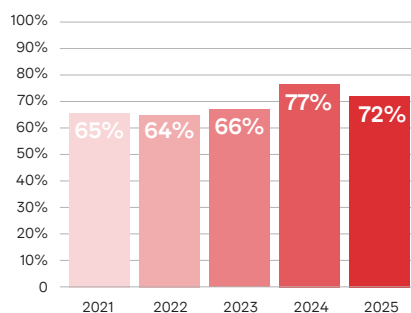
Evolution of the total number of original articles



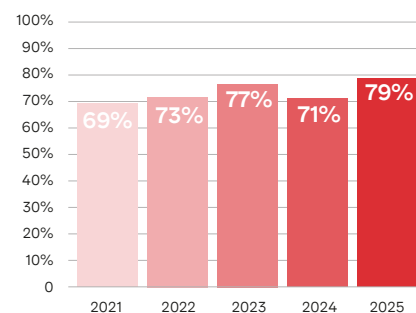
Evolution of the mean impact factor (IF) of the original articles



Evolution of the %Q1 (original articles)



Evolution of the %OA (original articles)



Evolution of the total number of original articles per area*

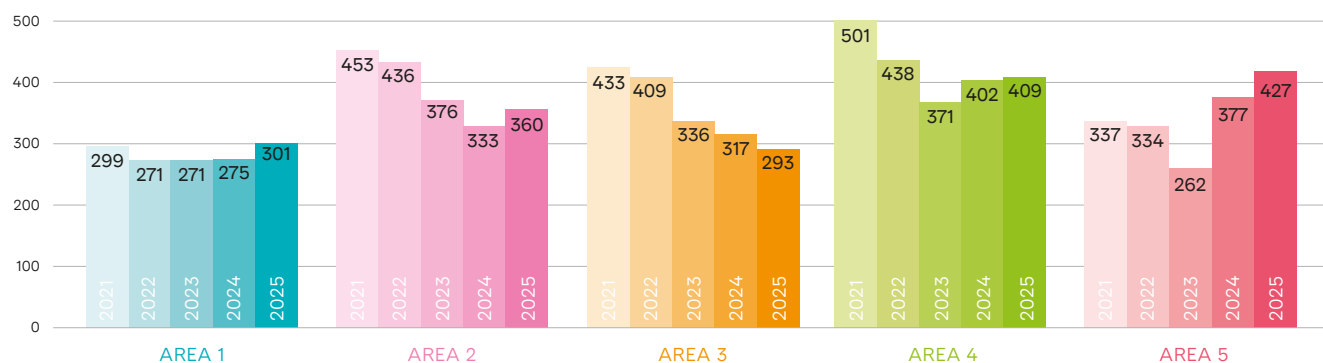


FIGURE LEGEND

Only original articles were taken into consideration. Publications resulting from collaboration between teams from different areas have been counted once for each area, so the sum of the articles per area is higher than the total.

* In 2024, there was a reorganization of the research areas, mainly affecting Areas 3 and 5. Some research groups from Area 3 moved to Area 5, so the results from 2024 onwards are not directly comparable with those from previous years.

Featured publications

Below is a selection of the most notable publications led by IDIBAPS' researchers in 2025.

AREA 1

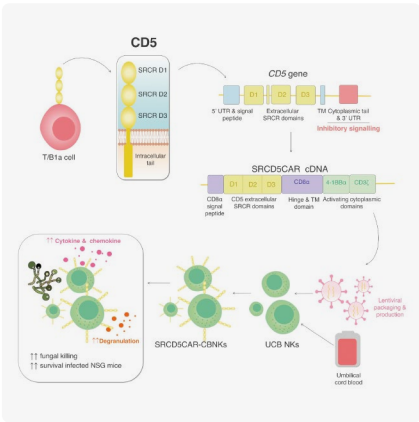
Adoptive transfer of NK cells engineered with a CD5-based chimeric antigen receptor (SRCD5CAR) to treat invasive fungal infections.

Velasco-de-Andrés M*, Català C, Carri- llo-Serradell L, Planells-Romeo V, Aragón- Serrano L, Español-Rego M, Pérez-Amill L, Puerta-Alcalde P, García-Vidal C, Juan M, Martín-Antonio B, **Lozano F***.

Molecular Therapy, 2025.

This work establishes a first-in-class, off-the-shelf immunotherapy for invasive fungal infections, overcoming key limita- tions of current antifungal drugs and rede- fining treatment paradigms for life-threa- tening mycoses

By engineering NK cells with a novel CD5-based chimeric antigen receptor that targets fungal β -glucans, we demonstrate broad antifungal activity against multiple clinically relevant pathogens. This approach opens the door to universal cell therapies, offering a promising strategy to improve outcomes for patients with severe fungal infections.



AREA 1

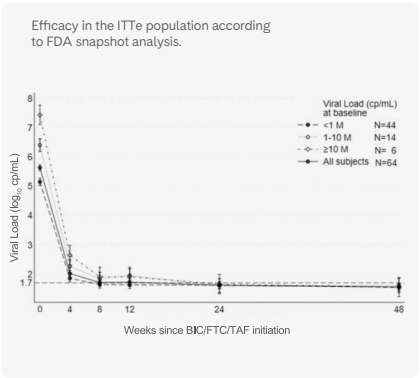
Bictegravir/emtricitabine/tenofovir alafenamide for primary HIV infection: Efficacy, safety and impact on viral reservoir (the BIC-PHI clinical trial).

Ambrosioni J*, de Lazzari E, Sánchez-Pa- lomino S, Bailón L, Suanzes P, Busca C, Ra- mos-Ruperto L, Orviz E, Rivero Á, Mothe B, Romero JD, Falcó V, Vicens-Artés S, Mora- ga E, Cruceta A, **Mallolas J, Miró JM***.

Journal of Infection, 2025.

This clinical trial shows that bictegra- vir/emtricitabine/tenofovir alafenamide is highly effective and safe when initiated du- ring primary HIV infection, achieving rapid viral suppression and a significant reduc- tion in the HIV reservoir.

The study provides relevant evidence su- pporting early integrase inhibitor-based treatment strategies to improve long-term clinical outcomes and potentially limit viral persistence, contributing to future HIV cu- re-oriented approaches.



AREA 2

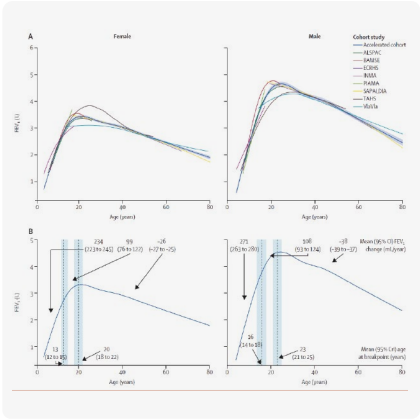
General population-based lung function trajectories over the life course: an acce- lerated cohort study.

Garcia-Aymerich* J, de Las Heras M, Car- sin AE, Accordini S, Agustí A, Bui D, Dhar- mage SC, Dodd JW, Eze I, Gehring U, Gisl- son T, Granell R, Imboden M, Iñiguez C, Jeong A, Koch S, Koppelman GH, Leynaert B, Melén E, Perret J, Probst-Hensch N, San- ta-Marina L, Torrent M, Vicendese D, Vonk JM, de Vries M, Haydn Walters E, Wang G, Wedzicha JA, Jarvis D, **Faner R**.

The Lancet Respiratory Medicine, 2025.

Lung function is a determinant of health, but current knowledge on lung function over the life course is based on fragmen- ted, potentially biased data. We created an accelerated cohort by pooling data from eight population-based cohort studies from Europe and Australia.

For the first time we showed that in both sexes, FEV1 and FVC increased in two pha- ses, with a fast increase until around age 13-16 years, and then a slower increase un- til a peak. Importantly, we did not find a plateau phase after the peak, and lung function decline started earlier than pre- viously described. These observations pro- vide an essential, but previously unavaila- ble, framework to assess and monitor lung health over the life course.



AREA 2

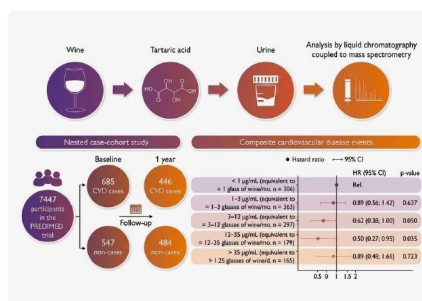
Urinary tartaric acid as a biomarker of wine consumption and cardiovascular risk: the PREDIMED trial.

Domínguez-López I, Lamuela-Raventós RM, Razquin C, Arancibia-Riveros C, Galikina P, Salas-Salvadó J, Alonso-Gómez ÁM, Fitó M, Fiol M, Lapetra J, Gómez-Gracia E, Sorlí JV, Ruiz-Canela M, Castañer O, Liang L, Serra-Majem L, Hu FB, Ros E, Martínez-González MÁ*, **Estruch R***.

European Heart Journal, 2025.

This study, which was conducted as part of the PREDIMED trial, shows that urinary tartaric acid, which is an objective biomarker of wine consumption, is associated with a decreased risk of cardiovascular disease. Participants who consumed wine in moderation had a significantly lower incidence of cardiovascular events than those who consumed little or a lot of wine.

These results emphasise the importance of objective biomarkers in nutritional epidemiology and suggest that moderate wine consumption as part of a Mediterranean diet may have cardioprotective properties.



AREA 3

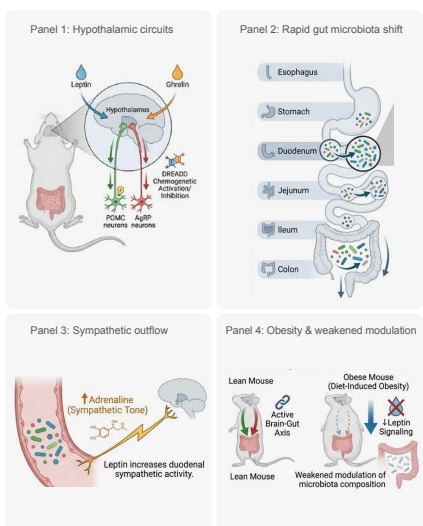
Rapid modulation of gut microbiota composition by hypothalamic circuits in mice.

Toledo M, Martínez-Martínez S, Van Hul M, Laudo B, Eyre E, Pelicaen R, Puel A, Altirriba J, Gómez-Valadés AG, Inderhees J, Moreno-Indias I, Pozo M, Chivite I, Milà-Guasch M, Haddad-Tóvolli R, Obri A, Fos-Domènech J, Tahiri I, Llana SR, Ramírez S, Monelli E, Schwaninger M, Cani PD*, Nogueiras R*, **Claret M***.

Nature Metabolism, 2025.

This study uncovers a paradigm-shifting brain-gut-microbiota axis whereby hypothalamic circuits rapidly and anatomically remodel gut microbiota composition within hours, independently of food intake. We show that activation of POMC/AgRP neurons or central leptin signalling dynamically reshapes microbial communities through sympathetic gut pathways, an effect disrupted in obesity.

These findings redefine the brain as an active regulator of microbiome plasticity and open transformative avenues for metabolic research.



AREA 3

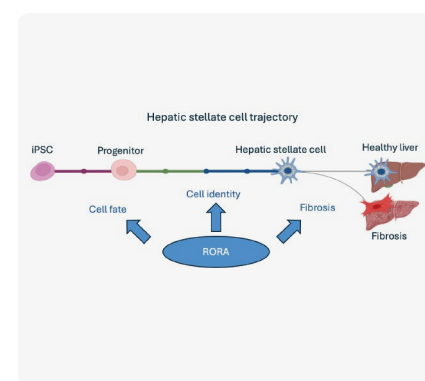
Trajectory analysis of hepatic stellate cell differentiation reveals metabolic regulation of cell commitment and fibrosis.

Martínez García de la Torre RA, Vallverdú J, Xu Z, Ariño S, Ferrer-Lorente R, Zanatto L, Mercado-Gómez M, Aguilar-Bravo B, Ruiz-Blázquez P, Fernandez-Fernandez M, Navarro-Gascon A, Blasco-Roset A, Sánchez-Fernández-de-Landa P, Pera J, Romero-Moya D, Ayuso Garcia P, Martínez Sánchez C, Sererols Viñas L, Cantalops Vilà P, I Cárcamo Giráldez C, McQuillin A, Morgan MY, Moya-Rull D, Montserrat N, Eberlé D, Staels B, Antoine B, Azkargorta M, Lozano JJ, Martínez-Chantar ML, Giorgetti A, Elortza F, Planavila A, Varela-Rey M, Woodhoo A, Zorzano A, Graupera I, Moles A, Coll M, **Affo S***, **Sancho-Bru P***.

Nature Communications, 2025.

This paper explores a new concept based on the study of cell differentiation trajectories to elucidate mechanisms involved in both development and disease. In this study we used iPSC-differentiated hepatic stellate cells to interrogate pathways involved in cell commitment and identity and also involved in fibrosis.

We uncover how the nuclear receptor RORA controls cell metabolism, regulating mesoderm commitment and fibrosis in the liver but also in the heart or kidney.



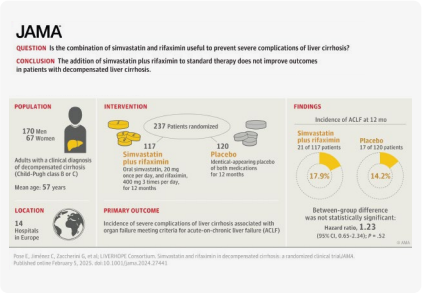
AREA 3

Simvastatin and Rifaximin in Decompensated Cirrhosis: A Randomized Clinical Trial.

Pose E*, Jiménez C, Zaccherini G, Campion D, Piano S, Uschner FE, de Wit K, Roux O, Gananandan K, Laleman W, Solé C, Alonso S, Cuyàs B, Ariza X, Juanola A, Ma AT, Napoleone L, Gratacós-Ginès J, Tonon M, Pompili E, Sánchez-Delgado J, Allegretti AS, Morales-Ruiz M, Carol M, Pérez-Guasch M, Fabrellas N, Pich J, Martell C, Joyera M, Domenech G, Ríos J, Torres F, Serra-Burriel M, Hernández R, Solà E, Graupera I, Watson H, Soriano G, Bañares R, Mookerjee RP, Francoz C, Beuers U, Trebicka J, Angeli P, Alessandria C, Caraceni P, Vargas VM, Abraldes JG, Kamath PS, **Ginès P***; LIVERHOPE Consortium.

JAMA, 2025.

Simvastatin and rifaximin have shown some beneficial effects in cirrhosis but it is not known whether they may prevent disease progression or reduce mortality. In a randomized double-blind placebo-controlled trial that included 237 patients with decompensated cirrhosis, no significant differences were found in terms of the incidence of acute-on-chronic liver failure, transplant or death, and complications of cirrhosis. The combination of simvastatin and rifaximin in patients with decompensated cirrhosis did not prevent severe complications of cirrhosis.



AREA 4

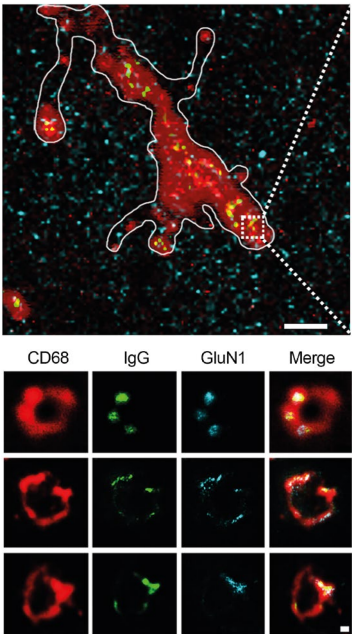
Neuro-immunobiology and treatment assessment in a mouse model of anti-NMDAR encephalitis.

Maudes E, Planagumà J, Marmolejo L, Radosevic M, Serafim AB, Aguilar E, Sindreu C, Landa J, García-Serra A, Mannara F, Cunquero M, Smith A, Milano C, Peixoto-Moledo P, Guasp M, Ruiz-Garcia R, Gray SM, Spatola M, Loza-Alvarez P, Sabater L, Matute C, **Dalmau J***.

Brain, 2025.

Using an active immunization protocol this highly cited study established the first murine model that recapitulates key phenotypic, electrophysiological, and histopathological features of human anti-NMDAR encephalitis. It also provides a robust experimental platform for investigating disease mechanisms and potential therapeutic interventions.

The study was featured on the journal cover and in an accompanying editorial the model was described as “a very valuable tool in rare diseases,” underscoring its innovation and translational potential.



AREA 4

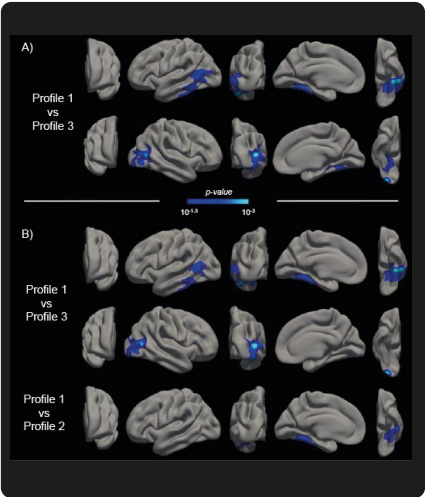
Psychological profiles associated with mental, cognitive and brain health in middle-aged and older adults.

Bartrés-Faz D*, Demnitz-King H, Cabello-Toscano M, Vaqué-Alcázar L, Saudners R, Touron E, Cattaneo G, Gonneaud J, Klimmeck O, Bargalló N, Sánchez-Solana J, Tormos JM, Chételat G, Pascual-Leone A, Marchant NL*.

Nature Mental Health, 2025.

This study is the first to demonstrate that middle aged and older adults can be classified according to risk or protective psychological profiles that show associations with cognitive decline and measures of brain atrophy over time.

This study, coordinated by Group Leader Prof. D. Bartrés-Faz in collaboration with research groups from the University College London (Prof. N. Marchant) and the INSERM (France, Prof. G Chételat) represents one cornerstone of the international research line aiming to characterize and investigate psychological features as modifiable factors for promotion of brain health and dementia prevention in advanced age.



AREA 4

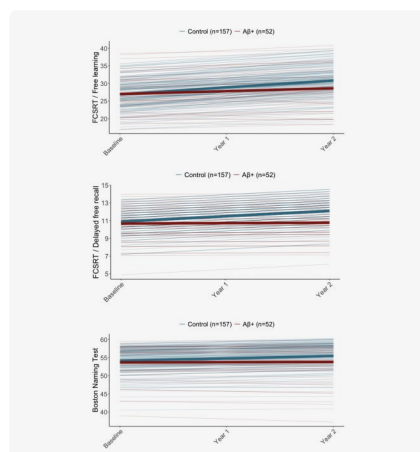
Decreased practice effects in cognitively unimpaired amyloid betapositive individuals: a multicenter, longitudinal, cohort study.

Tort-Merino A*, Perez-Millan A, Falgas N, Borrego-Ecija S, Esteller D, Bosch B, Castellvi M, Junca-Parella J, del Val-Guardiola A, Fernandez-Villullas G, Antonell A, Sanchez-Saudinos MB, Rubio-Guerra S, Zhu N, Garcia-Martinez M, Pozueta A, Estanga A, Ecay-Torres M, de Luis C, Tainta M, Altuna M, Rodriguez-Rodriguez E, Sanchez-Juan P, Martinez-Lage P, Lleo A, Fortea J, Illian-Gala I, Balasa M, Llado A, **Rami L, Sanchez-Valle R.**

Alzheimer's & Dementia, 2025.

The study showed that asymptomatic individuals with positive amyloid- β biomarkers (i.e., preclinical Alzheimer's disease) exhibit reduced practice effects on repeated neuropsychological testing compared with amyloid-negative controls. The findings suggest that diminished learning across repeated assessments may reflect one of the earliest cognitive indicators of preclinical Alzheimer's disease, before overt symptoms appear.

This could improve early detection and refine outcome measures for prevention trials by complementing traditional cognitive endpoints with practice-effect trajectories.



AREA 5

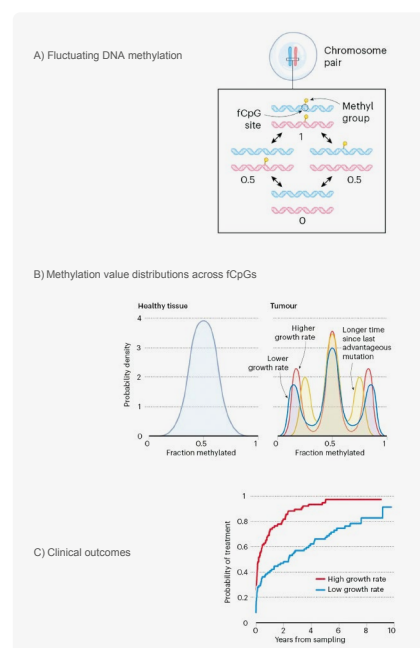
Fluctuating DNA methylation tracks cancer evolution at clinical scale.

Gabbutt C*, Duran-Ferrer M, Grant HE, Mallo D, Nadeu F, Househam J, Villamor N, Müller M, Heath S, Raineri E, Krali O, Nordlund J, Zenz T, Gut IG, Campo E, Lopez-Guillermo A, Fitzgibbon J, Barnes CP, Shibata D, **Martin-Subero JI***, Graham TA*.

Nature, 2025.

In this study, we developed EVOFLUX, a method that uses naturally-occurring fluctuating DNA methylation barcodes to decode the evolutionary dynamics of tumor cells from cost-effective bulk epigenetic profiles. Applied to 2,000 lymphoid cancers, it reveals when the cancer started to clonally expand, the intrinsic growth potential, and the presence of (sub)clonal diversity.

Crucially, decoding the past of cancer cells predicts future behavior, with evolutionary history strongly informing prognosis in chronic lymphocytic leukemia and tracing Richter transformation decades before diagnosis.



AREA 5

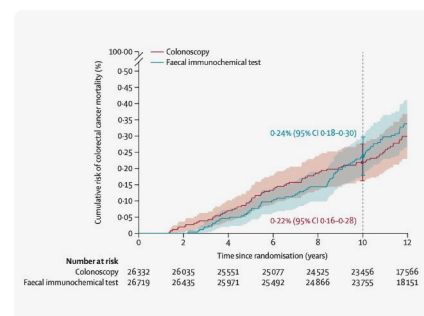
Effect of invitation to colonoscopy versus faecal immunochemical test screening on colorectal cancer mortality (COLONPREV): a pragmatic, randomised, controlled, non-inferiority trial.

Castells A*, Quintero E, Bujanda L, Castán-Cameo S, Cubiella J, Díaz-Tasende J, Lanás Á, Ono A, Serra-Burriel M, Frías-Arrocha E, Hernández C, Jover R, Andreu M, Carballo F, Morillas JD, Salas D, Almazán R, Alonso-Abreu I, Banalles JM, Hernández V, Portillo I, Vanaclocha-Espí M, de la Vega M; COLONPREV study investigators.

The Lancet, 2025.

First randomized control trial comparing head-to-head the two most widely used CRC screening strategies (FIT and colonoscopy). Participation in screening was higher among individuals invited to FIT screening than colonoscopy screening and, based on this participation, a FIT-based program was non-inferior to a colonoscopy-based program for CRC-related mortality and incidence at 10 years.

Its conclusions are being included in EU and IARC recommendations as the most robust evidence of FIT effectiveness to date. The Lancet has dedicated editor's comment and an editorial.



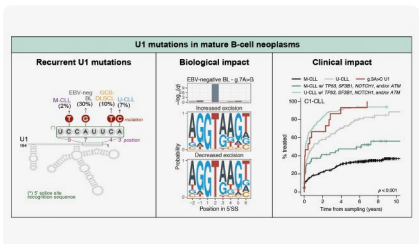
AREA 5

Disease-specific U1 spliceosomal RNA mutations in mature B-cell neoplasms.

Nadeu F*, Shuai S, Clot G, Hilton LK, Diaz-Navarro A, Martín S, Royo R, Baumann T, Kulis M, López-Oreja I, Cossio M, Lu J, Ljungström V, Young E, Plevova K, Knisbacher BA, Lin Z, Hahn CK, Bousquets P, Alcoceba M, González M, Colado E, Payer ÁR, Aymerich M, Terol MJ, Rivas-Delgado A, Enjuanes A, Ruiz-Gaspà S, Chatzikonstantinou T, Hägerstrand D, Jylhä C, Skafansson A, Mansouri L, Stranska K, Doubek M, van Gastel-Mol EJ, Davis Z, Walewska R, Scarfò L, Trentin L, Visentin A, Parikh SA, Rabe KG, Moia R, Armand M, Rossi D, Davi F, Gaidano G, Kay NE, Shanafelt TD, Ghia P, Oscier D, Langerak AW, Beà S, López-Guillermo A, Neuberg D, Wu CJ, Getz G, Pospisilova S, Stamatopoulos K, Rosenquist R, Huber W, Zenz T, Colomer D, Martín-Subero JI, Delgado J, Morin RD, Stein LD, Puente XS, **Campo E***.

Leukemia, 2025.

A specific mutation in the position 3 (g.3A>C) of U1 spliceosomal RNA disrupt splicing in chronic lymphocytic leukemia (CLL), but the role of U1 mutations and their clinical impact across B cell neoplasms is unclear. We analyzed 1,670 CLL and 363 B-cell lymphomas. In CLL, g.3A>C mutation (3.5%) predicts rapid progression independent of standard markers, while a new g.9C>T mutation (1.5%) also drives splicing changes and poor prognosis. In lymphomas, g.4C>T occurs in ~10% of germinal center diffuse large B cell lymphoma and g.7A>G in ~30% of EBV negative Burkitt lymphoma. These data identify U1 as a recurrent driver in aggressive B cell malignancies.



AREA 5

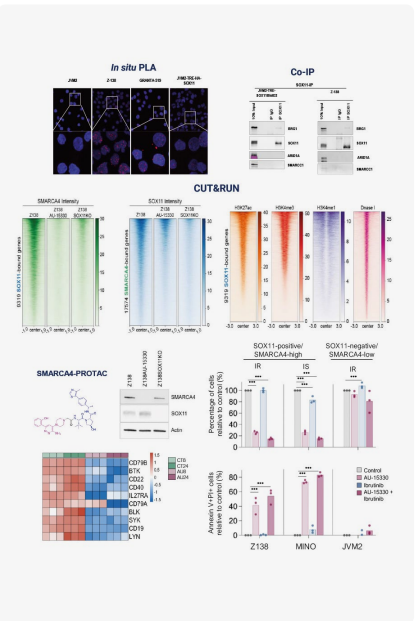
The SOX11:SMARCA4 complex is a driver of oncogenic transcriptional programs in mantle cell lymphoma.

De Bolòs A, Carreras-Caballé M, Sureda-Gómez M, Rodríguez ML, Charalampopoulou S, Alberio R, Maiques-Diaz A, Playa-Albinyana H, Clot G, López C, Colomer D, Martín-Subero JI, Campo E, Reverter D, Villanueva J, **Amador V***.

Blood Cancer Journal, 2025.

Using BioID2 proximity labeling and mass spectrometry, we mapped the SOX11 interactome in mantle cell lymphoma and identified SMARCA4 as a key cofactor driving oncogenic programs of proliferation, survival, stemness and drug resistance.

Disturbing SOX11:SMARCA4 interaction through PROTAC-mediated SMARCA4 degradation reduced chromatin accessibility, induced apoptosis, suppressed tumor growth, and reversed ibrutinib resistance, revealing a previously unexplored epigenetic vulnerability in aggressive MCL and new avenues for the treatment of SOX11-driven cancers, traditionally considered “undruggable”.



CROSS-CUTTING RESEARCH GROUPS

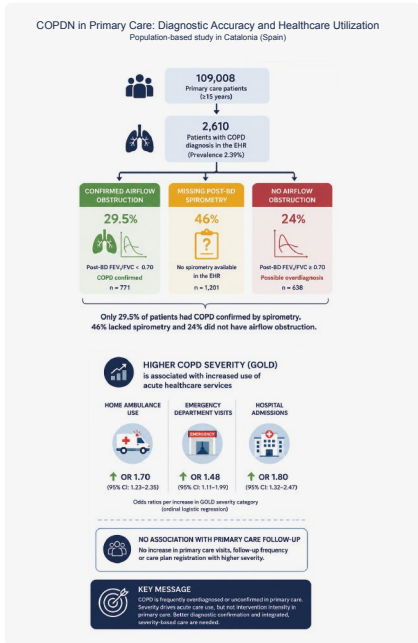
Prevalence, diagnostic accuracy, and healthcare utilization patterns in patients with COPD in primary healthcare: a population-based study.

Vila M, Sisó-Almirall A, Ocaña A, Agustí A, Faner R, Borrás-Santos A, **González-de Paz L***.

NPJ Primary Care Respiratory Medicine, 2025.

This population-based study of 109,008 primary care patients in Catalonia identified 2,610 with a COPD diagnosis (prevalence 2.39%). Post-bronchodilator spirometry was missing in 46% of records, and 24% of tested patients lacked airflow obstruction, suggesting substantial overdiagnosis.

Higher GOLD severity was associated with more emergency visits, ambulance use and hospitalisations, but not with more intensive follow-up or care plans. These findings reveal a gap between COPD severity and primary care intensity, supporting better diagnostic confirmation and integrated, severity-based care.



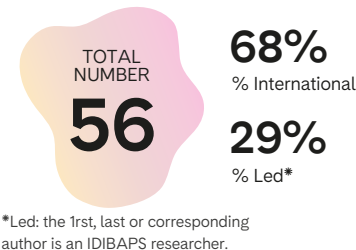
Knowledge translation and innovation

One of the IDIBAPS strategic goals is to transfer knowledge for the benefit of patients and society, as illustrated by multiple outputs, including: Clinical Guidelines, Clinical Trials and Technology Transfer activities, including license agreements and creation of spin-offs companies.

CLINICAL GUIDELINES

Every year IDIBAPS researchers participate in and sometimes lead the elaboration of international clinical guidelines with a remarkable impact in patients' care and medical practice.

Clinical guidelines published in 2025:



*Led: the first, last or corresponding author is an IDIBAPS researcher.

CLINICAL TRIALS

IDIBAPS researchers participate in multiple clinical trials for the development of drugs, treatments or medical devices.

In 2025, IDIBAPS participated in 1,150 clinical trials, including 17 academic independent trials, and the others industry-led trials. They initiated 257 new trials, overall.

The HCB-IDIBAPS Clinical Trial Unit provides support regarding ethical, methodological, regulatory and logistical aspects of clinical trials with drugs or with advanced therapies promoted by the institute's researchers.

Clinical trials	Private	Academic	Total
Biological aggression and response mechanisms	79	3	82
Respiratory, cardiovascular and renal pathobiology and bioengineering	186	2	188
Liver, digestive system and metabolism	81	0	81
Clinical and experimental neuroscience	94	2	96
Cancer	585	10	595
Transversal	2	0	2
Other	106	0	106
Total	1,133	17	1,150

TECHNOLOGY TRANSFER AND INNOVATION

IDIBAPS manages 94 patent families and 18 proprietary software, including 77 active license agreements with several industry partners. During 2025, 19 new patent applications were filed: 10 priority patents, 5 PCTs, and 4 patents entered into National Phases in several countries.

Besides, 10 new license agreements were signed with national and international companies.



It is remarkable to mention that the incomes received from license agreements during 2025 have increased 60% compared to those received in 2024. Moreover, IDIBAPS has participated in the foundation of 26 companies since 2008 acting as shareholder in 18 of them. Among these 18 spin-offs, 11 remain active in 2025, based on discoveries and developments by HCB and IDIBAPS researchers. These active companies operate in the medtech field (50%) followed by biotech (30%) and digital health (20%). This distribution reflects the predominant weight of medical and diagnostic technologies within the Campus Clínic spin-off ecosystem, complemented by a solid core of biotechnology and digital health initiatives.



In terms of financing, during 2025, the spin-offs raised a combined €9.03 million. The total capital raised by these spin-offs since its foundation amounts to €34.7 million. In terms of impact, 3 out of these 11 spin-offs have already launched a first product to the market and have generated an impact over 9000 patients. These spin-offs have created a total amount of 48.4 FTE and are split 59% women / 41% men.

Funding

Funding sources

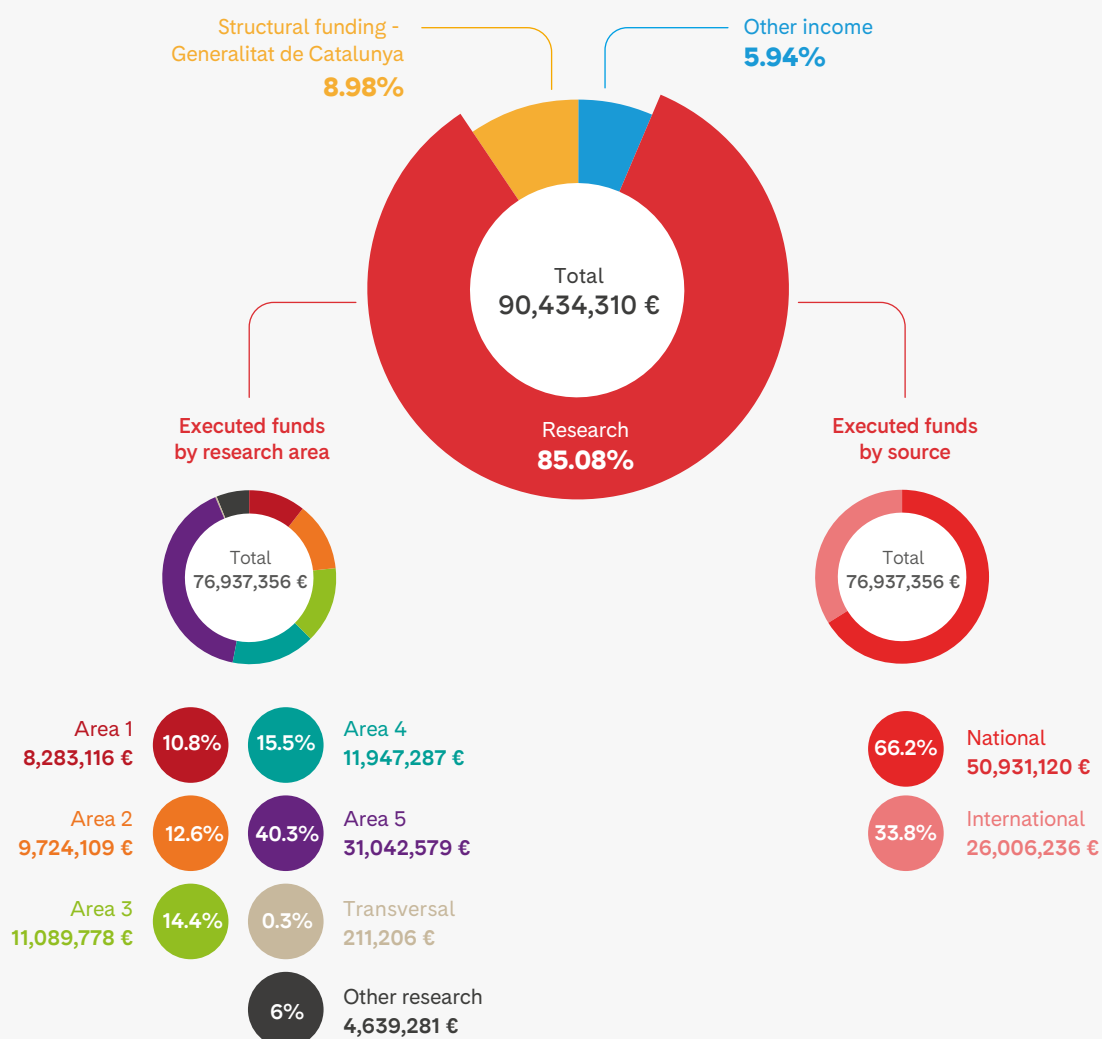
STRUCTURAL FUNDING	8,123,277 €	8.98%
Generalitat de Catalunya - Recerca i Universitats	6,054,722 €	74.5%
Generalitat de Catalunya - Salut	2,068,555 €	25.5%
ACTIVITIES R+D+I	76,937,356 €	85.08%
Competitive funding	34,812,828 €	45.2%
Contracts	29,531,926 €	38.4%
Services	5,400,560 €	7%
Donations	7,000,989 €	9.1%
Knowledge dissemination	191,052 €	0.2%
OTHER INCOME	5,373,677 €	5.94%
Rental income	894,822 €	16.7%
Other income	102,610 €	1.9%
Financial income	2,256,950 €	42%
Capital grant	2,119,295 €	39.4%



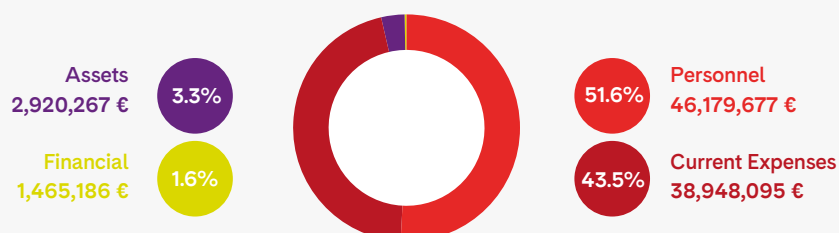
Total funding sources

90,434,310 €

Total funding sources: 90,434,310 €

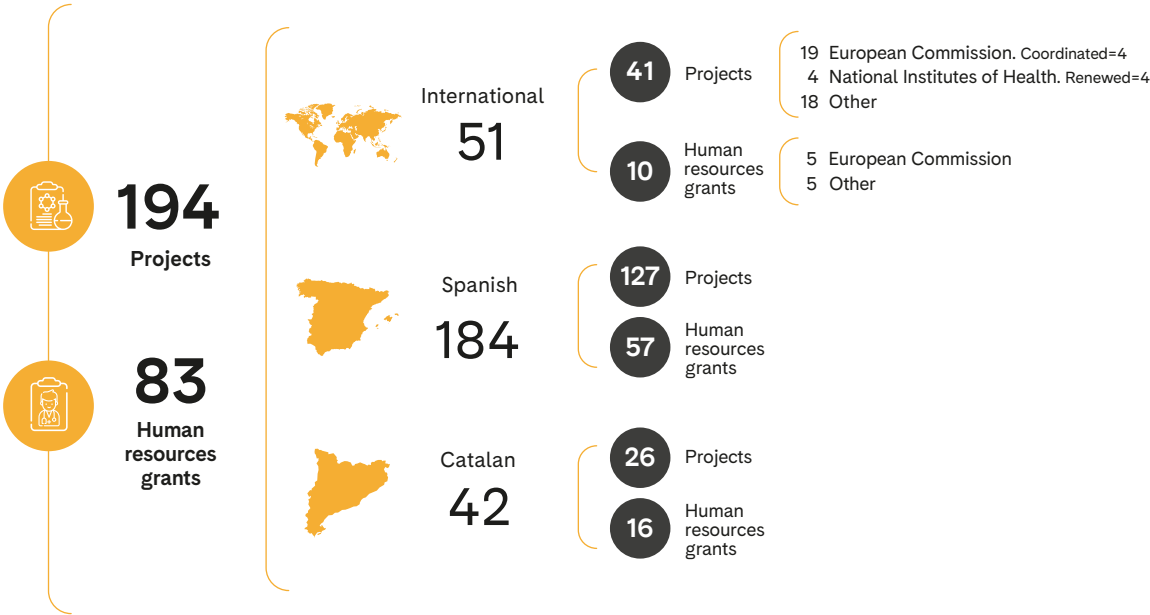


Expenses
89,513,225 €



Competitive projects

New competitive projects



Staff of IDIBAPS research groups and other members of the Clínic Campus have actively participated in multiple International, Spanish and Catalan competitive calls.

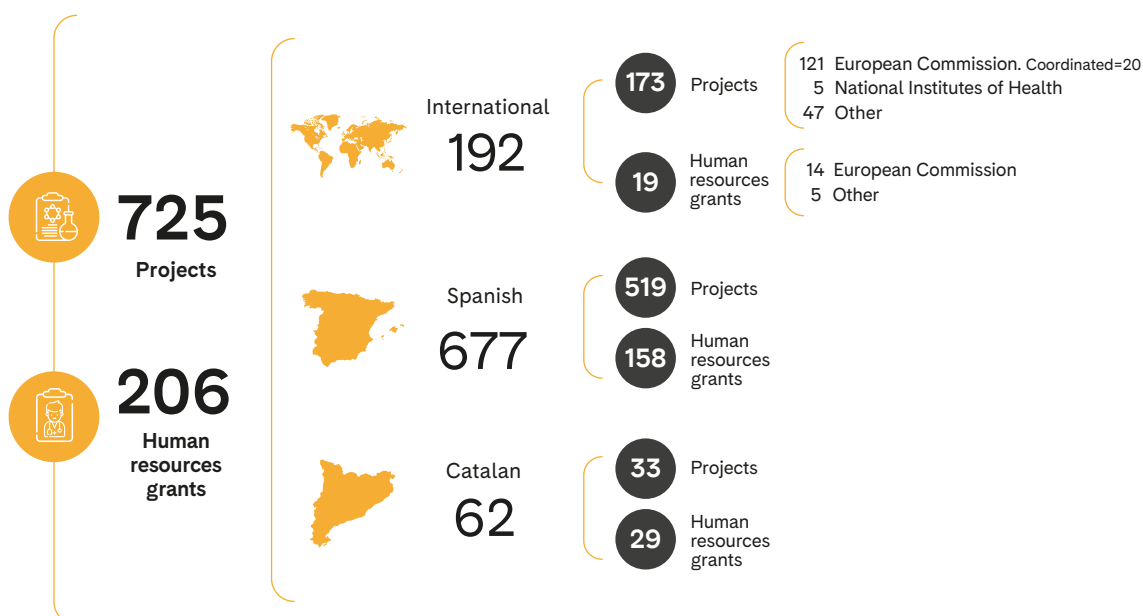
As a result, 277 competitive projects were granted to IDIBAPS in 2025.

Of the 226 grants received in Catalonia and Spain, we highlight 99 grants funded by the ISCIII (of which 70 are Health R&D projects), 33 funded by the AEI (of which 18 are R&D projects), 5 funded by La Marató de TV3 (corresponding to the Respiratory Diseases call) and 4 funded by Fundació "La Caixa" (of which 3 are research projects).

51 new international competitive projects were obtained in 2025, some of them belonging to highly competitive and prestigious funding programmes such as: 3 projects funded by the European Research Council, 5 projects belonging to the Marie Skłodowska-Curie Actions and 3 projects from the Innovative Health Initiative.

Active competitive projects

Total
931



In 2025, there were 931 active competitive projects at IDIBAPS, including both ongoing projects and those completed during the year. The funding obtained through these projects supported research activities and research fellowships.

Many of these projects were funded or co-funded by the European Regional Development Fund (ERDF). In addition, IDIBAPS continued to participate in projects funded through Spain's Recovery, Transformation and Resilience Plan (PRTR), financed by the European Union – NextGenerationEU.

Of these, 739 projects were funded by Catalan and Spanish entities. We highlight the following: 384 funded by ISCIII (including 228 Health R&D projects), 95 by the AEI (including 39 R&D projects), 62 by the Government of Catalonia (including 39 from AGAUR and 14 from the Catalan Ministry of Health), 35 by La Marató de TV3, 21 by the AECC (including 13 research projects), and 14 by Fundació "la Caixa" (including 8 CaixaResearch Health projects).

135 projects are being funded by the European Commission including: 10 funded by the European Research Council (1 ERC-SyG led by our institution), 14 projects belonging to the Marie Skłodowska-Curie Actions (1 led by our institution), 26 projects from the Societal Challenge 1/Cluster Health programme (1 led by our institution), 4 projects from the Mission Cancer (3 led by our institution), 14 projects funded

by the Innovative Medicines Initiative/Innovative Health Initiative (1 led by our institution), 17 projects funded by the European Innovation Council (13 EIC Health and 4 Pathfinder Open (2 EIC projects are led by our institution) and 10 projects funded by the EU4Health programme (1 led by our institution). Other relevant projects include 3 funded by the National Institutes of Health.

Networks

IDIBAPS actively participates in a wide range of national and international networks and alliances, focusing on science, technology, innovation, and research management.

International



BIOSAMPLE HUB

Biosample HUB to connect biotech companies with biobanks and facilitate access to reliable biospecimens for developing new drugs, diagnostics and vaccines.



COARA

Coalition for Advancing Research Assessment (COARA) to reflect and reform the research assessment system to maximize the quality and impact of research.



CTLS

The Core Technologies for Life Sciences (CTLS) to provide cutting-edge technologies and expert support to advance high-quality biomedical research.



EARA

European Animal Research Association (EARA) to foster transparency and communication in animal experimentation.



EARMA

European Association of Research Managers and Administrators (EARMA) to represent and support research management and administration professionals, fostering collaboration, professionalisation and best practices across the European Research Area.



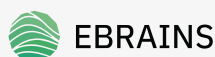
EATRIS

European Infrastructure for Translational Medicine (EATRIS) brings together resources and services for research communities to translate scientific discoveries into benefits for patients.



EBRAINS

EBRAINS to gather data, tools and computing facilities for brain-related research, built with interoperability at the core.



ECRIN

European Clinical Research Infrastructure Network (ECRIN) to provide support, advice and services for the development of multinational clinical trials in Europe.



EIT HEALTH

European Institute of Innovation and Technology - EIT Health - network connects world-class organisations across Europe from the three worlds of business, research and education to improve healthcare across Europe.



ERRIN

European Regions Research and Innovation Network (ERRIN) to connect regional actors in Brussels, facilitating collaboration, knowledge exchange and policy engagement to strengthen regional participation in European research and innovation initiatives.



ESBB

European, Middle Eastern and African Society for Biopreservation and Biobanking (ESBB) to advance biobanking science and practice by fostering collaboration, education, and innovation among its members.



INNODIA

INNODIA accelerates the development of therapies to prevent and cure type 1 diabetes.



Spanish



ISCIII NETWORKS

BIOBANKS AND BIOMODELS PLATFORM

The ISCIII Biobanks and Biomodels Platform is an initiative of the Carlos III Health Institute to manage and supply biological samples of human origin and associated clinical data. Also promotes the development of new resources as biomodels.



CIBER

Networked Biomedical Research Centre (CIBER) to foster excellent research in biomedical research and health sciences, focused on specific health problems, through joining efforts and resources from diverse disciplines and institutions.

IDIBAPS participated at 11 out of 13 existing CIBERs.

29 IDIBAPS researchers lead CIBER groups.

Jordi Gracia Sancho as Scientific director at CIBEREHD.



ITEMAS NETWORK

ITEMAS Network to exchange good practices and to boost innovation of the National Health System and the real transfer of research results to society.



RICORS

Cooperative Research Networks Oriented to Health Outcomes (RICORS) to promote health-oriented research by coordinating efforts towards specific, achievable research objectives that benefit the public.

IDIBAPS participates in 5 of the 7 existing RICORS and leads one of those networks: Terav+.

RICORS-ICTUS



SCREN

Spanish Clinical Research Network (SCREN) to achieve high quality standards in all clinical research studies, from the design to the final dissemination of the results.



Spanish
Clinical
Research
Network

OTHER NETWORKS

COSCE

Confederation of Scientific Societies of Spain (COSCE) to promote scientific Research and provide a unified voice for scientists in public policy discussions, including transparency in animal experimentation.



REGIC

Network of Clinical Research Management Entities (REGIC) to share experiences and foster interaction and training in health research, development and innovation management.



SPANISH ASSOCIATION OF FUNDRAISING

Spanish Association of Fundraising to promote philanthropy and enhance the professional development of fundraisers in Spain.



Catalan



STRATEGIC HEALTH INNOVATION NETWORKS

I4KIDS

Cluster focused on innovation in pediatrics and maternity.

TECSAM

Alliance focused on innovation in mental health.



XARTEC

Partnership focused on entrepreneurship and innovation in health technologies.

OTHER NETWORKS

ACER

Catalan Association of Research Entities (ACER) to contribute to establishing the region as an international reference in scientific and technological research.



AQUAS

Agency for Health Quality and Assessment of Catalonia (AQUAS) to generate scientific knowledge to improve the quality, safety, and sustainability of the healthcare system.



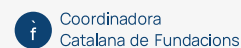
BIB

Bioinformatics Barcelona (BIB) to promote education, training, research and innovation in bioinformatics.



CATALAN FOUNDATIONS COORDINATOR

Catalan Foundations Coordinator to represent and defend the interests of associated foundations, contribute to their growth, promote philanthropy and sponsorship.



XBTC

Network of tumor banks of Catalonia (XBTC) to provide researchers with a large collection of biospecimens from different pathologies. This network is coordinated by the Tumor and Tissue Bank of the HCB-IDIBAPS Biobank.



WEMIND

Mental Health Cluster of Catalonia, WE-MIND to promote research, transfer of knowledge, and creation of synergies related to mental illness.



Core facilities

IDIBAPS hosts seven specialized Core Facilities that provide state-of-the-art technologies, scientific expertise, consulting, and training to support high-quality biomedical research. Through innovation, methodological excellence, and collaboration, they contribute to strengthening IDIBAPS' position as a leading center of excellence in translational biomedical research.

These centralized platforms are essential in driving scientific discovery and enhancing the impact of research outcomes.

- 1 Biobank
- 2 Flow cytometry and cell sorting
- 3 Functional Genomics
- 4 Magnetic Resonance Imaging
- 5 Medical Statistics
- 6 Clinical Trials Unit
- 7 Research Computing

A major focus throughout 2025 was the support provided by the Core Facilities to **key institutional strategic** initiatives, including the development of the Nou Campus Clínic and several cross-cutting projects such as FORTALECE and AECC.

Another significant achievement was the establishment of **strategic collaborations** with leading biomedical research centers in **Barcelona** through the BCN Biomedical Hub initiative, fostering closer interactions with CCiTUB, HStJdD, IRB Barcelona, CRG, CRI, VHIO and VHIR.

303 Services
(New → 56)

44 Total
publications

111 Educational
activities

26 Acknowledged
publications

5 New
equipment

In parallel, the **internationalization** of the Core Facilities was further strengthened through active engagement in major European research infrastructures and networks, including EATRIS and BBMRI, as well as new collaborative initiatives.

The professional development of Core Facilities personnel remained a priority throughout 2025. Staff members engaged in specialized training opportunities, including participation in an **international shadowing** experience, with a member of the **Flow Cytometry** Core Facility undertaking a training stay at VIB.

NEW EQUIPMENT AND DEVELOPMENTS AT IDIBAPS CORE FACILITIES

In 2025, the **HCB-IDIBAPS Biobank** successfully achieved ISO 9001 recertification, reinforcing its commitment to quality management and continuous improvement. The platform also consolidated the implementation of its new automated nucleic acid isolation system, including cell-free DNA extraction capabilities, and continued the development of the lyophilization project as an alternative strategy for long-term sample preservation.

The Biobank further strengthened its quality framework through the implementation of new controls aligned with ISO 20387 requirements and carried out a pilot test to improve sample traceability. In parallel, it promoted the donation of samples from transplant rejection cases at Hospital Clínic de Barcelona, expanding the availability of valuable biospecimens for research.

Biobank members presented oral communications at AAIC Neuroscience Next 2025 and Europe Biobank Week 2025, participated in biobanking round tables organized by EATRIS and ISCIII, and strengthened international collaborations through its designation as a BBMRI network collaborator.

The **Flow Cytometry Core Facility** expanded its technological capabilities through the acquisition of the CytoFLEX 6 LASER, incorporating an infrared laser, a feature rarely available in conventional cytometry platforms.

In parallel, the facility strengthened its advanced cell analysis capacity with the procurement of a Spectral Cell sorter equipped with a BSL-2 biosafety cabinet for human sample sorting, together with the integration of new flow imaging technology.

The **Functional Genomics Core Facility** has significantly expanded its Single Cell capabilities through the incorporation of the Rhapsody platform, the implementation of TapeStri, and the development of new protocols. Optimized workflows are now available for Chromium X, PARSE, Rhapsody and TapeStri, enabling greater flexibility for complex projects.

In parallel, process automation was enhanced with the integration of the Zephyr liquid handling robot, improving efficiency and reproducibility. Overall, more than 20 new protocols were established, and 18 new services were launched, substantially strengthening the facility's technological capabilities.

The **Magnetic Resonance Imaging (MRI) Core Facility** expanded its research activities through an EBRAINS-funded project aimed at integrating neurovascular information into the Human Brain Atlas.

In parallel, the 3T MRI scanner underwent a major software upgrade, enhancing imaging performance and functionality.

The facility also reached a record level of activity on the 7T MRI scanner, supporting studies in small animals, fixed tissues, organoids, and nanoparticles.

The **Medical Statistics Core Facility** coordinated data management, methodological support, and statistical analysis. The team supported more than 150 clinical research projects and 65 clinical trials, facilitating the development of advanced therapies in compliance with regulatory standards.

In addition, the facility was involved in 19 indexed scientific publications and provided statistical consulting services for more than 50 research requests.

The **Clinical Trials Unit (CTU) Core Facility** has contributed to a total of 56 research projects, 41 of which were clinical trials involving investigational medicinal products. Highlighted studies include phase I and II trials in in-house advanced therapies medicinal products (ATMPs) such as CART-BE-02, CART-BCMA, CARTD-BG-01, CD5CARNK, DELAY, GEM-PLASMACAR, TOLDEC-COMBINEM and ATDC-PICI.

Furthermore, the Unit has coordinated the ASPIRE clinical trial, a phase II randomized study for the treatment of hepatocellular carcinoma, involving 13 participating sites across Spain and funded by AECC. In addition, CTU supported investigators in the communication and reporting of clinical trial results in compliance with the European Clinical Trial Regulation.

The **Research Computing Platform** provided computational and bioinformatics support to 48 research groups and more than 100 users. It expanded access to BSC high-performance computing resources and deployed new institutional research software licenses.

The Platform also launched specialized training activities for researchers and bioinformaticians, including the Stepping Stone BioData Series and HPC Express courses, and published its first Bioinformatics Standard Operating Procedure (SOP), establishing a formal framework for in-house bioinformatics activities.

	Active internal projects	Active external projects	IDIBAPS groups attended
Biobank of Hospital Clínic - IDIBAPS	124	46	65
Flow cytometry and cell sorting	79	10	38
Functional genomics	90	13	41
Magnetic resonance imaging	65	18	33
Medical statistics	18	9	23
Clinical trials unit (CTU)	34	10	28
Research Computing	7	1	48



Training

PHD PROGRAMME

IDIBAPS PhD Programme is a key initiative to support predoctoral researchers along their professional journey at the institute and beyond.

DOCTORAL THESES

86

Defended
in 2025

14

With international
mention



PHD DAY 2025

PhD day 2025, organised by and for the IDIBAPS PhD community with institutional support.

28

Posters and thesis presentations

180

Attendees

SEMINARS

IDIBAPS organises yearly scientific seminars of different nature (IDIBAPS, In-house, Core facilities and Liver) and the Toolbox talks that are seminars about non-scientific but relevant topics.

1,703

Attendees

29

Total seminars

13 IDIBAPS

3 In-house

2 Core facilities

8 Liver

3 Toolbox talks



Sustainability

COURSES

IDIBAPS implements a comprehensive training plan, including activities and courses to nurture talent and to support its professionals in developing the required knowledge and skills to succeed in their career.

Apren+ as the training programme specific for IDIBAPS employees. Every year, the institute prepares a plan specific for all its employees, to offer workshops on diverse topics to all professionals, independently of their role within the institution.

58

Total activities

415

Attendants



Stepping-stone training programme opened to all IDIBAPS research community. This training programme includes activities for all profiles of researchers from the whole research community, focusing on scientific and transferable skills.

23

Total activities

5 Plenary sessions
18 Workshops

604

Attendants

IDIBAPS is committed to promoting more sustainable practices to reduce the considerable impact that research activity has on the environment.

This is why the Sustainability Committee was established in mid- 2022. During 2025, IDIBAPS carried out multiple actions towards a more sustainable research institute:

- *Organisation of the 1st Edition of the Campus Clínic Sustainable Development Goals Awards.*
- *Publication of the Environmental Sustainability Strategy and its Action Plan*
- *Publication of the video 'Avoiding water waste in the lab'*
- *Start of construction work for the installation of a photovoltaic solar system at the CEK.*

In 2025, the CEK building consumed 2,677,000 litres of water, equivalent to more than 7,300 litres per day. This figure is significantly lower than the one of the previous year, when total consumption reached 3,426,000 litres, or more than 9,300 litres per day.

This saving of more than 2,000 litres per day on average is the result of several improvements in water management implemented in 2024 and 2025, including new sign information on the different types of water available from laboratory taps; the installation of new aerators on restroom taps; adjustments to toilet flush volumes; and the replacement of pure water systems with more efficient models.



Communication and public engagement

Internal news

593

News in the internal newsletter

88

Internal comuniques

Web

202

Published news

Social media followers

At December 31th

3,368 

16,329 

21,687 

628 

Public engagement

68

Activities

2,790

Audience

96

Primary school students

1,695

Secondary school students

14

Patients and patient's associations

985

General public

Media relations

24

Press releases

3,180

Media appearances

Public relations

14

Institutional visits

Photos and videos produced

220



Institutional news



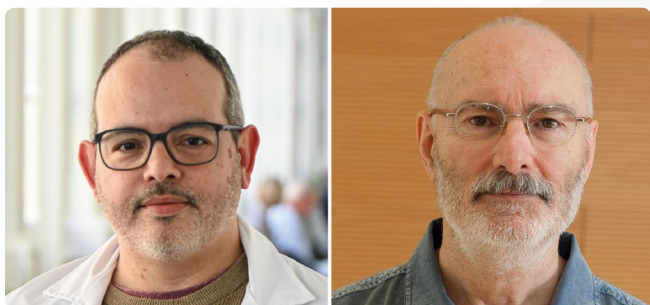
January

Ana Garcia leads the new group 'Cardiomyopathies, heart failure and secondary pulmonary hypertension'.



April

IDIBAPS is recognised as an accredited centre by the Scientific Foundation of the Spanish Association Against Cancer.



April

Isaac Almendros replaces Ramon Farré as head of the 'Respiratory biophysics and bioengineering' research group.



May

IDIBAPS publishes its CoARA Action Plan to transform research assessment.



May

The 'Let's Turn the Page!' campaign raises 240,000 euros for cancer research through reading.



May

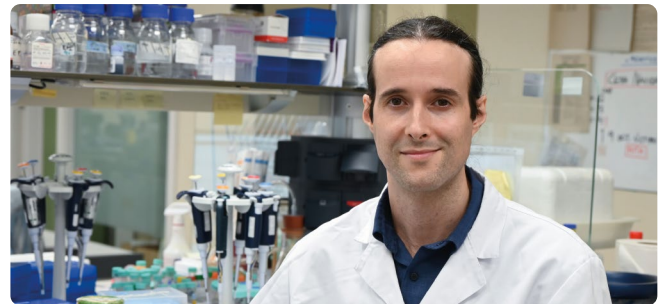
David Bartrés-Faz replaces Carme Junqué as head of the IDIBAPS research group 'Neuropsychology and neuroimaging'.

Sustainability Strategy and Action Plan



May

IDIBAPS publishes its Environmental Sustainability Strategy and its Action Plan for the coming years.



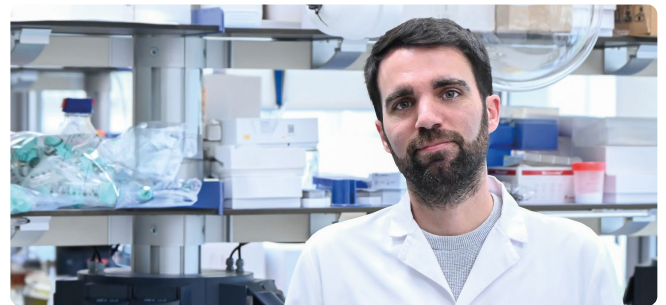
July

Iñaki Martín-Subero receives a “Proof of Concept Grant” from the European Research Council.



May

Susana Puig is appointed the new director of IDIBAPS.



September

Ferran Nadeu is awarded an European Research Council (ERC) starting grant for reconstructing the biological history of chronic lymphocytic leukaemia.



July

IDIBAPS participates in the constitution of the Association of Cytometrists of Catalonia.



November

Eight researchers from Clínic-IDIBAPS have been recognized as Highly Cited Researchers by Clarivate Analytics.

Awards and acknowledgements



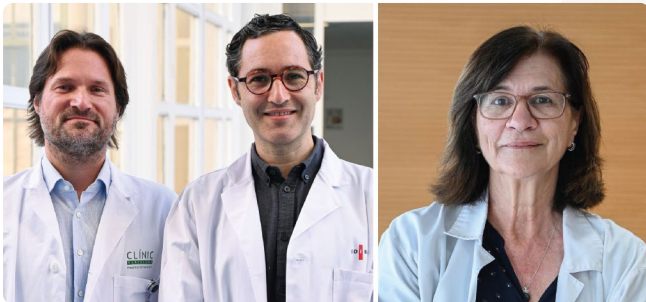
November

The Women Biology and Health Workshop successfully promotes health research with a gender perspective.



May

Josep M. Miró receives the 2025 Josep Trueta Award from the Academy.



December

Yaroslau Compta Hirnyj and Rubén Fernández-Santiago take over from M^a Josep Martí Domènech in the leadership of the IDIBAPS Parkinson's research group.



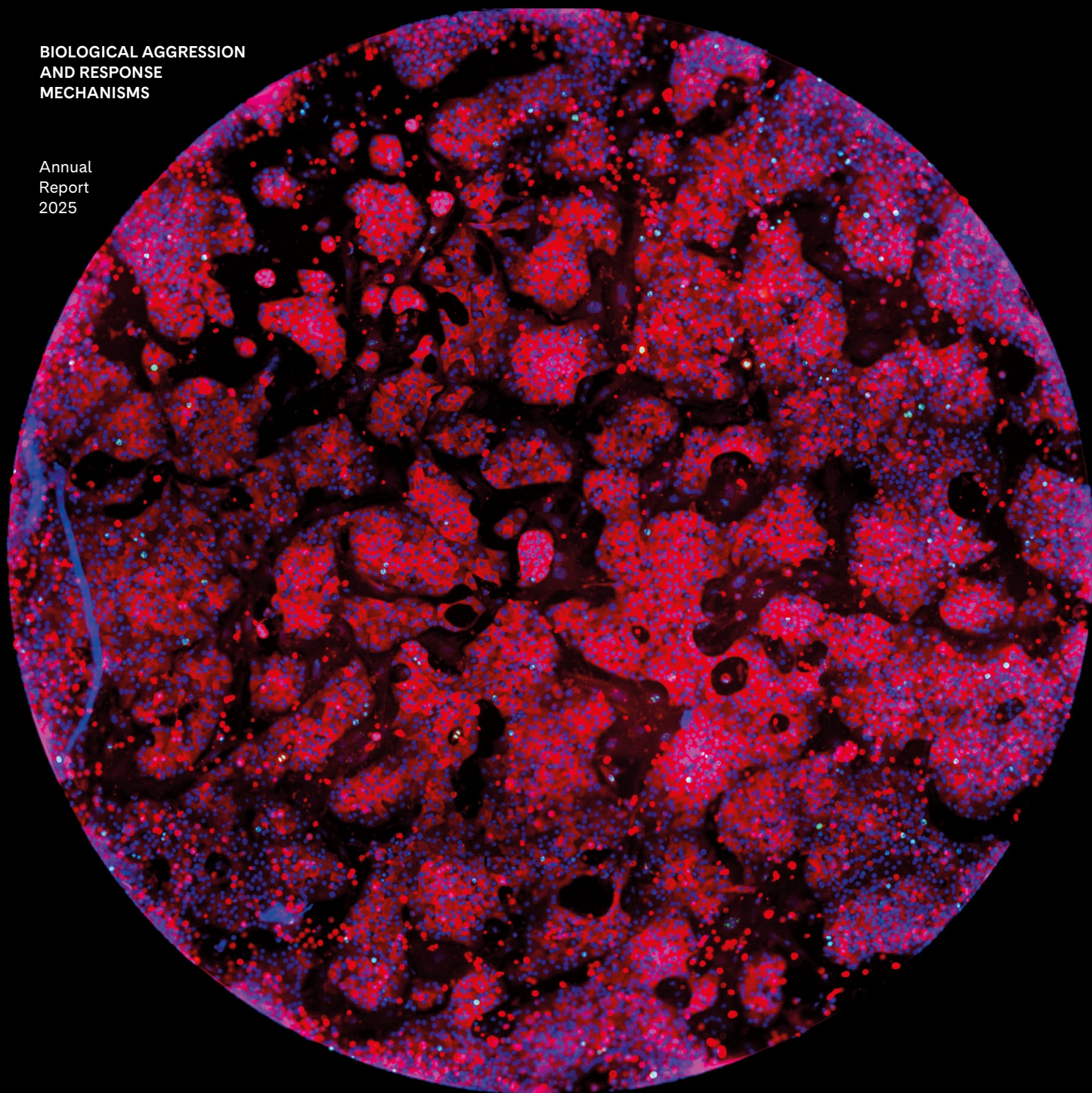
October

Josep Dalmau receives the 2025 National Research Award in Medicine and Health Sciences.

1

**BIOLOGICAL AGGRESSION
AND RESPONSE
MECHANISMS**

Annual
Report
2025



AREA 1

Biological aggression and response mechanisms

- 1.1 Ocular inflammation: clinical and experimental studies**
Alfredo Adán
- 1.2 Systemic autoimmune diseases**
Ricard Cervera
- 1.3 Systemic vasculitis**
Maria Cinta Cid
- 1.4 Molecular and cellular bases of inflammation. Structural and biological mass spectrometry**
Daniel Closa
- 1.5 Hemotherapy - hemostasis**
Maribel Díaz Ricart
- 1.6 Immunogenetics and immunotherapy in autoinflammatory and immune responses**
Manel Juan
- 1.7 Immune receptors of the innate and adaptive system**
Francisco Lozano
- 1.8 AIDS and HIV infection**
Josep Mallolas
- 1.9 Emergencies: processes and pathologies**
Òscar Miró
- 1.10 Endocarditis. Cardiovascular infections. Experimental model**
Josep M. Miró
- 1.11 Inflammatory joint diseases (IJDs)**
Raimon Sanmartí
- 1.12 Nosocomial infection**
Alex Soriano



GROUP LEADER

Alfredo Adán (HCB)

RESEARCH INTERESTS

The main objective of the group is focused on the translational research of inflammatory and degenerative ocular diseases, especially the understanding the pathophysiologic mechanisms and the immune response, together with the identification of biological and imaging biomarkers of prognosis and response to treatment.

Ultimately, the group aims to develop and implement novel therapies for ocular inflammatory and degenerative disorders. The group also promotes studies and the research in optic nerve diseases as glaucoma a secondary to neuro ophthalmologic conditions.

KEYWORDS

Ocular inflammation
Biomarkers
Retinal imaging
Artificial intelligence
Visual pathway

RELATED DISEASES

Uveitis
Age-related macular degeneration
Diabetic retinopathy
Glaucoma
Optic neuritis

1.01

Ocular inflammation: clinical and experimental studies

Publications

Original articles

24

Mean IF **3,12**
Q1 **58%**
D1 **13%**
MA **67%**
OA **75%**

Others

4

Mean IF **2,48**
Q1 **50%**
D1 **0%**
MA **50%**
OA **25%**

IF = Impact Factor
MA = Main authorship (last or corresponding author)
OA = Open Access
Others includes reviews, editorials, clinical guidelines, letters and case reports

Directed PhD theses

3

• Silvia Feu
• Sara Carlota Labay
• Aina Moll

Selected active grants

Niveles séricos y eficacia clínica de adalimumab en uveítis. Biomarcadores basados en la imagen multimodal y la respuesta inmune adaptativa.

Instituto de Salud Carlos III (ISCIII).

FIS_PI22/00782

PI: Victor Llorenç, Blanca Molins

I(eye)-SCREEN: A real-world AI-based infrastructure for screening and prediction of progression in age-related macular degeneration.

European Commission.

CE_HE_PathOPEN_23

PI: Javier Zarranz-Ventura

Selected publications

Labay-Tejado S, Fortuna V, Ventura-Abreu N, ... , Garcia-Humanes A, Brunet M, Milla E. **Pharmacogenetic Influences on Individual Responses to Ocular Hypotensive Agents in Glaucoma Patients.** *PHARMACEUTICS*. 17(3):325. D1

Nabaes Jodar MS, Llorenç V, Figueras-Roca M, Sainz de-la-Maza M, Adán A, Molins B. **C-reactive protein conformations and their association with the IL-1 β /IL-6 pathway in ocular inflammatory conditions.** *FRONTIERS IN IMMUNOLOGY*. 16:1601145. Q1

Toha-Dalmau A, Rosines-Fonoll J, Romero E, ... , Gimenez M, Vellido A, Zarranz-Ventura J. **Machine Learning Prediction of Cardiovascular Risk in Type 1 Diabetes Mellitus Using Radiomic Features from Multimodal Retinal Images.** *OPHTHALMOLOGY SCIENCE*. 5(6):100874. Q1

Martin-Pinardel R, Izquierdo-Serra J, Bernal-Morales C, ... , Mishchuk A, Casaroli-Marano RP, Zarranz-Ventura J; from the FRB SPAIN-IMAGE Project Investigators. **Fluid fluctuations assessed with artificial intelligence during the maintenance phase impact anti-vascular endothelial growth factor visual outcomes in a multicentre, routine clinical care national age-related macular degeneration database.** *BRITISH JOURNAL OF OPHTHALMOLOGY*. 109(10):1161-1170. Q1

Camós-Carreras A, Figueras-Roca M, Albà-Arbalat S, Alcubierre R, Saint-Gerons M, Sánchez-Dalmau B. **Correlation between quality of vision and clinical and structural parameters in patients with Autosomal Dominant Optic Atrophy.** *EYE*. 39(9):1837-1842. Q1

Systemic autoimmune diseases



GROUP LEADER

Ricard Cervera (HCB)

RESEARCH INTERESTS

The group promotes basic, clinical and translational research on systemic autoimmune diseases using a multidisciplinary approach and with the participation of members from different departments of Hospital Clínic.

It also cooperates with different international working groups, for which its team members are national or international coordinators, including: the European Working Party on Systemic Lupus Erythematosus, the European Forum on Antiphospholipid Antibodies, the Catastrophic Antiphospholipid Syndrome Registry Project Group, and Systemic Lupus International Collaborating Clinics (SLICC).

KEYWORDS

Systemic autoimmune diseases
Multidisciplinary approach
Networking
Translational research
Epidemiologic research

RELATED DISEASES

Systemic autoimmune diseases
Systemic lupus erythematosus
Antiphospholipid syndrome
Sjögren's syndrome
Autoinflammatory diseases

Publications

Original articles

44

Mean IF **4,25**
Q1 68%
D1 9%
MA 20%
OA 80%

Others

13

Mean IF **9,18**
Q1 54%
D1 38%
MA 54%
OA 85%

IF = Impact Factor

MA = Main authorship (last or corresponding author)

OA = Open Access

Others includes reviews, editorials, clinical guidelines, letters and case reports

Selected publications

Ramos-Casals M, Baer AN, Brito-Ze-rón MD, ... , Vivino F, Wahren-Herlenius M, Moutsopoulos HM; International Task Force on Nomenclature of Sjögren Disease. **2023 International Rome consensus for the nomenclature of Sjögren disease.** *NATURE REVIEWS RHEUMATOLOGY*. 21(7):426-437. D1

Mucke J, Bertsias G, Aringer M, ... , Van Vollenhoven R, Wincup C, Schneider M; Taskforce for development of EULAR recommendations. **EULAR recommendations for a core dataset to support clinical care and translational and observational research in systemic lupus erythematosus.** *ANNALS OF THE RHEUMATIC DISEASES*. 84(10):1621-1631. D1

Arnaud L, Ruiz-Irastorza G, Aranow C... , Touma Z, Mosca M, Tani C. **ERN ReCON-NET-SLEuro expert consensus on the therapeutic management of rare systemic lupus erythematosus manifestations.** *LANCET RHEUMATOLOGY*. 7(7):e505-e518. D1

Gomez-Martinez S, Amat-Samaranch V, Lasheras-Pérez MA, ... , Rodríguez-Serna M, Mascaró JM, Riquelme-Mc Loughlin C. **Oral roflumilast for the treatment of chronic hand eczema: A retrospective case series.** *JOURNAL OF THE AMERICAN ACADEMY OF DERMATOLOGY*. 93(2):489-491. D1

Rua-Figueroa I, Cervera R, Freire-González M, ... , Galvez-Fernandez M, Bahamontes-Rosa N, Pego-Reigosa JM; Spanish SLE Prospective Observational Cohort Study (SPOCS). **Oral glucocorticoid patterns use in moderate to severe active SLE: insights from the Spanish SPOCS data.** *LUPUS SCIENCE AND MEDICINE*. 12(2):e001597. Q1

Selected active grants

Taxonomy, treatment, targets and remission-Identification of the molecular mechanisms of non-response to treatments, relapses and remission in autoimmune, inflammatory, and allergic conditions (3TR).

European Comission.

CE_IMI2-2018-14

PI: Ricard Cervera, Juan de Dios Cañete, Azucena Salas

Redes de Investigación Cooperativa Orientadas a Resultados en Salud 2021: Enfermedades inflamatorias.

Instituto de Salud Carlos III (ISCIII).

FIS_RICORS21

PI: Ricard Cervera



GROUP LEADER

Maria Cinta Cid (HCB)

RESEARCH INTERESTS

Investigating mechanisms involved in vascular inflammation, injury, and remodeling in systemic vasculitis with the ultimate goal of identifying clinically useful biomarkers with diagnostic, assessment, and prediction potential as well as therapeutic targets.

Development of functional models to test the mechanistic function of molecules of interest. Validation of the experimental findings in clinical cohorts with prospectively collected clinical data, imaging, and biospecimens. Validation of potential therapeutic targets in clinical trials.

KEYWORDS

Vascular inflammation
Vascular remodeling
Development of functional models
Biomarker identification/validation
Therapeutic targets and clinical trials

RELATED DISEASES

Large vessel vasculitis
ANCA-associated vasculitis
Polymyalgia rheumatica
Other medium/ small vessel vasculitis
Vasculitis associated with other diseases

1.03

Systemic vasculitis

Publications

Original articles

14

Mean IF	10,79
Q1	64%
D1	21%
MA	14%
OA	79%

Others

14

Mean IF	7,72
Q1	64%
D1	36%
MA	57%
OA	64%

IF = Impact Factor

MA = Main authorship (last or corresponding author)

OA = Open Access

Others includes reviews, editorials, clinical guidelines, letters and case reports

Selected active grants

Deciphering the role of myeloid cells and type 3 cytokines on vascular inflammation and remodeling in systemic vasculitis (INFLAVASC).

Agencia Estatal de Investigación.

AEI_PID2023-152265OB-I00

PI: Maria Cinta Cid

Immunopathological impact of targeted therapies in ex-vivo arterial explants and tissue organoids. Towards a personalized medicine for patients with giant-cell arteritis (TARGETART).

Agencia Estatal de Investigación.

AEI_PE20

PI: Maria Cinta Cid

Selected publications

Corbera-Bellalta M, Kamberovic F, Alba-Rovira R, ... , Quintana E, Espígol-Frigolé G, Cid MC. **The IL-6 axis in vascular inflammation: effects of IL-6 receptor blockade on vascular lesions from patients with giant-cell arteritis.** *ANNALS OF THE RHEUMATIC DISEASES*. 84(8):1387-1400. D1

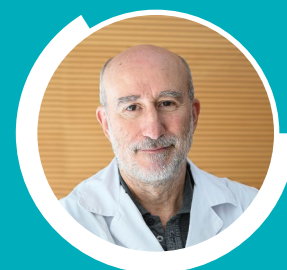
Blockmans D, Penn SK, Setty AR, ... , Romero AB, Wung PK, Merkel PA; SELECT-GCA Study Group. **A Phase 3 Trial of Upadacitinib for Giant-Cell Arteritis.** *NEW ENGLAND JOURNAL OF MEDICINE*. 392(20):2013-2024. D1

Moura MC, Merkel PA, Jayne D, ... , Stone JH, Specks U, Kronbichler A. **Challenges in the diagnosis, classification and prognosis of ANCA-associated vasculitis.** *NATURE REVIEWS RHEUMATOLOGY*. 21(12):719-736. D1

Solans-Laqué R, de Escalante-Yanguela B, Fonseca E, ... , Martínez-Zapico A, de Miguel-Campo B, Mestre-Torres J; REVAS-Registry. **Identification of risk factors for permanent visual loss in patients with giant cell arteritis.** *EUROPEAN JOURNAL OF INTERNAL MEDICINE*. 139:106372. D1

Mattioli I, Urban ML, Padoan R, ... , Bettiol A, Vaglio A, Emmi G; European EGPA Study Group. **Mepolizumab versus benralizumab for eosinophilic granulomatosis with polyangiitis (EGPA): A European real-life retrospective comparative study.** *JOURNAL OF AUTOIMMUNITY*. 153:103398. Q1

Molecular and cellular bases of inflammation. Structural and biological mass spectrometry



GROUP LEADER

Daniel Closa (IIBB-CSIC)

RESEARCH INTERESTS

The group studies intercellular signalling mechanisms based on the exchange of soluble molecules and on those transported by extracellular vesicles, the phenotypic changes associated with these diseases, and the alteration of different markers at the molecular level.

It also develops techniques for analysing biomolecules using mass spectrometry and, more especially for proteomic studies, analysing changes in patterns of phosphorylation or acetylation, and other protein modifications.

The group aims to discover innovative strategies that, by altering the communication between cells, will make it possible to develop new therapeutic applications for different diseases.

KEYWORDS

Inflammation
Fibrosis
Proteomics
Cell therapy
Exosomes

RELATED DISEASES

Pancreatitis
Lung fibrosis
Pancreatic cancer
Endometriosis

Publications

Original articles	Mean IF	3,90
1	Q1	0%
	D1	0%
	MA	0%
	OA	100%
Others	Mean IF	0
0	Q1	0%
	D1	0%
	MA	0%
	OA	0%

IF = Impact Factor

MA = Main authorship (last or corresponding author)

OA = Open Access

Others includes reviews, editorials, clinical guidelines, letters and case reports

Selected publications

López-Aladid R, Bueno-Freire L, Farrion-Duran R, ..., Lechuga LM, Torres A, Fernández-Barat L. **Epitope mapping of SARS-CoV-2 Spike protein using naturally-acquired immune responses to develop monoclonal antibodies.** *SCIENTIFIC REPORTS*. 15(1):16269. Q1

Selected active grants

Endometriosis beyond pelvic pain: clinical and molecular study of pain comorbidities in a large cohort of patients with long-term follow-up.

Fundació la Marató de TV3.

SexualReprod_23

PI: Daniel Closa



GROUP LEADER

Maribel Díaz Ricart (HCB)

RESEARCH INTERESTS

- **Molecular mechanisms of bleeding and thrombotic disorders:** Platelets and plasma proteins, thrombosis, therapies.
- **Endothelial dysfunction:** Common biomarkers in cardiovascular risk diseases, kidney transplantation, and hematological disorders. Complications of HCT and pregnancy.
- **Diagnosis and treatment of thrombotic microangiopathies:** Complement system and NETs.
- **Circulating procoagulant microparticles in atherothrombosis:** Impact of cell microparticles and microplastics phagocytosis by platelets.

KEYWORDS

Thrombosis
Bleeding
Endothelial activation and damage
Complement system
Microparticles

RELATED DISEASES

Chronic kidney disease
Cardiovascular disease
Hematopoietic stem cell transplantation
Septic syndromes
Pregnancy complications

1.05

Hemotherapy - hemostasis

Publications

Original articles

24

Mean IF 4,29
Q1 46%
D1 13%
MA 21%
OA 63%

Others

12

Mean IF 4,25
Q1 50%
D1 17%
MA 58%
OA 42%

IF = Impact Factor
MA = Main authorship (last or corresponding author)
OA = Open Access
Others includes reviews, editorials, clinical guidelines, letters and case reports

Directed PhD theses

1

• Álex Ramos

Selected active grants

Complement involvement and endothelial damage in ABO incompatible kidney transplantation: biomarkers characterization and identification of potential therapeutic strategies.

Instituto de Salud Carlos III (ISCIII).

FIS_PI22/00240

PI: Miquel Blasco Pelicano, Maribel Díaz-Ricart

Alteraciones de la hemostasia en pacientes con soporte vital extracorpóreo. evaluación de un nuevo método de diagnóstico rápido y con potencial como guía terapéutica ex vivo.

Sociedad Española de Trombosis y Hemostasia. SETH_LopezBorrasca22

PI: Maribel Díaz-Ricart

Selected publications

Xipell M, Sánchez-Alamo B, Guillén E, Charry P, Quintana LF, Lozano M. **The importance of immunoglobulin replacement in plasma exchange to prevent infections.** *KIDNEY INTERNATIONAL*. 108(2):328-329. D1

Moreno-Castaño AB, Iraola G, Martí-nez-Cibrián N, ... , Martínez-Sánchez J, Castro P, Díaz-Ricart M. **Endothelial dysfunction and hemostatic imbalance in CAR T-cell-associated toxicities: pathophysiological insights and the role of circulating biomarkers.** *FRONTIERS IN IMMUNOLOGY*. 16:1699894. Q1

Escribano-Serrat S, Salas MQ, Pascual-Izquierdo C, ... , Martínez-Sánchez J, Escolar G, Díaz-Ricart M. **EASIX, a new tool to predict response and refractoriness in immune-mediated thrombotic thrombocytopenic purpura.** *FRONTIERS IN IMMUNOLOGY*. 16:1700907. Q1

de Moner B, Martínez-Sánchez J, Escribano-Serrat S, ... , Carreras E, Álvarez-Larrán A, Díaz-Ricart M. **Proteomic profiling links complement activation to thrombosis in JAK2V617F myeloproliferative neoplasms.** *TRANSLATIONAL ONCOLOGY*. 62:102561. Q2

Marco DN, Brey M, Anguera S, ... , Mensa J, Soriano A, Herrera S. **Time to positivity as a predictor of catheter-related bacteremia and mortality in adults with Pseudomonas aeruginosa bloodstream infection.** *CRITICAL CARE*. 29(1):63. D1

Immunogenetics and immuno-therapy in autoinflammatory and immune responses

Publications

Original articles	Mean IF	9,06
	Q1	86%
	D1	48%
	MA	21%
	OA	88%
Others	Mean IF	13,29
	Q1	83%
	D1	50%
	MA	0%
	OA	83%

IF = Impact Factor
MA = Main authorship (last or corresponding author)
OA = Open Access
Others includes reviews, editorials, clinical guidelines, letters and case reports

Directed PhD theses

- 3
- Cristina Bayó
 - Núria Bonet
 - Iñaki Ortiz de Landazuri

Selected active grants

Redes de Investigación Cooperativa Orientadas a Resultados en Salud 2024: Terapias avanzadas: TERA+.
Instituto de Salud Carlos III (ISCIII).
FIS_RICORS24
PI: Manel Juan

Beyond traditional genetics in undefined autoinflammatory diseases: structural variants and subtle myeloid-restricted postzygotic variants.
Agencia Estatal de Investigación.
AEI_PID2024-161190OB-C21
PI: Juan Ignacio Aróstegui

Selected publications

Uribe-Herranz M, Oliver-Caldés A, Martínez-Micaelo N, ... , González-Navarro EA, Fernández de Larrea C, Juan M. **Microbiota Shape Metabolic and Immune Determinants of CAR-T Therapy and Correlate with Outcomes in Myeloma.** *BLOOD CANCER DISCOVERY.* 6(5):484-504. D1

Martínez-Cibrián N, Ortiz-Maldonado V, Español-Rego M, ... , González-Navarro EA, Juan M, Delgado J. **Efficacy and safety of the academic anti-CD19 chimeric antigen receptor T-cell product varnimcabtagene autoleucel for the treatment of relapsed/refractory follicular lymphoma.** *HEMASPHERE.* 9(9):e70166. D1

Pérez-Amill L, Armand-Ugón M, Val-Casals M, ... , Delgado J, Juan M, Klein-González N. **A novel chimeric antigen receptor T-cell therapy targeting CD84 for the treatment of acute myeloid and T-cell lymphoblastic leukemias.** *LEUKEMIA.* 39(10):2432-2441. D1

Bartoló-Ibars A, Aran A, Johansson AM, ... , González-Navarro EA, Kwok WW, Juan M. **T-cell responses against CD19-targeted CAR T cells varnimcabtagene autoleucel (ARI-0001): implications for immune response and therapy outcomes.** *JOURNAL FOR IMMUNOTHERAPY OF CANCER.* 13(9):e010792. D1

Feng SY, Wierzbowski MC, Hrovat-Schale K, ... , Geyer M, Boursier G, Masters SL. **Mechanisms of NLRP3 activation and inhibition elucidated by functional analysis of disease-associated variants.** *NATURE IMMUNOLOGY.* 26(3):511-523. D1



GROUP LEADER
Manel Juan (HCB)

RESEARCH INTERESTS
We develop new tools for diagnosing and treating diseases - from autoinflammatory disorders to cancer-including Cell Immunotherapy Products (CITP), from basic research to approval for clinical use. Our research covers 5 main branches:

- 1) Genetical evaluation of gene immuno-mediated diseases.
- 2) Study of new molecular mechanisms defining autoinflammation and other Inborn Errors of Immunity (IEI).
- 3) Development of new methods to improve new CITP from CITPs based on natural specific T-cells to specific proposal of genetically modified T-cells (and NKs).
- 4) Production of Cell-Vaccines for new clinical trials and evaluation of T-cell responses in induction of immune responses
- 5) Optimization of viral vectors and recombinant proteins for CITP.

KEYWORDS
Cell immunotherapy
CAR-T and gene modified T-cells
Immunogenetics
Immunodeficiencies
Autoinflammation

RELATED DISEASES
Hematological neoplasias
Autoinflammatory diseases
Inborn errors of immunity
Solid cancer
Disregulatory diseases



GROUP LEADER

Francisco Lozano (HCB-UB)

RESEARCH INTERESTS

We aim to identify and understand the function of the molecules that regulate immune responses in health and disease. We particularly focus on the molecular interactions involved in the intercommunication and coordination of immune cells during physiological and pathological processes.

This approach will allow the development of new approaches and biological tools (recombinant proteins and monoclonal antibodies) for the treatment of immunemediated disorders (e.g., systemic autoimmune and infectious diseases, graft rejection, allergy, or cancer).

KEYWORDS

Innate immunity
Leukocyte cell surface molecules
Viral immune evasion
Immunotherapy
Immune receptors

RELATED DISEASES

Herpes virus infections
Sjögren's syndrome
Bacterial and fungal sepsis
Inflammatory bowel disease
Hematologic malignancies
and solid cancers

1.07

Immune receptors of the innate and adaptive system

Publications

Original articles

5

Mean IF **9,40**
Q1 100%
D1 60%
MA 40%
OA 100%

Others

2

Mean IF **4,90**
Q1 100%
D1 0%
MA 100%
OA 100%

IF = Impact Factor

MA = Main authorship (last or corresponding author)

OA = Open Access

Others includes reviews, editorials, clinical guidelines, letters and case reports

Selected active grants

Explorando la dinámica del surfaceoma de células mieloides en la infección por citomegalovirus: desarrollo de terapias innovadores.

Agencia Estatal de Investigación.

AEI_ PID2023-146941OB-I00

PI: Ana Angulo, Pablo Engel

Desarrollo y optimización pre-clínica de nuevas terapias inmunomoduladoras en infección y cáncer basadas en receptores linfocitarios tipo scavenger.

Agencia Estatal de Investigación.

AEI_ PID2022-140932OB-I00

PI: Francisco Lozano

Selected publications

Leyton-Pereira A, Fernandez-Delgado I, Rodriguez-Lagunas MJ, ... , Baldoma L, Sanchez-Madrid F, Lozano F. **The OT-II model reveals dual in vitro and in vivo immunomodulatory properties of CD6 in T cell activation.** *FRONTIERS IN IMMUNOLOGY*. 16:1571590. Q1

Rodríguez-Lobato LG, Cardús O, Mañé-Pujol J, ... , Urbano-Ispizua A, Engel P, Fernández de Larrea C. **Bicistronic CAR T Cell against BCMA and CD229 Effectively Controls Myeloma Even When BCMA Expression Is Limited.** *CANCER IMMUNOLOGY RESEARCH*. 13(9):1374-1390. D1

Anton A, Shalaby S, Botero ML, ... , García-Pagán JC, Campreciós G, Hernández-Gea V. **Endothelial-to-mesenchymal transition: A targetable mechanism that contributes to portal vein thrombosis in cirrhosis.** *HEPATOLOGY*. D1

Velasco-de-Andrés M, Català C, Carrillo-Serradell L, ... , Juan M, Martín-Antonio B, Lozano F. **Adoptive transfer of NK cells engineered with a CD5-based chimeric antigen receptor (SRCD5CAR) to treat invasive fungal infections.** *MOLECULAR THERAPY*. 33(11):5442-5452. D1

de Diego ML, López-Fernández-Sobrino R, Pedragosa J, ... , Fernández-Cadenas I, Pérez-Tur J, Planas AM. **OAS1 and OAS3 genetic variants enhance inflammatory responses to SARS-CoV-2.** *SCIENCE*. 28(12):113966. Q1

AIDS and HIV infection



GROUP LEADER

Josep Mallolas (HCB)

RESEARCH INTERESTS

The HIV/AIDS Unit provides care for more than 6,500 people living with HIV. Research focuses on two complementary areas: clinical research on HIV prevention, including PrEP, PEP, chemsex and sexually transmitted infections, as well as antiretroviral therapy, treatment efficacy, tolerability, drug resistance and coinfections; and basic research in retrovirology and viral immunopathology, with a particular focus on HIV reservoirs, immune senescence and vaccine development.

KEYWORDS

HIV and coinfections
HIV prevention
HIV reservoir
Antiretroviral therapy
Chemsex

RELATED DISEASES

HIV Infection
AIDS
Hepatitis B and C
Human papillomavirus
Tuberculosis

Publications

Original articles

46

Mean IF	5,30
Q1	43%
D1	26%
MA	43%
OA	76%

Others

13

Mean IF	4,69
Q1	46%
D1	23%
MA	62%
OA	77%

IF = Impact Factor

MA = Main authorship (last or corresponding author)

OA = Open Access

Others includes reviews, editorials, clinical guidelines, letters and case reports

Selected publications

Ambrosioni J, de Lazzari E, Sánchez-Palomino S, ... , Cruceta A, Mallolas J, Miró JM; BIC-PHI Study Group. **Bictegravir/emtricitabine/tenofovir alafenamide for primary HIV infection: Efficacy, safety and impact on viral reservoir (the BIC-PHI clinical trial).** *JOURNAL OF INFECTION*. 91(5):106651. D1

Rodríguez-Agustín A, Ayala-Suárez R, Díez-Fuertes F, ... , Casanova V, Alcamí J, Climent N. **Intracellular HIV-1 Tat regulator induces epigenetic changes in the DNA methylation landscape.** *FRONTIERS IN IMMUNOLOGY*. 16:1532692. Q1

Sempere A, Alonso R, Berrocal L, ... , de Lazzari E, Mallolas J, Ambrosioni J. **The Role of Protease Inhibitors in HIV Treatment: Who Still Needs Them in 2025?** *INFECTIOUS DISEASES AND THERAPY*. 14(11):2551-2563. Q1

Pol S, Thompson AJ, Collins M, ... , Welhaven A, Fredrick LM, Doyle JS. **Effectiveness and safety of glecaprevir/pibrentasvir for 8 weeks in the treatment of patients with acute hepatitis C: A single-arm retrospective study.** *HEPATOLOGY*. 81(3):1006-1018. D1

Martínez E, Foncillas A, de la Mora L, Mallolas J, Miró JM, Castro P. **Advanced HIV Disease in the ICU: Experience from a Spanish Cohort.** *CLINICAL INFECTIOUS DISEASES*. ciaf556. D1

Selected active grants

Ensayo clínico de fase 1 para evaluar la seguridad e inmunogenicidad de la vacuna 763SIP8/MPLA-5 basada en la envoltura del VIH-1 (HIVAC-FOUND).

Instituto de Salud Carlos III (ISCIII).

FIS_ICI23/00025

PI: Josep Mallolas

Seguridad, tolerancia y actividad antirretroviral de dasatinib: estudio clínico piloto en pacientes con infección reciente por el VIH-1 (DASAHIVCURE).

Instituto de Salud Carlos III (ISCIII).

FIS_ICI20/00103

PI: Josep Maria Miró



GROUP LEADER

Òscar Miró (HCB)

RESEARCH INTERESTS

The group has maintained a large and exponentially increasing research activity during the past 15 years in acute heart failure, atrial fibrillation, chest pain, infection and thromboembolic diseases, and intoxicated patient care, with special focus in consultations generated by illicit drug consumption.

In all these areas, the group has promoted the creation of national and international networks, leading some of them. In recent years, it has expanded research in geriatric emergency medicine and in specific sex/gender differences in emergency medicine practice.

KEYWORDS

Acute heart failure
Atrial fibrillation
Clinical toxicology
Infectious diseases
Geriatric emergency medicine

RELATED DISEASES

Myocardopathies
Cardiac arrhythmias
Drug consumption
Sepsis
Frailty, comorbidity
and dependence

1.09

Emergencies: processes and pathologies

Publications

Original articles

40

Mean IF **5,09**
Q1 68%
D1 25%
MA 53%
OA 53%

Others

16

Mean IF **9,56**
Q1 94%
D1 50%
MA 50%
OA 50%

IF = Impact Factor

MA = Main authorship (last or corresponding author)

OA = Open Access

Others includes reviews, editorials, clinical guidelines, letters and case reports

Directed PhD theses

1

• Emilia Miró

Selected active grants

Influence of intimate partner violence on the prognosis of patients with acute coronary syndrome.

Fundació la Marató de TV3.

Cardiovascular_22

PI: Blanca Coll-Vinent

Selected publications

Miró O, Ivars N, Espinosa B, ... , Peacock WF, Mueller C, Llorens P. **Effect of seasonal influenza and COVID-19 vaccination on severity and long-term outcomes of patients with heart failure decompensations.** *EUROPEAN JOURNAL OF HEART FAILURE*. 27(1):152-165. D1

Coll-Vinent B, Miota Hernández N, Canadell Marco N, ... , Montero-Pérez FJ, Gonzalez del Castillo J, Miró Ò; Investigadores de la red SIESTA Spanish Investigators in Emergency Situations TeAM. **Clinical-epidemiological aspects, hospitalization, and reconsultations in older patients with atrial fibrillation in emergency departments in Spain (E-DEN-35 study): sex-disaggregated analysis.** *EMERGENCIAS*. 37(3):203-214. D1

Carbó M, Miró E, Hurtado JC, ... , González del Castillo J, Gené E, Miró Ò; members of the VIHgila program. **Role of emergency departments in HIV screening in Barcelona (Spain) and impact of a targeted opt-in strategy for HIV testing.** *EUROPEAN JOURNAL OF EMERGENCY MEDICINE*. 32(4):278-287. Q1

García-Martínez A, Artajona L, García-Rosa S, ... , Bellido A, Lázaro del Nogal M, Miró Ò. **Analysis of long-term prognosis of older patients after a first fall according to economic status.** *EUROPEAN GERIATRIC MEDICINE*. 16(3):881-889. Q2

Miró Ò, Galicia M, Dargan PI, ... , Martín Vallersnesi O, Eyer F, Burillo-Putze G; Euro-DEN Plus Research Group. **Age and sex related differences in clinical manifestations and severity of acute cocaine toxicity presentations to European emergency departments.** *AMERICAN JOURNAL OF EMERGENCY MEDICINE*. 96:151-160. Q2

Endocarditis. Cardiovascular infections. Experimental model



GROUP LEADER

Josep M. Miró (HCB)

RESEARCH INTERESTS

Our objective is to transfer basic scientific knowledge to daily clinical practice. Making progress in the study of IE requires an interdisciplinary and translational approach, from basic in vitro and in vivo laboratory research in an experimental endocarditis and other infection models, including catheter-related and foreign-body infections, to clinical studies.

This is achieved through close collaboration among specialists within the Endocarditis Team, covering prevention, advanced imaging and microbiological diagnosis, novel antimicrobials and treatment strategies, and improved cardiac surgical approaches.

KEYWORDS

Cardiovascular infections
Infective endocarditis
Experimental endocarditis model
Antibiotic treatment
Cardiac surgery

RELATED DISEASES

Bacteriemias
Catheter-related infection
Device-associated Infections
Endovascular infections
Mediastinitis

Publications

Original articles

13

Mean IF **5,92**
Q1 **38%**
D1 **23%**
MA **46%**
OA **77%**

Others

1

Mean IF **3,00**
Q1 **100%**
D1 **0%**
MA **0%**
OA **0%**

IF = Impact Factor

MA = Main authorship (last or corresponding author)

OA = Open Access

Others includes reviews, editorials, clinical guidelines, letters and case reports

Selected publications

Palom-Grau C, Cuervo G, Muñoz P, ..., García de la Mària C, Llopis J, Miró JM; GAMES Investigators. **A Contemporary Picture of Coagulase-Negative Staphylococcal Endocarditis A Nationwide GAMES Cohort Study.** *JOURNAL OF THE AMERICAN COLLEGE OF CARDIOLOGY*. 85(4):305-318. D1

Lapeña P, Urrea X, Llopis J, ... , Moreno A, Chamorro A, Miró JM; Mechanical Thrombectomy in IE Investigators; Cat-SCR Consortium. **Efficacy and safety of mechanical thrombectomy in acute ischaemic stroke secondary to infective endocarditis.** *CLINICAL MICROBIOLOGY AND INFECTION*. 31(8):1321-1329. D1

Cuervo G, Hernández-Meneses M, de Alarcón A, ... , Sala C, Ambrosioni J, Miró JM; OraPAT-IE GAMES Investigators. Oral vs. **Outpatient Parenteral Antimicrobial Treatment for Infective Endocarditis: Study Protocol for the Spanish OraPAT-IE GAMES Trial.** *INFECTIOUS DISEASES AND THERAPY*. 14(3):643-655. Q1

García-de-la-Mària C, Gasch O, Cañas-Pacheco MA, ... , Moreno A, Cuervo G, Miró JM. **Time to Reappraise the Antibiotic Treatment for Methicillin-Susceptible Staphylococcus aureus Infective Endocarditis: Data From the Experimental Model.** *JOURNAL OF INFECTIOUS DISEASES*. 232(3):540-549. Q1

Cañas MA, García-de-la-Mària C, García-González J, ... , Moreno A, Cuervo G, Miró JM; Hospital Clinic Endocarditis Study Group. **Efficacy of linezolid in monotherapy q12h versus q8h versus combined with daptomycin in the treatment of experimental endocarditis caused by methicillin-resistant and glycopeptide-intermediate Staphylococcus aureus strains.** *JOURNAL OF ANTIMICROBIAL CHEMOTHERAPY*. 80(7):1933-1941. Q2

Directed PhD theses

2

• Alejandro Fernández
• Javier García

Selected active grants

Microbiome-based stratification of individuals at risk of HIV-1 acquisition, chronic clinical complications, antimicrobial drug resistance, and unresponsiveness to therapeutic HIV-1 vaccination.

European Commission.

CE_H2020-SC1_2019_2s

PI: Josep Maria Miró

Endocarditis infecciosa por estafilococos coagulasa negativos: Situación clínica en España, utilidad del análisis genómico en el diagnóstico y pronóstico y papel de las lisinas y fagos en el tratamiento.

Instituto de Salud Carlos III (ISCIII).

FIS_PI23/O1656

PI: Cristina Garcia de la Maria,

Josep Maria Miró



GROUP LEADER

Raimon Sanmartí (HCB)

RESEARCH INTERESTS

This research group aims to increase its knowledge of the different prognostic factors that can determine a better evolution of arthritis and which treatment can be most effective for each patient.

It studies biomarkers present in the blood of patients with arthritis at the initial stages of the disease (especially autoantibodies) and is a pioneer in the field of immunopathological study of the synovial membrane in different forms of arthritis, including those that do not have an initial diagnosis, in order to improve the diagnostic and prognostic process.

The group also participates in strategic studies working towards the advancement of personalised medicine and therapeutic strategies in pre-clinical stages.

KEYWORDS

Arthritis
Remission
Personalized synovial biomarkers

RELATED DISEASES

Rheumatoid arthritis
Palindromic rheumatism
Spondyloarthritis
Pre-rheumatoid arthritis
Psoriatic arthritis

1.11

Inflammatory joint diseases (IJDs)

Publications

Original articles

17

Mean IF	4,06
Q1	82%
D1	0%
MA	35%
OA	53%

Others

11

Mean IF	5,67
Q1	82%
D1	36%
MA	55%
OA	73%

IF = Impact Factor
MA = Main authorship (last or corresponding author)
OA = Open Access
Others includes reviews, editorials, clinical guidelines, letters and case reports

Selected active grants

Taxonomy, treatment, targets and remission-Identification of the molecular mechanisms of non-response to treatments, relapses and remission in autoimmune, inflammatory, and allergic conditions (3TR).

European Commission.

CEIMI2-2018-14

PI: Ricard Cervera, Juan de Dios Cañete, Azucena Salas

Dissecting the cellular and molecular atlas of Rheumatoid Arthritis (RA) in sustained remission to identify pathways maintaining Remission and Triggering Flares.

Foundation for Research

in Rheumatology. INT_FOREUM_21

PI: Juan de Dios Cañete

Selected publications

Azuaga AB, Cuervo A, Reina D, ... , Scher JU, Cañete JD, Ramírez J. **Clinical and ultrasound features of a cohort of psoriasis patients without musculoskeletal symptoms: a prospective and multicentre study.** *RHEUMATOLOGY*. 64(10):5396-5403. D1

Arnaud L, Ruiz-Irastorza G, Aranow C, ... , Touma Z, Mosca M, Tani C; European Reference Network on Rare and Complex Connective Tissue and Musculoskeletal Diseases; Systemic Lupus Erythematosus International Collaborating Clinics group; European Lupus Society rare systemic lupus erythematosus taskforce member panel. **ERN ReCONNET-SLICC-SLEuro expert consensus on the therapeutic management of rare systemic lupus erythematosus manifestations.** *LANCET RHEUMATOLOGY*. 7(7):e505-e518. D1

Lewis MJ, Cubuk C, Surace AEA, ... , Nerviani A, Rivellese F, Pitzalis C; STRAP collaborative group. **Deep molecular profiling of synovial biopsies in the STRAP trial identifies signatures predictive of treatment response to biologic therapies in rheumatoid arthritis.** *NATURE COMMUNICATIONS*. 16(1):5374. D1

Piga M, Parodis I, Touma Z, ... , Pons-Estel G, Chasset F, Arnaud L. **Framework for implementing treat-to-target in systemic lupus erythematosus routine clinical care: consensus statements from an international task force.** *AUTOIMMUNITY REVIEWS*. 24(5):103773. D1

Rodriguez-Merlos P, Cabrera-Alarcón JL, Ruiz-Esquivé V, ... , Balsa A, Plasencia-Rodríguez C, Novella-Navarro M. **Early-onset difficult-to-treat rheumatoid arthritis: proposal of data-driven predictors and temporal threshold.** *ARTHRITIS RESEARCH & THERAPY*. 27(1):153. Q1

Nosocomial infection



GROUP LEADER

Alex Soriano (HCB)

RESEARCH INTERESTS

Our group is dedicated to complex infections with projects in immunosuppressed patients including onco-hematological patients and patients with solid organ transplant, orthopedic infections, infections in intensive care units and patients with nosocomial and community-acquired infections.

In addition, our research group works in projects related with infection prevention and antibiotic policies. We are working to obtain data from electronic health records and to implement research using advanced analytical techniques.

KEYWORDS

Nosocomial infection
Bacteremia
Immunosuppressed patients
Bone and joint infection
Antibiotic policy

RELATED DISEASES

Bacteremia
Fungal infections in immunosuppressed patients
Staphylococcus aureus infections
Solid organ transplant infections
Urinary tract infections

Publications

Original articles

63

Mean IF	5,06
Q1	62%
D1	19%
MA	32%
OA	84%

Others

35

Mean IF	5,70
Q1	60%
D1	23%
MA	29%
OA	66%

IF = Impact Factor

MA = Main authorship (last or corresponding author)

OA = Open Access

Others includes reviews, editorials, clinical guidelines, letters and case reports

Directed PhD theses

3

- Nicol Garcia
- Estela Moreno
- Caribay Vargas

Selected active grants

Análisis de la función plaquetaria en pacientes con bacteriemia por *Staphylococcus aureus*: valor pronóstico y aplicabilidad terapéutica.

Instituto de Salud Carlos III (ISCIII).

FIS_PI24/01680

PI: Alex Soriano

Personalización del tratamiento empírico de la neutropenia febril en los pacientes hematológicos.

Instituto de Salud Carlos III (ISCIII).

FIS_PI24/01776

PI: Carolina Garcia-Vidal

Selected publications

Peyrony O, García-Pouton N, Chumbita M, ... , Mensa J, Soriano A, García-Vidal C. **Current epidemiology of microbiologically documented infections and risk factors for multidrug resistance in hematologic patients presenting to the emergency department with suspected bacteremia.** *EMERGENCIAS*. 37(4):274-280. D1

García-Vidal Carolina, Teijón-Lumbreras C, Aiello TF, ... , Marcos MA, Mensa J, Soriano A. **COVID-19 Patients Benefitting From Remdesivir for Improved Survival: A Neural Network-Based Approach.** *JOURNAL OF MEDICAL VIROLOGY*. 97(3):e70276. Q1

Marco DN, Brey M, Anguera S, ... , Mensa J, Soriano A, Herrera S. **Time to positivity as a predictor of catheter-related bacteremia and mortality in adults with *Pseudomonas aeruginosa* bloodstream infection.** *CRITICAL CARE*. 29(1):63. D1

Soriano A, Locke JB, Cornely OA, ... , Manamley N, Sandison T, Arendrup MC. **Clinical and mycological outcomes of candidaemia and/or invasive candidiasis by *Candida* spp. and antifungal susceptibility: pooled analyses of two randomized trials of rezafungin versus caspofungin.** *CLINICAL MICROBIOLOGY AND INFECTION*. 31(2):250-257. D1

Gallardo-Pizarro A, Lopera C, Peyrony O, ... , Soriano A, Martínez JA, García-Vidal C. **Rectal colonization by multidrug-resistant Gram-negative bacteria and subsequent bacteraemia in haematological patients.** *CLINICAL MICROBIOLOGY AND INFECTION*. 31(9):1579-1583. D1

2

RESPIRATORY, CARDIOVASCULAR
AND RENAL PATHOBIOLOGY
AND BIOENGINEERING

Annual
Report
2025

Photo: Melissa Acosta Plasencia

AREA 2

Respiratory, cardiovascular and renal pathobiology and bioengineering

- 2.1 Inflammation and repair in respiratory diseases**
Àlvar Agustí
- 2.2 Respiratory biophysics and bioengineering**
Isaac Almendros
- 2.3 Physiopathological mechanisms of respiratory diseases**
Joan Albert Barberà
- 2.4 Translational research in pulmonary vascular diseases: cell proliferation and apoptotic mechanisms in pulmonary arterial hypertension**
Isabel Blanco
- 2.5 Familial cardiomyopathies and sudden death syndrome**
Josep Brugada
- 2.6 Nephrology and transplantation (LENIT)**
Fritz Diekmann
- 2.7 Vascular cell biology**
Gustavo Egea
- 2.8 Cardiovascular risk, nutrition and aging**
Ramon Estruch
- 2.9 Cardiomyopathies, heart failure and secondary pulmonary hypertension**
Ana García-Álvarez
- 2.10 Arrhythmias and physical activity**
Eduard Guasch
- 2.11 Biopathology and treatment of cardiac arrhythmias**
Lluís Mont
- 2.12 Clinical and experimental respiratory immunoallergy**
Joaquim Mullol
- 2.13 Atherosclerosis, coronary disease and heart failure**
Manel Sabaté
- 2.14 Cardiac imaging**
Marta Sitges
- 2.15 Applied research in infectious respiratory diseases and critically ill patients**
Antoni Torres



GROUP LEADER

Àlvar Agustí (HCB)

RESEARCH INTERESTS

Our group is interested in translational research of the most frequent chronic respiratory diseases, including chronic obstructive pulmonary disease, interstitial lung diseases, bronchiectasis, and lung cancer.

They are all the end-result of dynamic and cumulative interactions between environmental factors and genetic factors through the lifetime, a concept epitomized by the term GETomics (Agustí, Faner, Lancet RM 2022).

We sought to apply this GETomic approach to improve the prevention, early diagnosis and treatment of these patients, as we recently reported (Melén and Faner, Lancet 2024), but as early as possible due to the lack of plateau phase (Garcia-Aymerich J, Lancet RM 2025).

KEYWORDS

Respiratory diseases
Lung health
Lung immunity
Genomics
Networks

RELATED DISEASES

COPD
Bronchiectasis
Interstitial lung diseases
Lung cancer

2.01

Inflammation and repair in respiratory diseases

Publications

Original articles

41

Mean IF	8,78
Q1	78%
D1	46%
MA	32%
OA	80%

Others

19

Mean IF	9,63
Q1	68%
D1	47%
MA	53%
OA	58%

IF = Impact Factor

MA = Main authorship (last or corresponding author)

OA = Open Access

Others includes reviews, editorials, clinical guidelines, letters and case reports

Directed PhD theses

1

• Núria Olvera



Selected active grants

PredictCOPD. Understanding the host-environmental interactions across the lifespan determining lung function trajectories and COPD.

European Commission.

CE_ERC_2021_CoG

PI: Maria Rosa Faner

P4COPD. Prediction, prevention, personalized and precision management of COPD in young adults.

Instituto de Salud Carlos III (ISCIII).

FIS_PMP21/00090

PI: Àlvar Agustí

Selected publications

Garcia-Aymerich J, de las Heras M, Car-sin AE, ... , Wedzicha JA, Jarvis D, Faner R. **General population-based lung function trajectories over the life course: an accelerated cohort study.** *LANCET RESPIRATORY MEDICINE*. 13(7):611-622. D1

Faner R, Cho MH, Koppelman GH, ..., Dharmage SC, Meiners S, Agustí A. **Towards early detection and disease interception of COPD across the lifespan.** *EUROPEAN RESPIRATORY REVIEW*. 34(177):240243. D1

Olvera N, Agustí A, Vonk JM, ... , van den Berge M, Melén E, Faner R. **Heterogeneity of reduced FEV1 in early adulthood: A looking forward, looking backwards analysis.** *RESPIROLOGY*. 30(4):326-334. D1

Sibila O, Stobo J, Perea L, ... , Altenburg J, Boersma W, Chalmers J. **Symptoms, risk of future exacerbations, and response to long-term macrolide treatment in bronchiectasis: an observational study.** *LANCET RESPIRATORY MEDICINE*. 13(10):911-920. D1

Bui DS, Faner R, Washko G, Jenkins C, Walters EH, Dharmage SC. **Pre-COPD: an evolving concept with practice potential.** *LANCET RESPIRATORY MEDICINE*. 13(9):778-781. D1

Respiratory biophysics and bioengineering



GROUP LEADER

Isaac Almendros (UB)

RESEARCH INTERESTS

To deepen our understanding of the mechanical behavior of the respiratory system for improving the diagnosis and treatment of respiratory diseases.

On the one hand, we study respiratory mechanics in animal models and patients to optimize medical devices for diagnosing and treating lung dysfunctions.

On the other hand, we investigate how the mechanical interplay between lung cells and their extracellular matrix is altered in respiratory diseases and how this crosstalk can be modified to treat lung repair and regeneration.

KEYWORDS

Respiratory mechanics
Respiratory medical devices
Cell mechanics
Tissue engineering
Regenerative medicine

RELATED DISEASES

Sleep apnea
Acute lung injury
Cancer
Pulmonary fibrosis
COPD

Publications

Original articles

7

Mean IF **4,74**
Q1 **57%**
D1 **29%**
MA **0%**
OA **86%**

Others

2

Mean IF **2,40**
Q1 **0%**
D1 **0%**
MA **50%**
OA **50%**

IF = Impact Factor

MA = Main authorship (last or corresponding author)

OA = Open Access

Others includes reviews, editorials, clinical guidelines, letters and case reports

Selected publications

Salama R, Rodríguez-Lázaro MA, Castello-Branco C, ..., Muñoz Moreno E, Otero J, Farré R. **Low-cost, open-source device for applying controlled olfactory stimuli during functional magnetic resonance imaging (fMRI) of the brain.** *HARDWAREX*. 24:e00708. Q3

Díaz-García E, Alfaro E, Pérez-Moreno P, ..., Gozal D, García-Río F, Cubillos-Zapata C. **Immune Checkpoint Biomarkers Galectin-9 and TIM-3 Predict Melanoma and Lung Cancer Mortality in Obstructive Sleep Apnoea.** *ARCHIVOS DE BRONCONEUMOLOGIA*. 61(12):735-748. D1

Díaz-García E, Alfaro E, Pérez-Moreno P, ..., Gozal D, García-Río F, Cubillos-Zapata C. **From bench to bedside: Exploring the role of sCD25 in melanoma and lung cancer among sleep apnea patients.** *PULMONOLOGY*. 31(1):2590870. D1

Hernández-García MA, Aldave-Orzáiz B, Fernández-García CE, ..., Almendros I, Landete P, González-Rodríguez A. **Normalization of Oxygen Levels Induces a Metabolic Reprogramming in Livers Exposed to Intermittent Hypoxia Mimicking Obstructive Sleep Apnea.** *ANTIOXIDANTS*. 14(8):971. Q1

Gómez-López A, Arismendi E, Cano I, ..., Feroso J, Roca J, González-Colom R. **Protocol for the enhanced management of multimorbid patients with COPD and severe asthma: role of indoor air quality.** *BMJ OPEN RESPIRATORY RESEARCH*. 12(1):e002589. Q2

Directed PhD theses

1

· África Martínez

Selected active grants

Social, sustainable and inclusive health care systems in Med area (SALAM).

European Commission.
NEXT MED_A_T_3.2_0496

PI: Jorge Otero

Mechanisms driving the end-organ noxious effects of intermittent hypoxia using a novel ex vivo physiometric model based on precision-cut tissue slices.

Agencia Estatal de Investigación.
AEI_PID2022-140774OB-I00

PI: Isaac Almendros



GROUP LEADER

Joan Albert Barberà (HCB)

RESEARCH INTERESTS

Alterations of the pulmonary circulation in respiratory diseases, focusing on the identification of therapeutic targets for associated pulmonary hypertension.

Perioperative medicine, evaluating prehabilitation as a preoperative intervention to reduce complications and strategies to minimize complications of mechanical ventilation.

Sleep and ventilatory disorders, aiming to identify personalized treatment indications and to evaluate technological innovations for non-invasive home ventilation.

Integrated healthcare, evaluating models for risk prediction and developing tools to support clinical decisions.

KEYWORDS

Pulmonary hypertension
Perioperative medicine
Sleep apnea
Non-invasive home ventilation
Integrated healthcare

RELATED DISEASES

Pulmonary hypertension
Chronic thromboembolic pulmonary hypertension
Chronic obstructive pulmonary disease
Sleep apnea and ventilatory disorders
Perioperative care

2.03

Physiopathological mechanisms of respiratory diseases

Publications

Original articles

42

Mean IF **6,07**
Q1 74%
D1 40%
MA 40%
OA 69%

Others

9

Mean IF **5,72**
Q1 56%
D1 33%
MA 67%
OA 56%

IF = Impact Factor
MA = Main authorship (last or corresponding author)
OA = Open Access
Others includes reviews, editorials, clinical guidelines, letters and case reports

Directed PhD theses

1

• Javier Alsina

Selected active grants

Knowledge for improving indoor AIR quality and HEALTH (K-HEALTHinAIR).

European Commission.

CE_HE_CH_21_1s21_RIA

PI: Joan Albert Barberà, Josep Roca

Análisis transcriptómico de células endoteliales en la hipertensión arterial pulmonar para identificar firmas de genes relacionados con la enfermedad y cambios moleculares inducidos por el tratamiento.

Instituto de Salud Carlos III (ISCIII).

FIS_PI21/00403

PI: Joan Albert Barberà

Selected publications

Jiménez D, Dubois-Silva A, Demelo-Rodríguez P, ..., Barillari G, Bikdeli B, Monreal M; RIETE Investigators. **Acute pulmonary embolism: a multimarker calculator to predict short-term outcomes.** *EUROPEAN HEART JOURNAL*. 46(45):4921-4929. D1

Osorio J, Tura-Ceide O, Pavía Javier, ..., Castellà M, Peinado VI, Barberà JA. **Increased lung [18F]-FDG uptake in chronic thromboembolic pulmonary hypertension with distal involvement.** *EUROPEAN RESPIRATORY JOURNAL*. 66(6):2500130. D1

Dalmases M, Sánchez de la Torre M, Martínez D, ..., Lee CH, Barbé F, Torres G. **The Effect of Obstructive Sleep Apnea on Subclinical Target Organ Damage in Patients With Resistant Hypertension.** *ARCHIVOS DE BRONCONEUMOLOGÍA*. 61(3):147-155. D1

Poyatos P, Peinado VI, Blanco I, ..., Straub AC, Barberà JA, Tura Ceide O. **Assessing the role of endothelium-protective drugs: Functional and molecular insights into chronic thromboembolic pulmonary hypertension derived endothelial cells.** *BIOMEDICINE & PHARMACOTHERAPY*. 190:118425. D1

López-Hernández A, Gimeno-Santos E, Navarro Ripoll R, ..., Sandoval E, Castellà M, Martínez-Palli G. **Multimodal prehabilitation as a strategy to reduce postoperative complications in cardiac surgery.** *EUROPEAN JOURNAL OF ANAESTHESIOLOGY*. 42(11):987-996. D1

Translational research in pulmonary vascular diseases: cell proliferation and apoptotic mechanisms in pulmonary arterial hypertension



GROUP LEADER

Isabel Blanco (HCB)

RESEARCH INTERESTS

The group focuses on pulmonary hypertension (PH), studying disease mechanisms, identifying biomarkers, and developing new therapies. We evaluate therapeutic targets, disease progression, and remodeling in PH, with an interest in exercise and pulmonary circulation's impact.

Our goal is to develop tailored interventions for PH management. Utilizing animal, cell models, and patient samples, we aim to have a molecular and clinical impact.

Conducting clinical research, exploring non-pharmacological interventions, and investigating biomarkers and therapies are key activities. The group collaborates with prestigious medical institutions in translational research and international trials.

KEYWORDS

Pulmonary hypertension
Proliferation-apoptosis pathway
Hypoxia
Animal models
New targets

RELATED DISEASES

Pulmonary arterial hypertension
Connective tissue diseases
Congenital heart diseases
Chronic thromboembolic pulmonary hypertension
Pulmonary hypertension associated lung diseases

Publications

Original articles

23

Mean IF 5,30
Q1 61%
D1 30%
MA 35%
OA 83%

Others

16

Mean IF 5,26
Q1 75%
D1 56%
MA 44%
OA 44%

IF = Impact Factor
MA = Main authorship (last or corresponding author)
OA = Open Access
Others includes reviews, editorials, clinical guidelines, letters and case reports

Selected publications

Osorio J, Tura-Ceide O, Pavia J, ... , Castellà M, Peinado VI, Barberà JA. **Increased lung [18F]-FDG uptake in chronic thromboembolic pulmonary hypertension with distal involvement.** *EUROPEAN RESPIRATORY JOURNAL*. 66(6):2500130. D1

Delgado-Ortiz L, Buekers J, Chynkiamis N, ... , Rochester L, Troosters T, Garcia-Aymerich J. **How do people with COPD walk? A European study on digitally measured real-world gait.** *EUROPEAN RESPIRATORY JOURNAL*. 66(1):2402303. D1

Gimeno-Santos E, Vilaró J, Arbilla-ga-Etxarri A, ... , Souto S, Vendrell M, Garcia-Aymerich J. **Development and Comparison of Reference Equations for the Six-Minute Walk Test in Spanish Healthy Adults Aged 45-85 Years.** *ARCHIVOS DE BRONCONEUMOLOGIA*. 61(8):459-466. D1

Poyatos P, Peinado VI, Blanco I, ... , Straub AC, Barberà JA, Tura-Ceide O. **Assessing the role of endothelium-protective drugs: Functional and molecular insights into chronic thromboembolic pulmonary hypertension derived endothelial cells.** *BIOMEDICINE & PHARMACOTHERAPY*. 190:118425. D1

Torres-Castro R, Hinojosa W, Martínez-Meñaca A, ... , Barberà JA, Escribano-Subías P, Blanco I; REHAP Investigators. **Epidemiology of supplemental oxygen in patients with pulmonary hypertension.** *RESPIROLOGY*. 30(1):70-79. D1

Directed PhD theses

3

• Alfredo Páez 
• Javier Alsina
• Yolanda Torralba

Selected active grants

Innovando en el tratamiento de la HAP con YM155, inhibidor de survivina "first-in-class" (IDEHAP).

Instituto de Salud Carlos III (ISCIII).
FIS_PI24/01182

PI: Isabel Blanco

Rehabilitación en hipertensión pulmonar: efectos a largo plazo de un programa de entrenamiento urbano.

Instituto de Salud Carlos III (ISCIII).
FIS_PI21/00555

PI: Isabel Blanco



GROUP LEADER

Josep Brugada (HCB)

RESEARCH INTERESTS

The group, a pioneer at a national and international level, studies the clinical, electrical, structural and genetic variables involved in the onset, natural history and prognosis of sudden death, with the aim of being able to identify risk indicators and to prevent it.

In cases of diseases that affect cardiac function, the group works to prevent progression. The group also aims to be able to establish a careful diagnosis that allows personalized measures to be adopted, both in the prevention and in the treatment of sudden family death.

KEYWORDS

Inherited arrhythmias
Inherited cardiomyopathies
Sudden cardiac death
Cardiogenetic diseases
Personalised medicine

RELATED DISEASES

Brugada syndrome
Long QT syndrome
Catecholaminergic polymorphic ventricular tachycardia
Arrhythmogenic cardiomyopathy
Other familial cardiomyopathies and sudden arrhythmic death syndromes

2.05

Familial cardiomyopathies and sudden death syndrome

Publications

Original articles

7

Mean IF 4,31
Q1 71%
D1 43%
MA 0%
OA 43%

Others

7

Mean IF 15,17
Q1 100%
D1 86%
MA 29%
OA 86%

IF = Impact Factor

MA = Main authorship (last or corresponding author)

OA = Open Access

Others includes reviews, editorials, clinical guidelines, letters and case reports

Selected active grants

Caracterización y Estratificación de Riesgo en Síndrome de Brugada mediante el uso combinado agrupación fenotípica por ECG, escalas de riesgo poligénico y procesamiento de lenguaje natural para medicina de precisión (CARS-BrS).

Instituto de Salud Carlos III (ISCIII).
FIS_PI24/00691

PI: Elena Arbelo

Selected publications

Jurcut R, Barriales-Villa R, Biagini E, ... Elliott P, Arbelo E, Kaski JP. **Key priorities for the implementation of the 2023 ESC Guidelines for the management of cardiomyopathies in low-resource settings.** *EUROPEAN HEART JOURNAL-QUALITY OF CARE AND CLINICAL OUTCOMES.* 11(7):910-918. Q1

Behr ER, Winkel BG, Ensam B, ... , Odening KE, Shimizu W, Veltmann C. **The diagnostic role of pharmacological provocation testing in cardiac electrophysiology: a clinical consensus statement of the European Heart Rhythm Association and the European Association of Percutaneous Cardiovascular Interventions (EAPCI) of the ESC, the ESC Working Group on Cardiovascular Pharmacotherapy, the Association of European Paediatric and Congenital Cardiology (AEPC), the Paediatric & Congenital Electrophysiology Society (PACES), the Heart Rhythm Society (HRS), the Asia Pacific Heart Rhythm Society (APHRS), and the Latin American Heart Rhythm Society (LAHRS).** *EUROPA-CE.* 27(4):euaf067. D1

Borrell-Vega J, Fernández Font JD, Linares M, ... , Brugada J, Arbelo E, Giménez-Milà M. **Eighteen-year analysis of anaesthetic management in Brugada syndrome.** *EUROPEAN JOURNAL OF ANAESTHESIOLOGY.* 42(5):458-467. D1

Azeli Y, Rio S, Toledo Y, ... , Brugada J, Ortega M, Barbería E. **Characteristics and Causes of Sports-Related Sudden Death in the General Population during the COVID-19 Pandemic.** *MEDICINE AND SCIENCE IN SPORTS AND EXERCISE.* 57(5):962-969. D1

Ruiz Ortiz M, Arbelo E, Roldán Rabadán I, ... , del Río Lechuga A, Elola Somoza FJ, Anguita Sánchez M. **The European Society of Cardiology quality indicators in atrial fibrillation in centers of excellence in Spain: the SEC-EXCELENTE FA registry.** *REVISTA ESPAÑOLA DE CARDIOLOGÍA.* 78(5):389-400. Q1

Nephrology and transplantation (LENIT)



GROUP LEADER

Fritz Diekmann (HCB)

RESEARCH INTERESTS

Chronic kidney disease due to any cause and especially diabetes-related kidney disease are a major burden for patients and for health care budgets.

We conduct research that is directed towards new and improved treatment strategies for chronic kidney disease, dialysis treatment and kidney and pancreas transplantation.

This also includes techniques of kidney regeneration in early and late stages of chronic kidney failure as well as diagnostics and therapies in transplant immunology.

KEYWORDS

Kidney
Dialysis
Renal & pancreas transplant
Transplant immunology
Kidney regeneration

RELATED DISEASES

Chronic/acute kidney disease
Hereditary kidney disease
Graft rejection
Diabetes
Autoimmune kidney diseases

Publications

Original articles

42

Mean IF 4,15
Q1 62%
D1 17%
MA 38%
OA 79%

Others

13

Mean IF 4,62
Q1 54%
D1 31%
MA 54%
OA 54%

IF = Impact Factor
MA = Main authorship (last or corresponding author)
OA = Open Access
Others includes reviews, editorials, clinical guidelines, letters and case reports

Directed PhD theses

1

• Diana Maria Rodriguez

Selected active grants

Innovative Applications of Extracorporeal Photopheresis in Solid Organ Transplantation (exTra).

European Comission.
CE_HE_MSCA_22_DN
PI: Fritz Diekmann

Células dendríticas tolerogénicas autólogas donante-específicas (dsATDC) para receptores de trasplante de riñón altamente sensibilizados.

Instituto de Salud Carlos III (ISCIII).
FIS_ ICI21/00049
PI: Fritz Diekmann

Selected publications

Arana C, Hermida E, Rovira J, ... , Diekmann F, Ventura-Aguar P, Oppenheimer F. **Antibody-mediated rejection diagnosed in early protocol biopsies in high immunological risk kidney transplant recipients.** *NEPHROLOGY, DIALYSIS, TRANSPLANTATION*. 40(3):577-587. D1

Gauckler P, Matyjek A, Kapsia S, ... , Zagorec N, Mayer G, Kronbichler A; RITERM Study Team. **Long-Term Outcomes of Rituximab-Treated Adult Patients with Podocytopathies.** *JOURNAL OF THE AMERICAN SOCIETY OF NEPHROLOGY*. 36(4):668-678. D1

Cucchiari D, Cuadrado-Payán E, Gonzalez-Roca E, ... , Palou E, Puig-Butlle JA, Diekmann F. **Normalization dynamics of donor-derived cell-free DNA predicts future kidney transplant rejection.** *NEPHROLOGY DIALYSIS TRANSPLANTATION*. 40(6):1248-1250. D1

Maduell F, Escudero-Saiz VJ, Cuadrado-Payán E, ... , Casals G, Rico N, Broseta JJ. **Comparing hemodialysis and hemodiafiltration performance with and without hemoadsorption.** *CLINICAL KIDNEY JOURNAL*. 18(5):sfaf146. Q1

Montagud-Marrahi E, Rodriguez-Gonzalo A, López-Aladid R, ... , Diekmann F, Campistol JM, Ramírez-Bajo MJ. **Enhanced Kidney Targeting and Distribution of Tubuloids During Normothermic Perfusion.** *TRANSPLANT INTERNATIONAL*. 38:14747. Q1



GROUP LEADER

Gustavo Egea (UB)

RESEARCH INTERESTS

We are interested to investigate the pathomechanisms involved in the aortopathy that occurs in some genetic diseases of the connective tissue such as Marfan syndrome (MFS) and Williams-Beuren syndrome (WBS). The former is caused by mutations in fibrillin-1 gene (FBN1) and the latter caused by an extensive chromosomal deletion in which elastin gene (ELN) is lost.

Both fibrillin-1 and elastin are crucial molecular components of elastic fibers, but strikingly their cardiovascular injuries are opposed: aortic aneurysm for MFS and aortic stenosis for WBS.

Currently, we assay new or repositioned pharmacological drugs targeting TGF-beta and redox stress in mouse models of both diseases. As a result of this work, the European Medication Agency (EMA) has recognized allopurinol as an orphan drug for the treatment of Marfan syndrome.

KEYWORDS

Marfan syndrome
Williams-Beuren syndrome
Aortopathy
Redox stress
TGF-beta signalling

RELATED DISEASES

Loeys-Dietz syndrome
Ehlers-Danlos syndrome
Other fibrillinopathies
Bicuspid aortic valve
Supravalvular aortic stenosis

2.07

Translational vascular biology

Publications

Original articles

1

Mean IF **11,90**
Q1 100%
D1 100%
MA 0%
OA 100%

Others

1

Mean IF **4,90**
Q1 100%
D1 0%
MA 0%
OA 100%

IF = Impact Factor
MA = Main authorship (last or corresponding author)
OA = Open Access
Others includes reviews, editorials, clinical guidelines, letters and case reports

Selected publications

Manich G, Pérez B, Penas C, ... , Giménez-Llort L, Egea G, Jiménez-Altayó F. **Sex-and age-dependent neurovascular abnormalities linked to neuroinflammation lead to exacerbated post-ischemic brain injury in Marfan syndrome mice.** *REDOX BIOLOGY*. 83:103662. D1

Jimenez-Trinidad FR, Calvo-Gomez S, Sabaté M, ... , Campuzano V, Egea G, Dantas AP. **Extracellular Vesicles as Mediators of Endothelial Dysfunction in Cardiovascular Diseases.** *INTERNATIONAL JOURNAL OF MOLECULAR SCIENCES*. 26(3):1008. Q1

Selected active grants

Nuevos conocimientos sobre los mecanismos y terapéuticas de la aortopatía del Síndrome de Marfan: del estrés redox al ambiente genómico parental.

Agencia Estatal de Investigación.
AEI_PID2023-146296OB-I00
PI: Gustavo Egea

Novel redox stress targets and therapies to combat genetic aortopathies.

Fundació la Marató de TV3.
Cardiovascular_22
PI: Gustavo Egea

Cardiovascular risk, nutrition and aging



GROUP LEADER

Ramon Estruch (HCB)

RESEARCH INTERESTS

The leading cause of premature death in industrialized countries is cardiovascular disease, which accounts for 17.3 million deaths/year around the world and is considered a public-health priority.

Evidence exists that indicates that lifestyle, and more specifically a healthy diet such as the Mediterranean diet, may play a key role in the prevention of this disease and in the management of associated risk factors, such as diabetes, obesity, hypertension and dyslipidaemia.

Our research interest is to find tools to prevent the onset of cardiovascular disease and its associated risk factors.

KEYWORDS

Mediterranean diet
Healthy aging
Lifestyle
Cardiovascular disease
Inflammation

RELATED DISEASES

Cardiovascular disease
Obesity
Hypertension
Diabetes
Dyslipidaemia

Publications

Original articles

36

Mean IF 6,66
Q1 75%
D1 36%
MA 19%
OA 94%

Others

11

Mean IF 4,31
Q1 55%
D1 18%
MA 82%
OA 73%

IF = Impact Factor
MA = Main authorship (last or corresponding author)
OA = Open Access
Others includes reviews, editorials, clinical guidelines, letters and case reports

Selected publications

Domínguez-López I, Lamuela-Raventós RM, Razquin C, ... , Ros E, Martínez-González MA, Estruch R. **Urinary tartaric acid as a biomarker of wine consumption and cardiovascular risk: the PREDIMED trial.** *EUROPEAN HEART JOURNAL*. 46(2):161-172. D1

Ruiz-Leon AM, Camafort M, Sala-Vila A, ... , Ros E, Estruch R, Casas R. **The Mediterranean diet displays an immunomodulatory effect that correlates with beneficial changes in carotid atherosclerosis.** *CARDIOVASCULAR RESEARCH*. 121(6):847-850. D1

Casas R, Ruiz-León AM, Argente J, ... , Willett W, Ros E, Estruch R. **A New Mediterranean Lifestyle Pyramid for Children and Youth: A Critical Lifestyle Tool for Preventing Obesity and Associated Cardiometabolic Diseases in a Sustainable Context.** *ADVANCES IN NUTRITION*. 16(3):100381. D1

Ruiz-Leon AM, Casas R, Castro-Barquero S, ... , Casanovas-Garriga F, Pérez-Gesalí A, Estruch R. **Efficacy of a Mobile Health-Based Behavioral Treatment for Lifestyle Modification in Type 2 Diabetes Self-Management: Greenhabit Randomized Controlled Trial.** *JOURNAL OF MEDICAL INTERNET RESEARCH*. 27:e58319. D1

Arroyo-Huidobro M, Amat M, Capdevila-Reniu A, ... , Ladino A, Sepúlveda C, Sacanella E. **The Role of the Mediterranean Diet in the Prevention of Sarcopenia and Frailty in Older Adults: A Narrative Review.** *NUTRIENTS*. 17(10):1743. Q1

Selected active grants

Efecto de una intervención con dieta mediterránea hipocalórica, ayuno intermitente y senolíticos naturales en los marcadores de senescencia celular.

Instituto de Salud Carlos III (ISCIII). FIS_ PI23/00921

PI: Ramon Estruch, Emilio Sacanella

Fundamentos teóricos para sistemas de aprendizaje escalables y generalizables de próxima generación (EXPLORA-NEXTLEARN).

Agencia Estatal de Investigación. AEI_IA25

PI: Isabel Vilaseca, Rosa Casas



GROUP LEADER

Ana García-Álvarez (HCB)

RESEARCH INTERESTS

Our group investigates the mechanisms of cardiomyopathies, heart failure, and secondary pulmonary hypertension with right ventricular involvement, from a translational perspective that integrates animal models, cardiac imaging, omics, and clinical trials.

We also study cardiac arrest, cardiogenic shock, mechanical circulatory support, minimally invasive surgical techniques in valvular heart disease, congenital heart disease, Chagas disease, and the molecular mechanisms of atherosclerosis, with the aim of improving diagnosis, treatment, and prognosis for our patients.

KEYWORDS

Translational research
Experimental animal models
Omics
Imaging
Clinical trials

RELATED DISEASES

Heart failure
Pulmonary hypertension
Cardiomyopathy
Cardiac arrest
Atherosclerosis

2.09

Cardiomyopathies, heart failure and secondary pulmonary hypertension

Publications

Original articles

49

Mean IF	7,70
Q1	69%
D1	20%
MA	14%
OA	47%

Others

18

Mean IF	7,63
Q1	89%
D1	33%
MA	11%
OA	33%

IF = Impact Factor

MA = Main authorship (last or corresponding author)

OA = Open Access

Others includes reviews, editorials, clinical guidelines, letters and case reports

Selected active grants

Papel del metabolismo en la adaptación del ventrículo derecho en la hipertensión pulmonar: efecto de la empagliflozina y monitorización in-vivo con PET-FDG y espectrometría por resonancia magnética.

Instituto de Salud Carlos III (ISCIII).

FIS_PI23/01341

PI: Ana García-Álvarez

A blueprint of inflammation in human atherosclerosis: a translational multiomics and imaging study.

Fundació la Marató de TV3.

Cardiovascular_22

PI: Ana García-Álvarez

Selected publications

Sandoval E, Morales-Rey I, Muro A, Camon S, Trashorras M, Pereda D. **Impact of the surgical approach on postoperative quality of life.** *JOURNAL OF ROBOTIC SURGERY*. 19(1):686. Q1

Cepas-Guillen P, Flores-Umanzor E, Horlick E, ... , Freixa X, Houde C, Rodés-Cabau J. **Interventions for adult congenital heart disease.** *NATURE REVIEWS CARDIOLOGY*. 22(7):510-526. D1

Avvedimento M, Cepas-Guillén P, Ternacle J, ... , Capodanno D, Garot P, Rodés-Cabau J. **Validation of the Valve Academic Research Consortium High Bleeding Risk Definition in Patients Undergoing TAVR.** *CIRCULATION-CARDIOVASCULAR INTERVENTIONS*. 18(1):e014800. Q1

Caravaca Pérez P, Fernández-Herrero I, Broseta JJ, ... , García-Álvarez A, Farre M, Delgado JF. **Impact of natriuresis on worsening renal function during episodes of acute heart failure.** *REVISTA ESPAÑOLA DE CARDIOLOGÍA*. 78(3):196-205. Q1

Ibanez B, Latini R, Rossello X, ... , de la Torre-Hernández JM, Ottani F, Fuster V; REBOOT-CNIC Investigators. **Beta-Blockers after Myocardial Infarction without Reduced Ejection Fraction.** *NEW ENGLAND JOURNAL OF MEDICINE*. 393(19):1889-1900. D1

Arrhythmias and physical activity



Publications

Original articles

9

Mean IF	9,09
Q1	44%
D1	33%
MA	11%
OA	89%

Others

5

Mean IF	11,22
Q1	80%
D1	80%
MA	60%
OA	100%

IF = Impact Factor
MA = Main authorship (last or corresponding author)
OA = Open Access
Others includes reviews, editorials, clinical guidelines, letters and case reports

Selected active grants

Daño vascular y miocárdico inducido por el ejercicio extremo: de mitocondria, células y tejidos hasta el envejecimiento en atletas.

Instituto de Salud Carlos III (ISCIII).
FIS_PI22/00953
PI: Eduard Guasch

Diseño, validación y aplicación de una nueva herramienta, los cortes de miocardio vivo, para el estudio de la patología arrítmica inducida por el ejercicio.

Fundación Casa del Corazón.
SEC_InvBasica24
PI: Eduard Guasch

Selected publications

Guasch E, Mont L. **Atrial fibrillation in elite rowers: a genetic and endurance sport nexus?** *EUROPEAN HEART JOURNAL*. 46(47):5126-5128. D1

Alcarraz A, Meza-Ramos A, Rubies C, ..., Mont L, Battle M, Guasch E. **From moderate to strenuous training: unravelling mechanistic contributors and biomarkers for atrial fibrillation in exercise.** *EURO-PACE*. 27(6):euaf098. D1

Kotecha D, Bunting KV, Mehta S, ..., Gale CP, de Potter TJR, van Gelder IC; STEER-AF investigators. **Education of healthcare professionals to improve guideline adherence in atrial fibrillation: the STEER-AF cluster-randomized clinical trial.** *NATURE MEDICINE*. 31(8):2647-2654. D1

Pujol-López M, Graterol FR, Borràs R, ..., Guasch E, Tolosana JM, Mont L. **Clinical Response to Resynchronization Therapy Conduction System Pacing vs Biventricular Pacing: The CONSYST-CRT Trial.** *JACC: CLINICAL ELECTROPHYSIOLOGY*. 11(8):1820-1831. D1

Regany-Closa M, Pomes J, Arbelo E, ..., Roca-Luque I, Mont L, Althoff TF. **Postablation Arrhythmogenic Channels Predict Atrial Fibrillation Recurrence: Iatrogenic Substrate Revisited.** *JACC: CLINICAL ELECTROPHYSIOLOGY*. 11(4):823-826. D1

GROUP LEADER

Eduard Guasch (HCB-IDIBAPS)

RESEARCH INTERESTS

Our group aims at identifying the deleterious cardiovascular consequences of long-term strenuous physical activity and describing their causes and pathology, taking advantage of a translational approach including animal and ex vivo models, and human samples.

We specifically focus on the development of atrial fibrillation, right ventricle arrhythmias, and vascular stiffening in heavily trained athletes. We are also interested in uncovering the mechanisms of the atrial arrhythmogenic remodelling underlying atrial fibrillation and improving its clinical management.

KEYWORDS

Atrial fibrillation
Arterial stiffening
Animal model
Strenuous exercise

RELATED DISEASES

Atrial fibrillation



GROUP LEADER

Lluís Mont (HCB)

RESEARCH INTERESTS

Our group is working in etiopathology and therapy of arrhythmias, from animal models of atrial cardiomyopathy, to the use of new diagnostic like Magnetic resonance and electrocardiographic imaging, to personalize therapy.

Furthermore, we are analyzing the usefulness of new available therapies, such as pulse field ablation, or conducting system pacing. We are also interested in the use of new mapping catheters, to improve ventricular tachycardia ablation.

KEYWORDS

Ablation
MRI
ECG Imaging
CRT
Physiological pacing

RELATED DISEASES

Atrial fibrillation
Supraventricular arrhythmias
Ventricular arrhythmias
Heart failure
Bradycardia

Biopathology and treatment of cardiac arrhythmias

Publications

Original articles

19

Mean IF **6,95**
Q1 63%
D1 37%
MA 21%
OA 89%

Others

8

Mean IF **9,83**
Q1 88%
D1 88%
MA 50%
OA 100%

IF = Impact Factor
MA = Main authorship (last or corresponding author)
OA = Open Access
Others includes reviews, editorials, clinical guidelines, letters and case reports

Directed PhD theses

2

• Paula Sánchez
• Sara Vázquez

Selected active grants

Herramientas no-invasivas para la estratificación de riesgo y guía de la terapia de la fibrilación auricular.

Instituto de Salud Carlos III (ISCIII).
FIS_PI22/00441

PI: Lluís Mont

Teràpia de Resincronització Personalitzada Basada en Imatge Electrocardiogràfica i Resonància Magnètica: estimulació biventricular vs estimulació de la branca esquerra.

Fundació la Marató de TV3.
Cardiovascular_22

PI: José M. Tolosana

Selected publications

Guasch E, Mont L. **Atrial fibrillation in elite rowers: a genetic and endurance sport nexus?** *EUROPEAN HEART JOURNAL*. 46(47):5126-5128. D1

Pujol-López M, Graterol FR, Borràs R, ... , Guasch E, Tolosana JM, Mont L. **Clinical Response to Resynchronization Therapy Conduction System Pacing vs Biventricular Pacing: The CONSYST-CRT Trial.** *JACC: CLINICAL ELECTROPHYSIOLOGY*. 11(8):1820-1831. D1

Regany-Closa M, Pomes J, Arbelo E, ... , Roca-Luque I, Mont L, Althoff TF. **Post-ablation Arrhythmogenic Channels Predict Atrial Fibrillation Recurrence: Iatrogenic Substrate Revisited.** *JACC: CLINICAL ELECTROPHYSIOLOGY*. 11(4):823-826. D1

Kotecha D, Bunting KV, Mehta S, ... , Gale CP, de Potter TJR, van Gelder IC; STEER-AF investigators. **Education of healthcare professionals to improve guideline adherence in atrial fibrillation: the STEER-AF cluster-randomized clinical trial.** *NATURE MEDICINE*. 31(8):2647-2654. D1

Castrejón Castrejón S, Martínez Cossiani M, Basterra Sola N, ... , Escobar Cervantes C, Moreno R, Merino JL; POWER FAST III Trial Investigators. **High-Power Short-Duration Radiofrequency Application for Faster and Safer Pulmonary Vein Isolation The POWER-FAST III Trial.** *JACC: CLINICAL ELECTROPHYSIOLOGY*. 11(2):350-361. D1

Clinical and experimental respiratory immunoallergy



GROUP LEADER

Joaquim Mullol (IDIBAPS)

RESEARCH INTERESTS

Respiratory, skin, drug and food allergies, and chronic rhinosinusitis and asthma are chronic diseases with high prevalence. These diseases affect over 30% of the general population having a high burden on quality of life and personal and public health costs.

Identifying mechanisms of action responsible for these disorders may improve the efficiency of current treatments, allow the development of new therapeutic strategies, and facilitate the identification of biological markers (biomarkers) for diagnosis and monitoring therapeutic response within a context of personalized and precision medicine.

KEYWORDS

CRS with NP & loss of smell
Severe asthma
Drug & food allergy
Urticaria & skin allergy
Anaphylaxis

RELATED DISEASES

CRS, rhinitis, and severe asthma
Smell and taste disorders
Drug- & food-induced allergy, anaphylaxis
Atopic dermatitis, urticaria
Sinus and skull base tumors

Publications

Original articles

52

Mean IF **8,25**
Q1 **58%**
D1 **38%**
MA **44%**
OA **77%**

Others

38

Mean IF **6,48**
Q1 **84%**
D1 **68%**
MA **53%**
OA **79%**

IF = Impact Factor
MA = Main authorship (last or corresponding author)
OA = Open Access
Others includes reviews, editorials, clinical guidelines, letters and case reports

Directed PhD theses

2

• Laia Ollé
• Sonia Vicens

Selected active grants

BREATHE: Blocking Respiratory Exacerbations: AI and data driven Technology for Health Enhancement.
European Commission.
CE_EIT_Inn_Flag23_C3
PI: Irina Bobolea, Joaquim Mullol

Caracterización fenotípica y funcional de basófilos y mastocitos de pacientes con anafilaxia por alergia a alimentos.
Instituto de Salud Carlos III (ISCIII).
FIS_PI22/00920
PI: Rosa Muñoz

Selected publications

Sanchez-Gomez S, Martin-Jimenez D, Moreno-Luna R, ... , Fernandez-Liesa R, Alobid I, Bernal-Sprekelsen M. **The Lamella Ostium Extent Mucosa (LOEM) system: a new classification and pilot study for endoscopic sinus surgery.** *EUROPEAN ARCHIVES OF OTO-RHINO-LARYNGOLOGY*. 282(2):851-867. Q1

Lipworth BJ, Han JK, Desrosiers M, ... , Mankad VS, Bahadori L, Ponnarambil SS; WAYPOINT Study Investigators. **Tezepelumab in Adults with Severe Chronic Rhinosinusitis with Nasal Polyps.** *NEW ENGLAND JOURNAL OF MEDICINE*. 392(12):1178-1188. D1

Pascal M, Chauhan J, Knol E, ... , Bergmann C, Karagiannis SN, Bax HJ. **Basophil Activation Test: Bridging Allergy and Oncology for Diagnostic, Therapeutic and Prognostic Applications in AllergoOncology: An EAACI Position Paper.** *ALLERGY*. 80(8):2097-2112. D1

Ollé L, García-García L, Ruano-Zaragoza M, ... , Pascal M, Martín M, Muñoz-Cano R. **Mast Cell Activation Profile and TFH13 Detection Discriminate Between Food Anaphylaxis and Sensitization.** *JOURNAL OF INVESTIGATIONAL ALLERGOLOGY AND CLINICAL IMMUNOLOGY*. 35(3):203-215. D1

Matas J, Di Somma A, Liras V, ... , Torné R, Sánchez-Dalmau B, Enseñat J. **Retinal and Optic Nerve Integrity After Endoscopic Transorbital Skull Base Surgery Assessed by Optical Coherence Tomography.** *NEUROSURGERY*. 99(2):311-323. D1

Atherosclerosis, coronary disease and heart failure



GROUP LEADER

Manel Sabaté (HCB)

RESEARCH INTERESTS

To evaluate the performance of novel strategies to treat coronary artery disease (acute/chronic).

To assess the influence of hormonal factors, gender, and aging in ischemic heart disease.

To study the efficacy of stem cell therapy.

To study the pathogenesis of neointimal hyperplasia, inflammation, and thrombosis.

To determine the efficiency of new transcatheter devices to treat structural and congenital heart disease and the role of imaging techniques.

To study the pathogenesis of ventricular remodelling in dilated cardiomyopathy.

To evaluate new therapies for pulmonary hypertension.

KEYWORDS

Coronary artery disease
Percutaneous coronary intervention
Stem cell therapy
Structural heart disease
Heart failure

RELATED DISEASES

Coronary artery disease
Acute coronary syndrome
Structural heart disease
Heart failure
Pulmonary hypertension

Publications

Original articles

64

Mean IF **6,38**
Q1 67%
D1 23%
MA 25%
OA 63%

Others

29

Mean IF **9,85**
Q1 76%
D1 38%
MA 72%
OA 34%

IF = Impact Factor

MA = Main authorship (last or corresponding author)

OA = Open Access

Others includes reviews, editorials, clinical guidelines, letters and case reports

Directed PhD theses

1

• Marta Arrieta

Selected active grants

AI Scalable Solution for ST Myocardial Infarction (ASSIST).

European Commission.

CE_EIT_Inn_Flag23_C1

PI: Manel Sabaté

Pre-Symptomatic Detection of Decompensated Heart Failure from Voice (PRE-DETECT-HF).

European Commission.

CE_EIT_Inn_Flag23_C2

PI: Manel Sabaté

Selected publications

Sabaté M, Alfonso F, Gómez-Lara J, ... , García del Blanco B, Ortega-Paz L, Brugaletta S; MAGSTEMI Trial Investigators. **Magnesium-Based Resorbable Scaffold vs Sirolimus-Eluting Stent in STEMI Patients: 5-Year Results of the MAGSTEMI Trial.** *JACC-CARDIOVASCULAR INTERVENTIONS*. 18(13):1714-1716. D1

Rinaldi R, Occhipinti G, Ortega-Paz L, ... , Franchi F, Angiolillo DJ, Brugaletta S. **Platelet Function Profiles in Patients With Ischemia and Nonobstructed Coronary Arteries.** *JACC-CARDIOVASCULAR INTERVENTIONS*. 18(12):1609-1610. D1

Jimenez-Trinidad FR, Solanes N, Arrieta M, ... , Dantas AP, Tura-Ceide O, Rigol M. **Myocardial infarction induces endothelial dysfunction with independence of cardiovascular risk factors.** *ANGIOGENESIS*. 28(4):52. D1

Ruberti A, Occhipinti G, Mon M, ... , Flores-Umanzor E, Freixa X, Regueiro A. **Self-Expanding Intra-Annular Transcatheter Aortic Valve Replacement System in Patients With Severely Calcified Aortic Valve.** *CANADIAN JOURNAL OF CARDIOLOGY*. 41(12):2378-2387. Q1

Gabani R, Brugaletta S, Bujak K, ... , Meseguer J, Nombela-Franco L, Sabaté M. **Impact of gender on in-hospital and long-term outcomes after transcatheter aortic valve implantation: an analysis of the Spanish TAVI registry.** *REVISTA ESPAÑOLA DE CARDIOLOGÍA*. 78(4):338-346. Q1

Cardiac imaging

Publications

Original articles

21

Mean IF **4,09**
Q1 43%
D1 19%
MA 5%
OA 67%

Others

9

Mean IF **5,27**
Q1 89%
D1 22%
MA 33%
OA 44%

IF = Impact Factor

MA = Main authorship (last or corresponding author)

OA = Open Access

Others includes reviews, editorials, clinical guidelines, letters and case reports

Selected active grants

Evaluación de pacientes con oclusiones crónicas totales coronarias con imagen multimodal.

Instituto de Salud Carlos III (ISCIII).
FIS_PI21/00401

PI: Ander Regueiro, José Tomás Ortiz

REMAI-DIF: Remodelado auricular diferencial en pacientes en riesgo de fibrilación auricular: implicación funcional y potencial embólico.

Instituto de Salud Carlos III (ISCIII).
FIS_PI21/00905

PI: Marta Sitges

Selected publications

Lurz P, Kresoja KP, Besler C, ... , Barreiro-Perez M, Vaknin H, Kornowski R. **Heterotopic Crosscaval Transcatheter Tricuspid Valve Replacement for Patients With Tricuspid Regurgitation The Trillium Device.** *JACC-CARDIOVASCULAR INTERVENTIONS*. 18(11):1425-1434. D1

Pujol-Lopez M, Graterol FR, Borrás R, ... , Guasch E, Tolosana JM, Mont L. **Clinical Response to Resynchronization Therapy Conduction System Pacing vs Biventricular Pacing: The CONSYST-CRT Trial.** *JACC: CLINICAL ELECTROPHYSIOLOGY*. 11(8):1820-1831. D1

Donal E, Unger P, Coisne A, ... , Keenan N, Petrescu AM, Stankovic I. **The role of multi-modality imaging in multiple valvular heart diseases: a clinical consensus statement of the European Association of Cardiovascular Imaging of the European Society of Cardiology.** *EUROPEAN HEART JOURNAL CARDIOVASCULAR IMAGING*. 26(4):593-608. D1

Sisinni A, Barreiro-Perez M, Freixa X, ... , Avanzas P, Cepas-Guillén P, Estévez-Loureiro R. **Real-World Experience in Tricuspid Transcatheter Edge-to-Edge Repair: Transcatheter Tricuspid Valve Repair in Spain Registry.** *JOURNAL OF THE AMERICAN HEART ASSOCIATION*. 14(2):e037070. Q1

Alcarraz A, Meza-Ramos A, Rubies C, ... , Mont L, Batlle M, Guasch E. **From moderate to strenuous training: unravelling mechanistic contributors and biomarkers for atrial fibrillation in exercise.** *EURO-PACE*. 27(6):euaf098. D1



GROUP LEADER

Marta Sitges (HCB)

RESEARCH INTERESTS

Characterization of cardiac mechanics in heart failure.

Characterization of hypertrophic hearts (INDEPTH-HCM).

Identification of athletes at risk of sudden death.

Identification of candidates for and impact of percutaneous therapies for heart valve diseases.

Identification of patients at risk of sudden death and heart failure after myocardial infarction.

Non invasive characterization of arrhythmia substrate.

Prediction of atrial fibrillation in patients at risk (PREDICTAF study).

Usefulness of non-invasive cardiac imaging in the identification of acute coronary syndromes.

KEYWORDS

Cardiac imaging
Echocardiography
Cardiac magnetic resonance
Valvular heart disease
Structural heart disease

RELATED DISEASES

Heart valve disease
Athlete's heart
Arrhythmia
Acute coronary syndrome
Atrial fibrillation



GROUP LEADER

Antoni Torres (HCB)

RESEARCH INTERESTS

We are a multidisciplinary team of researchers focused on the Study of respiratory infections, critical illness and respiratory distress (including COVID-19) with a personalized approach through omics sciences and novel therapeutics.

We perform translational research through big clinical datasets, a porcine model of pneumonia and a research laboratory for omics, biofilms and rapid diagnostics. Our goal is to uncover novel therapeutic targets and develop personalized medicine strategies for prevention and treatment of respiratory infections, considering the unique microbiome and immune tone of individuals.

Pneumonia in the elderly and particularly aspiration pneumonia is another field of interest including epidemiology, physiopathology, prevention and treatment.

KEYWORDS

Animal model of pneumonia and ARDS
Research laboratory
Immunomodulators
and novel therapies
Microbiome and pneumonia
Immunomarkers and biomarkers

RELATED DISEASES

Respiratory infections
Mechanical ventilation
Pneumonia and aspiration pneumonia
COPD and bronchiectasis
Acute respiratory distress syndrome

2.15

Applied research in infectious respiratory diseases and critically ill patients

Publications

Original articles

45

Mean IF **7,78**
Q1 87%
D1 33%
MA 40%
OA 89%

Others

18

Mean IF **5,59**
Q1 72%
D1 33%
MA 94%
OA 61%

IF = Impact Factor

MA = Main authorship (last or corresponding author)

OA = Open Access

Others includes reviews, editorials, clinical guidelines, letters and case reports

Directed PhD theses

1

• Marta Arrieta

Selected active grants

Long-term alterations of host-microbiome interactions and cardiovascular and respiratory diseases progression after pneumonia.

European Commission.

CE_HE_CH_23_1s13_RIA

PI: Antoni Torres

Host-targeted Approaches for the Prevention and the treatment of Hospital-Acquired Pneumonia.

European Commission.

CE-H2020-SC1_2019_2s

PI: Antoni Torres, Laia Fernández

Selected publications

Calabretta D, Cillóniz C, Gabarrus A,..., Espasa M, Martin-Loeches I, Torres A. **Impact of Empirical Treatment Recommendations From 2017 European Guidelines for Nosocomial Pneumonia.** *CHEST*. 167(4):993-1002. D1

Fernández-Barat L, Motos A, Canseco-Ribas J, ... , Bermejo-Martin J, Barbé F, Torres A. **Outcomes and predictors of mortality in patients with severe COVID 19 and COPD admitted to ICU: A multi-center study.** *ANAESTHESIA CRITICAL CARE & PAIN MEDICINE*. 44(5):101558. Q1

Cillóniz C, Calabretta D, Palomeque A,..., Ferrer M, Marcos MA, Torres A. **Risk Factors and Outcomes Associated With Polymicrobial Infection in Community-Acquired Pneumonia.** *ARCHIVOS DE BRONCONEUMOLOGÍA*. 61(7):408-416. D1

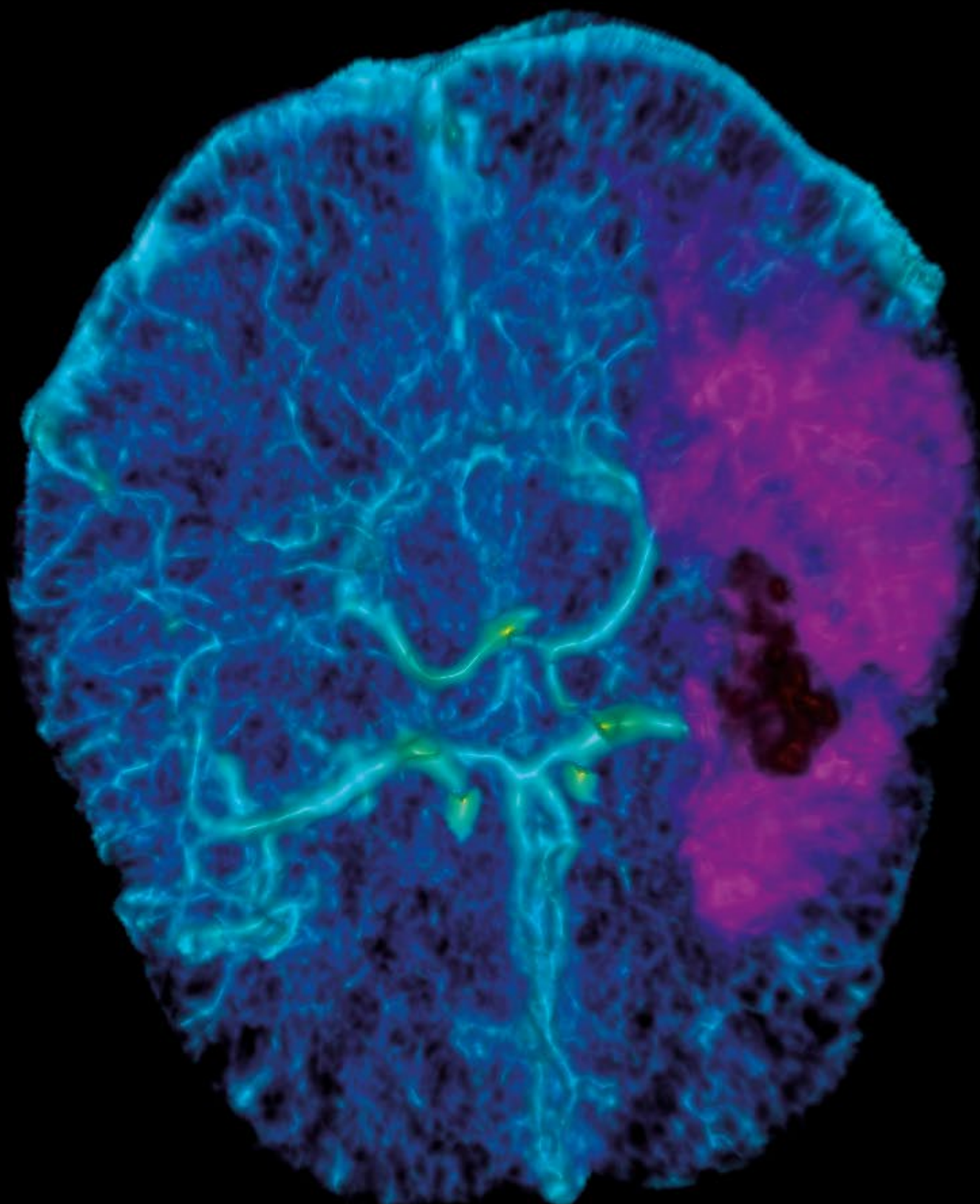
Fernández-Barat L, López-Aladid R, Alcaraz-Serrano V... , Farré R, Høiby N, Torres A. **Clinical and Lung Microbiome Impact of Chronic Versus Intermittent Pseudomonas aeruginosa Infection in Bronchiectasis.** *ARCHIVOS DE BRONCONEUMOLOGÍA*. 61(11):669-679. D1

Motos A, Yang M, Battaglini D, ... , Martínez D, Li Bassi G, Torres A. **Corticosteroid and antimicrobial therapy in macrolide-resistant pneumococcal pneumonia porcine model.** *INTENSIVE CARE MEDICINE EXPERIMENTAL*. 13(1):27. Q2

3

LIVER, DIGESTIVE SYSTEM AND METABOLISM

Annual
Report
2025



AREA 3

Liver, digestive system and metabolism

- 3.1 Steatohepatitis and liver transplantation**
Ramon Bataller
- 3.2 Neuronal control of metabolism (NeuCoMe)**
Marc Claret
- 3.3 Inflammation and liver disease**
Joan Clària
- 3.4 Mitochondrial regulation of cell death and steatohepatitis**
José Carlos Fernández-Checa
- 3.5 Translational control of liver disease and cancer**
Mercedes Fernández-Lobato
- 3.6 Viral, genetic and immune-mediated liver diseases**
Xavier Forns
- 3.7 Liver disease and the vascular system (LiVas)**
Juan Carlos García-Pagán
- 3.8 Chronic liver diseases: molecular mechanisms and clinical consequences**
Pere Ginès
- 3.9 Liver vascular biology**
Jordi Gracia-Sancho
- 3.10 Fetal and perinatal medicine**
Eduard Gratacós
- 3.11 Endocrine disorders: crosstalk between molecular, metabolic and therapeutic determinants**
Felicja Alexandra Hanzu
- 3.12 Gynecology, human reproduction and women's health**
M. Àngels Martínez-Zamora
- 3.13 Biomarkers and laboratory precision medicine in hepatology, metabolism, and rare diseases (HEMERA-Lab)**
Manuel Morales-Ruíz
- 3.14 Pathogenesis and prevention of diabetes**
Anna Novials
- 3.15 Molecular biology of reproduction and development**
Rafael Oliva
- 3.16 Protective strategies against hepatic ischemia reperfusion injury**
Carmen Peralta
- 3.17 Lipid trafficking and disease**
Albert Pol
- 3.18 Inflammatory bowel disease**
Azucena Salas
- 3.19 Liver cell plasticity and tissue repair**
Pau Sancho-Bru
- 3.20 Pathogenesis and treatment of autoimmunity**
Pere Santamaría
- 3.21 Translational research in diabetes, lipids and obesity**
Josep Vidal

3.01



GROUP LEADER

Ramon Bataller (HCB)

RESEARCH INTERESTS

Alcohol-related steatohepatitis is the main cause of advanced liver disease. Our interest includes the identification of major disease determinants and molecular drivers in alcohol-related hepatitis.

Liver transplantation is the only treatment available for end-stage liver disease and some liver tumors. This is a multidisciplinary group of clinic and basic researchers focused on optimizing the number of organs available for transplantation by improving techniques of procurement and preservation as well as improving the survival, quality of life and management of transplanted patients.

KEYWORDS

Biomarkers of alloreactivity
Liver transplantation
Steatohepatitis
Post-transplant complications
Graft viability

RELATED DISEASES

Alcohol-related liver disease
Cardiovascular risk and de novo neoplasia
Ischemia-reperfusion injury
Biliary complications
Allograft rejection

Steatohepatitis and liver transplantation

Publications

Original articles

45

Mean IF	10,87
Q1	82%
D1	47%
MA	27%
OA	87%

Others

30

Mean IF	12,86
Q1	70%
D1	47%
MA	27%
OA	53%

IF = Impact Factor

MA = Main authorship (last or corresponding author)

OA = Open Access

Others includes reviews, editorials, clinical guidelines, letters and case reports

Selected active grants

Early Alcohol-Related Liver Disease: Determinants of Disease Severity, Influence of Metabolic Syndrome and Identification of Novel Biomarkers.

Instituto de Salud Carlos III (ISCIII).

FIS_PI24/01984

PI: Ramón Bataller

Caracterización de la respuesta inmune en los pacientes trasplantados hepáticos con cáncer: identificación de biomarcadores que permitan la personalización de la inmunosupresión.

Instituto de Salud Carlos III (ISCIII).

FIS_PI22/01234

PI: Jordi F. Colmenero

Selected publications

Sugimoto A, Saito Y, Wang G, ... , Stocckwell BR, Augustin HG, Schwabe RF.

Hepatic stellate cells control liver zonation, size and functions via R-spondin 3. *NATURE*. 640(8059)752-761. D1

Ruiz P, Millán O, Fundora Y, ... , Bataller R, Colmenero J, Brunet M. **Plasma microRNAs and chemokines as biomarkers for rejection in liver transplantation with score verification and tissue correlation.** *SCIENTIFIC REPORTS*. 16(1)2271. Q1

Engel B, Alaswad A, Campos-Murguía A, ... , Jaekel E, Li Y, Taubert R. **Molecular signatures discriminating different types of rejection in human liver transplants.** *JOURNAL OF HEPATOLOGY*. 83(6)1353-1363. D1

Vanderschueren E, Praktijn M, Wiest R, Cardenas A, Trebicka J, Laleman W. **Recent advances in clinical practice endohepatology: the endoscopic liver rush.** *GUT*. 74(11)1916-1930. D1

Anton A, Shalaby S, Botero ML, ... , García-Pagán JC, Campreciós G, Hernández-Gea V. **Endothelial-to-mesenchymal transition: A targetable mechanism that contributes to portal vein thrombosis in cirrhosis.** *HEPATOLOGY*. 84(1)91-105. D1

Neuronal control of metabolism (NeuCoMe)



Publications

Original articles

3

Mean IF	9,83
Q1	100%
D1	67%
MA	67%
OA	100%

Others

1

Mean IF	8,00
Q1	100%
D1	100%
MA	100%
OA	0%

IF = Impact Factor
 MA = Main authorship (last or corresponding author)
 OA = Open Access
 Others includes reviews, editorials, clinical guidelines, letters and case reports

Directed PhD theses

1

· Iasim Tahiri

Selected active grants

Decoding tuncytic mitochondrial dynamics in nutrient sensing and metabolic health.

European Foundation for the Study of Diabetes. INT_EFSD/LILLY_23_01

PI: Marc Claret

KetoResi: Ketogenic signalling in resilience promotion.

Agencia Estatal de Investigación. AEI_PCI24

PI: Marc Claret

Selected publications

Toledo M, Martínez-Martínez S, Van Hul M, ... , Cani PD, Nogueiras R, Claret M. **Rapid modulation of gut microbiota composition by hypothalamic circuits in mice.** *NATURE METABOLISM*. 7(6):1123-1135. D1

Ribas V, Morón-Ros S, Marí H, ... , Marco-Rius I, Novials A, Servitja JM. **Diet-induced obesity disrupts sexually dimorphic gene expression in mice.** *AMERICAN JOURNAL OF PHYSIOLOGY-CELL PHYSIOLOGY*. 329(4):C987-C1003. D1

Tahiri I, Llana SR, Diaz-Castro F, Claret M, Obri A. **AgRP neurons shape the sperm small RNA payload.** *SCIENTIFIC REPORTS*. 15(1):7206. Q1

Claret M, Haddad-Tóvolli R. **Sexual dimorphism in the development and function of the melanocortin system.** *REVIEWS IN ENDOCRINE & METABOLIC DISORDERS*. 27(3):561-572. D1

GROUP LEADER

Marc Claret (IDIBAPS)

RESEARCH INTERESTS

Our team employs state-of-the-art technologies to understand the molecular mechanisms and neuronal circuits regulating energy balance and systemic metabolism, in the context of highly prevalent metabolic disorders such as obesity and type 2 diabetes. We are also interested in investigating the interface of food intake, complex behaviours, and psychological processes.

KEYWORDS

Hypothalamus
 POMC neurons
 AgRP neurons
 Obesity
 Diabetes

RELATED DISEASES

Obesity
 Diabetes
 Eating disorders



GROUP LEADER

Joan Clària (HCB)

RESEARCH INTERESTS

Immune dysfunction is a hallmark of chronic liver disease. Persistent, unresolved inflammation is a key driver of liver injury, promoting hepatocyte death and fibrosis across multiple forms of chronic liver disease. Moreover, in advanced stages, the disease is characterized by a profound systemic inflammatory response which together with immunosuppression contributes to multiorgan failure and increase susceptibility to recurrent infections.

Our research aims to unravel the mechanisms underlying this dysregulated immune response from a translational perspective. By decoding the pathways that drive immune dysfunction, we seek to identify novel biomarkers and actionable therapeutic targets that can improve the diagnosis, prognosis, and treatment of these patients.

KEYWORDS

Resolution of inflammation
Innate immune cells
Lipid mediators
Omics technologies
Tissue injury

RELATED DISEASES

Chronic liver disease
Systemic inflammatory conditions
Infections
Acute-on-chronic liver failure

3.03

Inflammation and liver disease

Publications

Original articles

12

Mean IF	7,35
Q1	50%
D1	33%
MA	17%
OA	92%

Others

4

Mean IF	9,53
Q1	75%
D1	25%
MA	25%
OA	100%

IF = Impact Factor

MA = Main authorship (last or corresponding author)

OA = Open Access

Others includes reviews, editorials, clinical guidelines, letters and case reports

Selected active grants

DECISION: Decompensated cirrhosis: identification of new combinatorial therapies based on system approaches.

European Commission.

CE_H2020-SC1_2019_2s

PI: Joan Clària

PROGNOSLIVER: Precision medicine-based prediction of disease progression and response to treatment in patients with advanced liver disease.

Agencia Estatal de Investigación.

AEI_PE22

PI: Joan Clària

Selected publications

Kerbert AJC, Engelmann C, Habtesion A, ... , Fenaille F, Andreola F, Jalan R. **Hyperammonemia induces programmed liver cell death.** *SCIENCE ADVANCES*. 11(10):eado1648. D1

Flores-Costa R, Duran-Gueell M, Romero-Grimaldo B, ... , Trebicka J, Lopez-Vicario C, Claria J. **An optimized peritonitis-induced ACLF model that reproduces the full spectrum of extrahepatic organ failures in mice.** *HEPATOLOGY COMMUNICATIONS*. 9(7):e0744. Q1

Engelmann C, Zhang IW, Clària J. **Mechanisms of immunity in acutely decompensated cirrhosis and acute-on-chronic liver failure.** *LIVER INTERNATIONAL*. 45(3):e15644. Q1

Trebicka J, Aguilar F, Queiroz-Farias A, ... , Claria J, Moreau R, Arroyo V; PREDICT study and ACLARA study. **Gene score to quantify systemic inflammation in patients with acutely decompensated cirrhosis.** *GUT*. 74(8):1293-1307. D1

Feio-Azevedo R, Boesch M, Radenkovic S, ... , Ghesquière B, Korf H, van der Merwe S. **Distinct immunometabolic signatures in circulating immune cells define disease outcome in acute-on-chronic liver failure.** *HEPATOLOGY*. 81(2):509-522. D1

Mitochondrial regulation of cell death and steatohepatitis

Publications

Original articles	Mean IF	7,90
	Q1	63%
	D1	25%
	MA	50%
	OA	88%
Others	Mean IF	7,70
	Q1	33%
	D1	33%
	MA	67%
	OA	67%

IF = Impact Factor
 MA = Main authorship (last or corresponding author)
 OA = Open Access
 Others includes reviews, editorials, clinical guidelines, letters and case reports

Selected active grants

Role of Hypernutrition and Metabolic Stress in Non-Alcoholic Steatohepatitis (NASH) Driven Hepatocellular Carcinoma (HCC).

Sanford Burnham Prebys Medical Discovery Institute. INT_NIH_ PAR-23-059_1

PI: José Carlos Fernández-Checa

Disruption of ER-mitochondria crosstalk in alcoholic steatohepatitis-driven hepatocellular carcinoma.

Ministerio de Ciencia, Innovación y Universidades (MCIU).

PID2022-142956OB-I00

PI: José Carlos Fernández-Checa

Selected publications

de la Rosa LC, Fàbrega L, Torres S, ... , Marin JJG, García-Ruiz C, Fernández-Checa JC. **Stard1 promotes cholestatic liver injury and disease progression by sensitizing to bile acid hepatotoxicity.** *HEPATOLOGY*. 82(2):293-307. D1

Monte MJ, Romero MR, Temprano AG, ... , García-Ruiz C, Marin JJG, Fernández-Checa JC. **Bile acids in liver and gastrointestinal cancer.** *SEMINARS IN CANCER BIOLOGY*. 116:45-58. D1

Vinaixa J, Martínez-Bosch N, Gibert J, ... , Rabinovich GA, Fernandez-Zapico ME, Navarro P. **Nuclear Galectin-1 promotes KRAS-dependent activation of pancreatic cancer stellate cells.** *PROCEEDINGS NATIONAL ACADEMY OF SCIENCES OF USA*. 122(14):e2424051122. Q1



GROUP LEADER

José Carlos Fernández-Checa
(IIBB-CSIC)

RESEARCH INTERESTS

The structure-function relation between endoplasmic reticulum (ER) and mitochondria is essential for cell and tissue homeostasis. Disruption of ER-mitochondrial function contributes to the development of metabolic diseases, such as metabolic-associated steatotic liver disease, and its advanced stages of liver fibrosis, and hepatocellular carcinoma, as well as pancreatic adenocarcinoma, and lysosomal storage disorders.

Our goal is to elucidate the players involved in the disruption of the physiological interaction of ER-mitochondria axis, focusing on the role of structural lipids, like cholesterol and sphingolipids.

KEYWORDS

Mitochondria
 Lipids
 Fibrosis
 Cancer
 Biomarkers
 Tissue remodeling

RELATED DISEASES

Alcohol-related liver disease (ARLD)
 Metabolic-associated steatotic liver disease (MASLD)
 Hepatocellular carcinoma (HCC)
 Pancreatic ductal adenocarcinoma (PDAC)
 Lysosomal disorders (LD)

Translational control of liver disease and cancer



GROUP LEADER

Mercedes Fernández-Lobato
(IDIBAPS)

RESEARCH INTERESTS

Our research investigates how obesity- and ageing-associated metabolic stress drives the progression from fatty liver disease to MASLD/MASH and hepatocellular carcinoma. We focus on post-transcriptional dysregulation, particularly translational control, as a key mechanism by which liver cells adapt to chronic stress. Using multi-omics, experimental models and human samples, we study how altered mRNA translation reshapes metabolic, inflammatory and fibrogenic responses, as well as vascular plasticity, cell death and tumor-host interactions, ultimately promoting liver disease progression and cancer development.

KEYWORDS

Translational control
Metabolic liver disease
Hepatocellular carcinoma
Obesity and ageing
Tumor microenvironment

RELATED DISEASES

MASLD/MASH
Liver fibrosis
Hepatocellular carcinoma
Obesity-associated cancer
Ageing-associated liver disease

Publications

Original articles

12

Mean IF	7,35
Q1	50%
D1	33%
MA	17%
OA	92%

Others

4

Mean IF	9,53
Q1	75%
D1	25%
MA	25%
OA	100%

IF = Impact Factor

MA = Main authorship (last or corresponding author)

OA = Open Access

Others includes reviews, editorials, clinical guidelines, letters and case reports

Selected publications

Delgado ME, Naranjo-Suarez S, Ramirez-Pedraza M, ... , Boyle M, Mendez R, Fernandez M. **CPEB4 modulates liver cancer progression by translationally regulating hepcidin expression and sensitivity to ferroptosis.** *JHEP REPORTS*. 7(3):101296. Q1

Fernandez-Lobato M, Mendez R. **Cytoplasmic regulation of the poly(A) tail length as a potential therapeutic target.** *RNA*. 31(3):402-415. Q1

Selected active grants

Targeting translational control to advance liver cancer therapy.

Agencia Estatal de Investigación.
AEI_PID2020-118937RB-I00
PI: Mercedes Fernández-Lobato

Integrative Approach to Liver Cancer: Unveiling the Impact of High-Fat Diets and Aging (ILUC).

Agencia Estatal de Investigación.
AEI_PID2023-150033OB-I00
PI: Mercedes Fernández-Lobato

Viral, genetic and immune-mediated liver diseases



Publications

Original articles

31

Mean IF	9,86
Q1	75%
D1	45%
MA	45%
OA	84%

Others

12

Mean IF	12,97
Q1	75%
D1	33%
MA	67%
OA	67%

IF = Impact Factor

MA = Main authorship (last or corresponding author)

OA = Open Access

Others includes reviews, editorials, clinical guidelines, letters and case reports

Selected active grants

Estudio de los mecanismos que contribuyen a la falta de respuesta al tratamiento inmunosupresor en pacientes con hepatitis autoinmune.

Instituto de Salud Carlos III (ISCIII).

FIS_PI24/01511

Maria Carlota Londoño

THERVACB: A therapeutic vaccine to cure hepatitis B.

European Commission.

CE-H2020-SC1_2019_2s

PI: Xavier Forns, Sabela Lens

Selected publications

Mariño Z, Garcia-Sola C, Rios J, ... , Forns X, Torra M, Berenguer M. **Exchangeable copper for patients with Wilson disease at follow-up: Rethinking normal ranges or changing methodology.** *HEPATOLOGY*. 81(6):1728-1739. D1

del Barrio M, Ferreiro E, Gomez E, ... , Crespo J, Londoño MC, Diaz-Gonzalez A. **Occurrence and Management of Opportunistic Infections in Patients With Autoimmune Hepatitis: A Spanish Multicentre Study.** *ALIMENTARY PHARMACOLOGY & THERAPEUTICS*. 62(5):493-503. D1

Soria A, Diaz A, Iruzubieta P, ... , Gines P, Londoño MC, Graupera I. **Autoantibodies are associated with worse outcomes in MASLD.** *JHEP REPORTS*. 7(10):101470. Q1

Semmler G, Lens S, Hidalgo A, ... , Forns X, Fernandez I, Mandorfer M. **Incidence and Clinical Significance of Recompensation After HCV Cure.** *CLINICAL GASTROENTEROLOGY AND HEPATOLOGY*. 23(13):2488-2498. D1

Lens S; Burton AR, Davies J, ... , Forns X, Perez-del-Pulgar S, Maini MK. **Tracking B cell immunity during perturbation of hepatitis B infection induced by treatment withdrawal.** *GUT*. 75(8):1587-1596. D1

GROUP LEADER

Xavier Forns (HCB)

RESEARCH INTERESTS

Viral, genetic and immune-mediated liver diseases are relevant causes of cirrhosis, hepatocellular carcinoma, and liver-related mortality worldwide. As for HBV and HDV infection, we are interested in investigating the viral factors and host responses that explain viral persistence and pathogenesis. We also focus on clinical and translational aspects of autoimmune hepatitis and cholestatic liver diseases, particularly on the role of adaptive immune responses. Our team is also involved in clinical research on genetic liver diseases (mainly Wilson disease) and drug-induced liver injury.

KEYWORDS

Immune responses
Clinical outcomes
New therapeutic targets
Serum biomarkers
Epidemiology
Genetics

RELATED DISEASES

Viral hepatitis: HCV, HBV and HDV
Autoimmune hepatitis
Cholestatic liver diseases
Wilson disease
Drug-induced liver injury



GROUP LEADER

Juan Carlos García-Pagán (HCB)

RESEARCH INTERESTS

Physiopathology, natural history, prognosis, and management of patients with portal hypertension, cirrhosis, or vascular alterations.

Precision medicine: Leading clinical trials evaluating different treatment strategies based on individual risk of decompensation in patients with cirrhosis.

Hepatic vascular diseases (Budd-Chiari, PVT, PSVD): We are a European Reference Network (ERN) for the treatment of rare vascular disorders. We lead international trials to improve knowledge on vascular liver diseases, focusing on the discovery of diagnostic biomarkers and risk stratification for PSVD using genomics and transcriptomics strategies.

KEYWORDS

Portal hypertension
Liver vascular diseases
Hepatic hemodynamics
Endothelial dysfunction
Translational research

RELATED DISEASES

Cirrhosis
Porto sinusoidal vascular disorder (PSVD)
Portal vein thrombosis (PVT)
Budd chiari syndrome

3.07

Liver disease and the vascular system (LiVas)

Publications

Original articles

20

Mean IF	13,32
Q1	85%
D1	45%
MA	40%
OA	80%

Others

19

Mean IF	6,81
Q1	68%
D1	26%
MA	74%
OA	63%

IF = Impact Factor

MA = Main authorship (last or corresponding author)

OA = Open Access

Others includes reviews, editorials, clinical guidelines, letters and case reports

Selected active grants

PortoSinusoidal Vascular Disease: Risk stratification & Therapeutic approaches (RiTA).

Instituto de Salud Carlos III (ISCIII).

FIS_AC23

PI: Virginia Hernández-Gea

Nuevas herramientas diagnósticas, pronósticas y de evaluación de la respuesta al tratamiento de pacientes con enfermedades vasculares del hígado.

Instituto de Salud Carlos III (ISCIII).

FIS_ PI23/01102

PI: Juan Carlos García-Pagán

Selected publications

Anton A, Shalaby S, Botero ML, ... , García-Pagán JC, Campreciós G, Hernández-Gea V. **Endothelial-to-mesenchymal transition: A targetable mechanism that contributes to portal vein thrombosis in cirrhosis.** *HEPATOLOGY*. 84(1):91-105. D1

Puente A, Turon F, Martinez J, ... , Albillos A, Crespo J, García-Pagán JC. **Rivaroxaban to prevent complications of portal hypertension in cirrhosis: The CIRROXABAN study.** *JOURNAL OF HEPATOLOGY*. 83(5):1069. D1

Magaz M, Giudicelli-Lett H, Abraldes JG, ... , Tripathi D, Rautou PE, García-Pagán JC; ERN RARE-LIVER; a study of VALDIG, an EASL consortium. **Porto-sinusoidal vascular liver disorder with portal hypertension: Natural history and long-term outcome.** *JOURNAL OF HEPATOLOGY*. 82(1):72-83. D1

European Association for the Study of the Liver. **EASL Clinical Practice Guidelines on TIPS.** *JOURNAL OF HEPATOLOGY*. 83(1):177-210. D1

European Association for the Study of the Liver. **EASL Clinical Practice Guidelines on extrahepatic abdominal surgery in patients with cirrhosis and advanced chronic liver disease.** *JOURNAL OF HEPATOLOGY*. 83(3):768-789. D1

Chronic liver diseases: molecular mechanisms and clinical consequences



Publications

Original articles	Mean IF	18,49
	Q1	95%
	D1	58%
	MA	37%
	OA	84%

19

Others

26

Mean IF	21,23
Q1	88%
D1	73%
MA	77%
OA	58%

IF = Impact Factor
MA = Main authorship (last or corresponding author)
OA = Open Access
Others includes reviews, editorials, clinical guidelines, letters and case reports

Directed PhD theses

4

- Ann T. Ma
- Celia Martínez
- Emma Avitabile
- Montse Nuevo

Selected active grants

LIVERAIM: A Biomarker-based Platform for Early Diagnosis of Chronic Liver Disease to Enable Personalized Therapy.

European Commission.

CE_IHI_23_1s15_RIA

PI: Pere Ginès

LIVERSCREEN: Screening for liver fibrosis-population-based study across European countries.

European Commission.

CE_H2020-SC1_2019_2s

PI: Pere Ginès

Selected publications

Pose E, Jimenez C, Zaccherini G, ... , Abalde JG, Kamath PS, Gines P; LI-VERHOPE Consortium. **Simvastatin and Rifaximin in Decompensated Cirrhosis: A Randomized Clinical Trial.** *JAMA-JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION*. 333(10):864-874. D1

Pose E, Piano S, Thiele M, Fabrellas N, Tsochatzis EA, Gines P. **Moving diagnosis of liver fibrosis into the community.** *JOURNAL OF HEPATOLOGY*. 83(1):258-270. D1

Ginès P, Guha IN, Fabrellas N, Allen AM, Angeli P, Serra-Burriel M; LiverScreen Consortium Investigators. **Liver Health: An Emerging Concept.** *GASTROENTEROLOGY*. 169(1):4-8.e1. D1

Juanola A, Mezzano G, Pose E, ... , Piano S, Sola E, Gines P. **PD-L1 and the risk of bacterial infection in patients with chronic liver diseases: An international multicohort study.** *JHEP REPORTS*. 7(12):101597. Q1

Goncalves RLS, Branden ZB, Riveros JK, ... , Burgess SC, Graupera I, Hotamisligil GS. **CoQ imbalance drives reverse electron transport to disrupt liver metabolism.** *NATURE*. 643(8073):1057-1065. D1

GROUP LEADER

Pere Ginès (HCB)

RESEARCH INTERESTS

The main objectives of our research group are to investigate the pathogenic mechanisms leading to disease progression in chronic liver diseases as well as design and test new therapeutic and preventive interventions. Our main areas of interest are:

Metabolic-dysfunction associated steatotic liver disease; alcohol-related liver disease; complications of cirrhosis; biomarkers of chronic liver disease; acute-on-chronic liver failure; translational/experimental studies in chronic liver diseases; and screening for liver fibrosis in the general population and at-risk populations.

KEYWORDS

Liver cirrhosis
Liver fibrosis
Liver biomarkers
Alcohol-related liver disease
MASLD
ACLF

RELATED DISEASES

Decompensated cirrhosis
Alcohol-related liver disease
Metabolic-associated steatotic liver disease
Hepatorenal syndrome
Acute-on-chronic liver failure



GROUP LEADER

Jordi Gracia-Sancho (IDIBAPS)

RESEARCH INTERESTS

The group studies the molecular and biomechanical processes that regulate the status and function of liver cells, as well as the hepatic intercellular communication mechanisms in healthy situations, in response to acute liver damage, in chronic liver disease and in ageing.

We apply our results to discover new therapeutic targets and to develop novel therapies that improve liver microcirculation, fibrosis and function in a precision medicine manner.

To achieve this, the group uses a wide range of experimental methods, which include tissues and primary cells (from humans or rodents), in vivo and in vitro models of liver disease, including liver-on-a-chip technology, and computational methods for advanced analysis of omics data, among others.

KEYWORDS

Cirrhosis
Portal hypertension
Ageing
Liver sinusoidal endothelial cells
Liver fibrosis

RELATED DISEASES

Chronic liver disease
Steatohepatitis
Alcohol-related liver disease
Metabolic dysfunction-associated steatotic liver disease

3.09

Liver vascular biology

Publications

Original articles

18

Mean IF	11,23
Q1	100%
D1	39%
MA	44%
OA	94%

Others

7

Mean IF	7,77
Q1	86%
D1	43%
MA	29%
OA	71%

IF = Impact Factor
MA = Main authorship (last or corresponding author)
OA = Open Access
Others includes reviews, editorials, clinical guidelines, letters and case reports

Directed PhD theses

1

• Laia Abad

Selected active grants

UNMASK: UNveiling the pathobiology of metabolic dysfunction-associated steatotic liver disease for the discovery of novel therapeutics and biomarkers.
Instituto de Salud Carlos III (ISCIII).
FIS_ AC24/00124
PI: Jordi Gracia-Sancho

Endothelial senescence in chronic liver disease: pathogenic mechanism & novel theranostic opportunity.
Instituto de Salud Carlos III (ISCIII).
FIS_P123/00945
PI: Jordi Gracia-Sancho

Selected publications

Gibert-Ramos A, Andrés-Rozas M, Pas-to R, Alfaro-Retamero P, Guixé-Muntet S, Gracia-Sancho J. **Sinusoidal communication in chronic liver disease.** *CLINICAL AND MOLECULAR HEPATOLOGY*. 31(1):32. D1

Abad-Jordà L, Andrés-Rozas M, Martínez-Alcocer A, ... , Guixé-Muntet S, Fernández-Iglesias A, Gracia-Sancho J. **Hepatocyte-derived extracellular vesicles promote endothelial dedifferentiation in chronic liver disease through the miR-153-3p-pyroptosis axis.** *HEPATOLOGY*. 84(1):74-90. D1

Andrés-Rozas M, Boyer-Díaz Z, Ruiz-Cánavas E, ... , Mercade J, Bosch J, Gracia-Sancho J. **GTX-11 improves portal hypertension, liver fibrosis, and sinusoidal cells phenotype in experimental MASH.** *JHEP REPORTS*. 7(10):101497. Q1

Aristu-Zabalza P, Andrés-Rozas M, Boyer-Díaz Z, ... , Guixé-Muntet S, Fernández-Iglesias A, Gracia-Sancho J. **Sex-specific differences in preclinical models of advanced chronic liver disease and portal hypertension.** *BIOLOGY OF SEX DIFFERENCES*. 16(1):39. Q1

Priego-Parra BA, Gallego-Durán R, Román-Calleja BM, Velarde-Ruiz JA, Romero-Gómez M, Gracia-Sancho J. **Advancing precision medicine in metabolic dysfunction-associated steatotic liver disease.** *TRENDS IN ENDOCRINOLOGY AND METABOLISM*. 36(11):1000-1013. D1

Fetal and perinatal medicine



GROUP LEADER

Eduard Gratacós (HCB)

RESEARCH INTERESTS

We are a scientific group in the field of Maternal and Fetal Medicine. We treat the fetus as a patient and with this vision we aim at minimizing future sequelae of diseases that can be diagnosed and treated prenatally.

Our group includes different medical and research disciplines and investigates on these research areas: fetal cardiac programming, prematurity, fetal neurodevelopment, preterm inflammation, fetal therapy and surgery, placental diseases and the influence of the environment in pregnancy.

KEYWORDS

Fetal cardiac programming
Prematurity
Fetal neurodevelopment
Preterm inflammation
Placental diseases

RELATED DISEASES

Fetal programming
Fetal surgery
Placental insufficiency
New solutions for prematurity

Publications

Original articles

45

Mean IF **4,62**
Q1 69%
D1 29%
MA 56%
OA 78%

Others

18

Mean IF **4,79**
Q1 67%
D1 44%
MA 56%
OA 72%

IF = Impact Factor

MA = Main authorship (last or corresponding author)

OA = Open Access

Others includes reviews, editorials, clinical guidelines, letters and case reports

Selected publications

Murillo C, Eixarch E, Rueda C, ... , Gratacos E, Palacio M, Cobo T. **Evidence of brain injury in fetuses of mothers with preterm labor with intact membranes and preterm premature rupture of membranes.** *AMERICAN JOURNAL OF OBSTETRICS AND GYNECOLOGY*. 232(1):114.e1-114.e24. D1

Youssef L, Crispi F, Paolucci S, ... , Crovetto F, Figueras F, Gratacos E. **Angiogenic factors alone or in combination with ultrasound Doppler criteria for risk classification among late-onset small fetuses with or without pre-eclampsia.** *ULTRASOUND IN OBSTETRICS & GYNECOLOGY*. 65(3):317-324. D1

Miranda J, Benitez L, Macias-Redondo S, ... , Schoorlemmer J, Crispi F, Gratacos E. **Maternal stress and fetoplacental cortisol regulation in small-for-gestational-age newborns.** *ULTRASOUND IN OBSTETRICS & GYNECOLOGY*. 65(6):738-748. D1

Gonzalez A, Peguero A, Meler, ... , Tassies MD, Figueras F, Mazarico E. **Treatment of early-onset fetal growth restriction with low molecular weight heparin does not prolong gestation: a randomized clinical trial.** *AMERICAN JOURNAL OF OBSTETRICS AND GYNECOLOGY*. 232(6):552.e1-552.e10-5520000000000. D1

Cobo T, Aldecoa V, Ferrero S, ... , Figueras F, Gratacos E, Palacio M. **Preterm prelabor rupture of membranes: the use of amniocentesis to detect intraamniotic infection reduces maternal and neonatal duration of antibiotic exposure.** *AMERICAN JOURNAL OF OBSTETRICS AND GYNECOLOGY*. 233(5):4770-47700000000000. D1

Directed PhD theses

1

· Leticia Benitez

Selected active grants

PHASE 2: Interdisciplinary program for a clinical prototype of artificial placenta evaluation of impact on fetal programming and development of the technological requirements.

Fundació "la Caixa".

LCF/PR/SP23/52950010

PI: Eduard Gratacós

PE37: Ensayo clínico aleatorizado multicéntrico de cribado con sFlt1/PlGF e inducción selectiva del parto para la prevención de preeclampsia a término.

Instituto de Salud Carlos III (ISCIII).

FIS_PI22/00109

PI: Eduard Gratacós



GROUP LEADER

Felicia Alexandra Hanzu (HCB)

RESEARCH INTERESTS

The group focuses on rare endocrine diseases of the hypothalamus–pituitary–adrenal (HPA) axis and on identifying novel diagnostic, prognostic, and therapeutic clinical and translational biomarkers, as well as on the development of diagnostic and therapeutic approaches of rare benign and malignant endocrine tumors.

The research also aims to elucidate the molecular mechanisms underlying the tissue alterations that determine the clinical phenotype induced by steroids and hormone-secreting pituitary, adrenal, and neuroendocrine tumors, both during active disease and in the persistence of comorbidities throughout life, as well as their impact on treatment response.

KEYWORDS

Pituitary, adrenal, neuroendocrinology
Cardiovascular and metabolism
Neuroendocrinology
Steroids

RELATED DISEASES

Pituitary and neuroendocrine tumors
Cushing syndrome and hypercortisolism
Adrenal tumors
Secondary arterial hypertension

Endocrine disorders: crosstalk between molecular, metabolic and therapeutic determinants

Publications

Original articles

16

Mean IF	6,70
Q1	69%
D1	19%
MA	25%
OA	81%

Others

8

Mean IF	8,78
Q1	50%
D1	25%
MA	25%
OA	38%

IF = Impact Factor

MA = Main authorship (last or corresponding author)

OA = Open Access

Others includes reviews, editorials, clinical guidelines, letters and case reports

Selected publications

Diaz-Catalan D, Capo J, Vega-Beyhart A, ... , Ensenat J, Casals G, Hanzu F. **Sex-dependent effects of FGF21 on HPA axis regulation and adrenal regeneration after Cushing syndrome in mice.** *MOLECULAR METABOLISM*. 96:102122. Q1

Nowak E, Zhang Q, Zhang S, ... , Yoel U, Flaseriu M, Reincke M. **Cycle characterisation and clinical complications in patients with cyclic Cushing's syndrome: insights from an international retrospective cohort study.** *LANCET DIABETES & ENDOCRINOLOGY*. 13(12):1030-1040. D1

Manyalich-Blasi M, Saavedra-Perez D, Fajardo-Guzman LM, ... , Rull-Ortuno A, Pera-Roman M, Vidal O. **Robotic posterior retroperitoneoscopic adrenalectomy: initial experience with Hugo™ RAS system.** *JOURNAL OF ROBOTIC SURGERY*. 19(1):298. Q1

Flaseriu M, Gurnell M, McCormack A, ... , Zada G, Karavitaki N, Melmed S. **Pituitary incidentaloma: a Pituitary Society international consensus guideline statement.** *NATURE REVIEWS ENDOCRINOLOGY*. 21(10):638-655. D1

Gynecology, human reproduction and women's health

Publications

Original articles	Mean IF	3,64
	Q1	76%
	D1	24%
	MA	62%
	OA	81%

21

Others

Mean IF	2,70
Q1	33%
D1	33%
MA	50%
OA	50%

6

IF = Impact Factor
MA = Main authorship (last or corresponding author)
OA = Open Access
Others includes reviews, editorials, clinical guidelines, letters and case reports

Directed PhD theses

4

- Inés Agustí
- Pilar Carrillo
- Marta Mendez
- Marta Valdés-Vango

Selected active grants

Detection of the sentinel lymph node using 99mTc nanocolloid albumin and indocyanine green in early stage epithelial ovarian cancer.

Instituto de Salud Carlos III (ISCIII).
FIS_ PI22/01174

PI: Berta Díaz-Feijóo

Stratifying Risk: Exploring the intertwined relationship of HPV-related anogenital lesions in immunocompetent women.

Fundació la Marató de TV3.
SexualReprod_23

PI: Marta del Pino

Selected publications

Mallorqui A, Fortuna A, Segura E, ... , Angulo-Antunez E, Carmona F, Martinez-Zamora MA. **Prevalence of anhedonia in women with deep endometriosis.** *SCIEN-TIFIC REPORTS*. 15(1):752. Q1

Blade AT, Ramírez-Mena MM; de la Fuente-Valero J, ... , López N; Villarejo M; del Pino M. **HPV vaccination coverage rate in women undergoing conization for cervical intraepithelial neoplasia in Spain: The COVAR study.** *INTERNATIONAL JOURNAL OF GYNECOLOGY & OBSTETRICS*. 171(1):415-422. Q1

Gil-Ibanez B, Carreras-Dieguez N, Lopez G, ... , Torne A, Tejerizo A, Diaz-Feijoo B. **A multimodal intervention program to improve sexual health and self-perceived quality of life in patients treated for cervical cancer: a randomized prospective study (PROVIDENCE trial).** *JOURNAL OF GYNECOLOGIC ONCOLOGY*. 36(4):e56. D1

Rius M, Camacho M, Tort J, ... , Paredes-Zapata D, Gracia M, Carmona F. **Availability of deceased uterus donor: Is it a real case scenario in Spain?** *ACTA OBSTETRICIA ET GYNECOLOGICA SCANDINAVICA*. 104(10):1869-1874. Q1

Goday A, Valls-Roca L, Mendez M, ... , Garrabou G, Carmona F, Manau D. **Exploring Oxidative Stress in Different Endometriosis Phenotypes: Insights from Ovarian and Systemic Perspectives by the Study of SIRT3.** *INTERNATIONAL JOURNAL OF MOLECULAR SCIENCES*. 26(18):9110-9110. Q1



GROUP LEADER

Ma. Àngels Martínez-Zamora (HCB)

RESEARCH INTERESTS

To increase the knowledge of the etiopathogenesis and treatment of different gynecological processes, obtain early diagnostic tools, improve treatments and optimize follow-up to ensure the safety of our patients. We aim to integrate into this knowledge the improvement of quality of life and to encourage our patients to be involved in decision- making.

The main health issues that focus our research are endometriosis and adenomyosis, sterility and reproductive failure, cervical pathology and human papillomavirus, endocrine disorders and sexual dysfunctions, as well as oncological gynecological pathology.

KEYWORDS

Gynecology
Infertility
Cancer
Hormones
Surgery

RELATED DISEASES

Human papillomavirus
Gynecological cancer
Fertility preservation
Endometriosis
Sexual health



GROUP LEADER

Manuel Morales-Ruiz (HCB)

RESEARCH INTERESTS

HEMERA-Lab bridges complex diagnostics with advanced therapies. Our research focuses on:

- 1) Advanced nanotherapies, macrophage reprogramming, and in vivo cell therapies for liver regeneration and cancer.
- 2) Multi-omics and AI-driven biomarker discovery to reclassify variants of uncertain significance in rare genetic and neurodevelopmental disorders.
- 3) Next-generation newborn screening and gene therapies for inherited metabolic diseases using untargeted metabolomics and genomics.

KEYWORDS

Precision laboratory medicine
Liver regenerative therapies
Multi-omics and biomarkers
Rare genetic disorders
Inherited metabolic diseases

RELATED DISEASES

Liver cirrhosis and fibrosis
Cancer
Neurodevelopmental disorders
Inherited rare diseases
Metabolic liver disease
FMR1 associated pathologies

3.13

Biomarkers and laboratory precision medicine in hepatology, metabolism, and rare diseases (HEMERA-Lab)

Publications

Original articles

21

Mean IF **6,56**
Q1 57%
D1 10%
MA 48%
OA 71%

Others

8

Mean IF **8,04**
Q1 50%
D1 38%
MA 63%
OA 63%

IF = Impact Factor
MA = Main authorship (last or corresponding author)
OA = Open Access
Others includes reviews, editorials, clinical guidelines, letters and case reports

Selected active grants

Function and therapeutic potential of RNA helicases and miR-122a-5p in liver regeneration and cancer.

Agencia Estatal de Investigación.
AEI_PE22

PI: Manuel Morales-Ruiz

CRINGENES: A new dimension in newborn screening: pilot study of integrated genomic newborn screening.

Instituto de Salud Carlos III (ISCIII).
FIS_PMPER24

PI: Judit García-Villoria

Selected publications

Pose E, Jimenez C, Zaccherini G, ... , Abalde JG, Kamath PS, Gines P; LIVERHOPE Consortium. **Simvastatin and Rifampin in Decompensated Cirrhosis: A Randomized Clinical Trial.** *JAMA-JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION*. 333(10):864-874. D1

Zhou S, Zhang Y, Casals E, ... , Liu Q, Zhang B, Casals G. **Mesoporous Silica-Encapsulated Cerium Oxide Nanoparticles and Quercetin for Synergistic ROS-Modulated Downregulation of Inflammatory Cytokines.** *INTERNATIONAL JOURNAL OF NANOMEDICINE*. 20:8191-8207. D1

Lu H, Huang J, Wang YC, Casals E, Casals G, Zeng M. **Beyond M1/M2: The role of reactive oxygen species in liver fibrosis and immune modulation.** *REDOX BIOLOGY*. 88:103933. D1

Shi Y, Zeng M, Casals E, Casals G, Liu N. **Metal and Covalent Organic Frameworks Meet OB-GYN: Advancing Applications in Women's Health and Pregnancy Care.** *SMALL*. 21(33):e2504366. D1

Greene D, de Wispelaere K, Lees J, ... , Freson K, Mumford AD, Turro E. **Mutations in the small nuclear RNA gene RNU2-2 cause a severe neurodevelopmental disorder with prominent epilepsy.** *NATURE GENETICS*. 57(6):1367-1373. D1

Pathogenesis and prevention of diabetes



Publications

Original articles	Mean IF	4,65
	Q1	50%
	D1	50%
	MA	50%
	OA	100%

2

Others

Mean IF	0
Q1	0%
D1	0%
MA	0%
OA	0%

0

IF = Impact Factor
 MA = Main authorship (last or corresponding author)
 OA = Open Access
 Others includes reviews, editorials, clinical guidelines, letters and case reports

Selected publications

Ribas V, Morón-Ros S, Marí H, ... , Marco-Rius I, Novials A, Servitja JM. **Diet-induced obesity disrupts sexually dimorphic gene expression in mice.** *AMERICAN JOURNAL OF PHYSIOLOGY-CELL PHYSIOLOGY*. 329(4):C987-C1003. D1

Ooi SA, Valli D, Kuska MI, ... , Novials A, Servitja JM, Maj M. **Cryo-EM exposes diverse polymorphism in IAPP mutants to guide the rational design of peptide-based therapeutics.** *JOURNAL OF MOLECULAR BIOLOGY*. 437(21):169405. Q2

Selected active grants

Effects of physical exercise implementation in type 2 diabetes: extracellular vesicles as biomarkers and response mediators in cardiovascular protection.

Instituto de Salud Carlos III (ISCIII). FIS_PI23/00514

PI: Anna Novials, Joan-Marc Servitja

Effects of circulating extracellular vesicles on pancreatic islets during obesity.

European Foundation for the Study of Diabetes. INT_EFSD/Boehr_22

PI: Joan-Marc Servitja

GROUP LEADER

Anna Novials (IDIBAPS)

RESEARCH INTERESTS

Diabetes is a major global health issue, affecting over 500 million people worldwide. Its high prevalence, economic burden, and the mortality linked to chronic complications underscore the need for effective prevention and treatment. Our research integrates clinical and basic science in humans and animal models, with a focus on:

- 1) Lifestyle interventions to prevent and manage diabetes, particularly through physical exercise.
- 2) The adaptation and dysfunction of pancreatic beta-cells throughout disease progression.
- 3) Molecular mechanisms of organ crosstalk contributing to metabolic imbalance, with emphasis on small extracellular vesicles as biomarkers and disease mediators.

KEYWORDS

Diabetes
 Obesity
 Physical exercise
 Pancreatic beta-cell
 Small extracellular vesicles

RELATED DISEASES

Diabetes
 Obesity
 Metabolic dysfunction-associated steatotic liver disease (MASLD)
 Cardiovascular diseases
 Neurodegenerative diseases



GROUP LEADER

Rafael Oliva (HCB-UB)

RESEARCH INTERESTS

The team aims at identifying both normal molecular mechanisms and alterations in the reproductive function, embryonic development, and the transmission of information, that can affect the health of the following generations.

Towards translational medicine the group applies genetic, genomic, epigenomic, transcriptomic and proteomic strategies to the study of the male germinal line towards correct diagnosis and prognosis, as well as open doors to new strategies for prevention and treatment.

KEYWORDS

Germinal cell line
Assisted reproduction
Spermatozoa
Epigenetics
Proteomics

RELATED DISEASES

Male infertility
Couple infertility
Assisted reproductive failure
Reproductive endocrine disorders
Sterility

3.15

Molecular biology of reproduction and development

Publications

Original articles

9

Mean IF **3,60**
Q1 33%
D1 22%
MA 0%
OA 78%

Others

4

Mean IF **2,45**
Q1 25%
D1 25%
MA 22%
OA 0%

IF = Impact Factor

MA = Main authorship (last or corresponding author)

OA = Open Access

Others includes reviews, editorials, clinical guidelines, letters and case reports

Selected active grants

The paternal age effect on the sperm molecular composition and identification of proteomic and chromatin alterations relevant for male fertility and Infertility.

Instituto de Salud Carlos III (ISCIII). FIS_P123/00986

PI: Judit Castillo, Rafael Oliva

ANDRONET: European andrology network– research coordination, education and public awareness.

European Commission.

CE_H2020_COST20

PI: Rafael Oliva

Selected publications

Trias I, Algaba F, de Torres I, ... , Ribera-Cortada I, Garcia-Herrera A, Rakislova N. **p53 Immunohistochemistry Defines a Subset of Human Papillomavirus-independent Penile Squamous Cell Carcinomas With Adverse Prognosis.** *AMERICAN JOURNAL OF SURGICAL PATHOLOGY*. 49(2):190-193. D1

Goday A, Valls-Roca L, Mendez M, ... , Garrabou G, Carmona F, Manau D. **Exploring Oxidative Stress in Different Endometriosis Phenotypes: Insights from Ovarian and Systemic Perspectives by the Study of SIRT3.** *INTERNATIONAL JOURNAL OF MOLECULAR SCIENCES*. 26(18):9110-9110. Q1

Castillo J, Gay M, de la Iglesia A, ... , Vilaseca M, Jodar M, Oliva R. **Alterations in the abundance of protamine proteoforms related to sperm chromatin packaging, obesity, and age in normozoospermic men.** *MOLECULAR HUMAN REPRODUCTION*. 31(2):gaaf019. Q1

Leiva M, Lopez-Panades M, Wang D, ... , Roig I, Oliva R, Jodar M. **Viruses and assisted reproductive technologies (ART).** *SYSTEMS BIOLOGY IN REPRODUCTIVE MEDICINE*. 71(1):246-278. Q2

Ribó S, Ramon-Krauel M, Mari-mon-Escude JM, ... , Oliva R, Tost J, Jiménez-Chillarón JC. **Transgenerational inheritance of hepatic steatosis in mice: sperm methylome is largely reprogrammed and inherited but does not globally influence liver transcriptome.** *ENVIRON EPIGENET*. 11(1):dvaf003. Q2

Protective strategies against hepatic ischemia reperfusion injury

Publications

Original articles	Mean IF	7,80
	Q1	100%
	D1	50%
	MA	50%
	OA	25%

4

Others	Mean IF	3,60
	Q1	100%
	D1	0%
	MA	100%
	OA	100%

1

IF = Impact Factor
 MA = Main authorship (last or corresponding author)
 OA = Open Access
 Others includes reviews, editorials, clinical guidelines, letters and case reports

Directed PhD theses

2

- Luzmira Cecilia
- Sergio Martínez

Selected active grants

RECPROTECT: Protecting recipients in steatotic and non-steatotic liver transplantation from brain-dead donors.

Agencia Estatal de Investigación.
 AEI_PE24

PI: Carmen Peralta

LIVGRAFTPROTECT: Intervening to correct signals arriving at the liver after brain death in order to protect steatotic and non-steatotic liver grafts used in transplantation.

Agencia Estatal de Investigación.
 AEI_PE21

PI: Carmen Peralta

Selected publications

Ferrer-Fabrega J, Cardenas G, Sapena Victor, ... , Fernandez-Cruz L, Garcia-Valdecasas JC, Fuster J. **Validation of the Back-table Graft Arterial Anastomosis Between the Splenic Artery and Superior Mesenteric Artery.** *ANNALS OF SURGERY*. 281(5):843-851. D1

Micó-Carnero M, Rojano-Alfonso C, Maroto-Serrat C, Cutrin JC, Casillas-Ramírez A, Peralta C. **Relevance of the GH-VEGFB/VEGFA axis in liver grafts from brain-dead donors with alcohol-associated liver disease.** *FRONTIERS IN CELL AND DEVELOPMENTAL BIOLOGY*. 12:1455258. Q1

Casillas-Ramírez A, Maroto-Serrat C, Sanus F, ... , Rojano-Alfonso C, Cabrer M, Peralta C. **Regulation of Adiponectin and Resistin in Liver Transplantation Protects Grafts from Extended-Criteria Donors.** *AMERICAN JOURNAL OF PATHOLOGY*. 195(3):494-527. Q1

del Risco J, Molina A, Piñeiro G, ... , Maduell F, Soriano A, Poch E. **Reduction of hemodialysis catheter-related blood stream infections in intensive care units after systematic use of tauro-lidline-citrate-heparin locking solution.** *JOURNAL OF VASCULAR ACCESS*. 26(5):1504-1509. Q3



GROUP LEADER

Carmen Peralta (IDIBAPS)

RESEARCH INTERESTS

Organs available for transplant are insufficient to meet demand and many patients die while waiting. Given the shortage of donors, the criteria have been expanded and pathological livers including steatotic livers are also now accepted.

Both brain death/cardiac arrest and steatosis (with or without inflammation) negatively affect graft quality, post-transplant results and many organs are rejected due to their pathological conditions.

The group's research is focused on protective strategies in transplantation and hepatic resection, especially in pathological livers from extended criteria donors to reduce the waiting-list for transplant.

KEYWORDS

Liver transplantation
 Liver surgery
 Ischemia-reperfusion injury
 Partial hepatectomy
 Liver diseases

RELATED DISEASES

Transplantation
 Obesity
 Diabetes
 NAFLD & NASH
 Cirrhosis



GROUP LEADER

Albert Pol (ICREA-IDIBAPS)

RESEARCH INTERESTS

Lipid droplets are organelles that store and supply lipids in eukaryotic cells. Thus, Lipid Droplets provide cells with essential nutrients and the energy needed for functioning. For this reason, Lipid Droplets are an attractive nutrient source for viruses and bacteria and a powerful energy source hijacked for cancer cells to proliferate.

The premise of our research is that by understanding the Cell Biology of Lipid Droplets we will be able to discover metabolic vulnerabilities in pathogens and the metabolic pathways exploited by cancer cells to design novel therapeutic strategies.

KEYWORDS

Lipid droplets
Lipids
Innate immunity
Energetic metabolism
Cancer metabolism

RELATED DISEASES

Infection
Cancer
Obesity
Diabetes
Stroke

3.17

Lipid trafficking and disease

Publications

Original articles

2

Mean IF	11,30
Q1	100%
D1	50%
MA	0%
OA	100%

Others

1

Mean IF	4,30
Q1	0%
D1	0%
MA	100%
OA	100%

IF = Impact Factor
MA = Main authorship (last or corresponding author)
OA = Open Access
Others includes reviews, editorials, clinical guidelines, letters and case reports

Selected publications

Ford C, de Sena-Tomás C, Wun TTR, ... , Smeeton J, Sanges R, Targoff KL. **Nkx2.7 is a conserved regulator of craniofacial development.** *NATURE COMMUNICATIONS*. 16(1):3802. D1

Wu YP, Lim YW, McMahon KA, ... , Ariotti N, Hall TE, Parton RG. **Pro-ferroptotic lipids as key control points for caveola formation and disassembly.** *CELL REPORTS*. 44(6):115789. Q1

Alonso-Bivou M, Pol A, Lo HP. **Moving the fat: Emerging roles of rab GTPases in the regulation of lipid droplet contact sites.** *CURRENT OPINION IN CELL BIOLOGY*. 93:102466. Q2

Selected active grants

Lipid droplets as key players in brain microgliosis after stroke.

Fundació Bancaria "La Caixa".
HealthRes23-00560
PI: Albert Pol

Lipid droplets as innate immunity hubs.

European Commission.
CE_HE_ERC_2022_SyG
PI: Albert Pol

Inflammatory bowel disease

Publications

Original articles	Mean IF	7,32
	Q1	70%
	D1	35%
	MA	10%
	OA	60%
Others	Mean IF	8,82
	Q1	40%
	D1	40%
	MA	40%
	OA	80%

IF = Impact Factor
MA = Main authorship (last or corresponding author)
OA = Open Access
Others includes reviews, editorials, clinical guidelines, letters and case reports

Directed PhD theses

1

• Elisa Melón 

Selected active grants

MacNet: Decoding Myeloid-Driven Heterogeneity in Inflammatory Bowel Disease.
Agencia Estatal de Investigación.
AEI_PE24
PI: Azucena Salas

FIBROTARGET: Validation of novel immunotherapeutic targets against fibrosis in inflammatory bowel diseases.
European Commission.
CE_HE_CH_22_2s22_RIA
PI: Azucena Salas

Selected publications

el Maimouni C, García AV, González-Suárez B. **Jejunal Gastric Heterotopia Causing Iron Deficiency Anemia.** *CLINICAL GASTROENTEROLOGY AND HEPATOLOGY*. 23(1):A15-A16. D1

Gudiño V, Bartolomé-Casado R, Salas A. **Single-cell omics in inflammatory bowel disease: recent insights and future clinical applications.** *GUT*. 74(8):1335-1345. D1

Melon-Ardanaz E, Veny M, Corraliza AM, ... , Panes J, Ricart E, Salas A. **Differential effects of tofacitinib on macrophage activation contribute to lack of response in ulcerative colitis patients.** *JOURNAL OF CROHNS & COLITIS*. 19(6):jjaf076. D1

Gudiño V, Cho JW, Caballol B, ... , Panés J, Hemberg M, Salas A. **TL1A-activated T cells remodel the rectal mucosa in patients with Crohn's disease with perianal fistulising disease.** *GUT*. gut-jnl-2025-336246. D1

Caballol B, Ordas I, Saavedra C, ... , Panes J, Ricart E, Rimola J. **Volumetric Changes in Perianal Fistulizing Crohn's Disease Measured by Magnetic Resonance Is Feasible and Could Be a Potential Biomarker to Predict Clinical Outcomes.** *UNITED EUROPEAN GASTROENTEROLOGY JOURNAL*. 13(7):1217-1225. Q1



GROUP LEADER
Azucena Salas (IDIBAPS)

RESEARCH INTERESTS
Crohn's disease and ulcerative colitis are chronic inflammatory diseases of the intestine for which there is no cure. Available treatment attempts to reduce disease activity. Despite access to newly developed drugs, some patients will not respond which can severely impact their quality of life.

Our group works to understand the mechanisms that support disease, particularly in patients that do not respond to currently approved therapies. By using cutting edge molecular, cellular and imaging technologies we aim to understand the pathways supporting lack of response so that we can design alternative effective treatment for all patients.

KEYWORDS
Transcriptomics
Organoids
Magnetic resonance
Cell therapies

RELATED DISEASES
Inflammatory bowel disease
Ulcerative colitis
Crohn's disease



GROUP LEADER

Pau Sancho-Bru (IDIBAPS)

RESEARCH INTERESTS

We are conducting translational research in chronic liver disease and carcinogenesis. The group is interested in understanding the mechanisms governing the liver cell plasticity in chronic liver diseases and the interplay of these processes with liver inflammation, fibrosis and cancer.

In this context, one of our main research interests is to develop 3D organotypic in vitro systems for disease modeling and drug development.

KEYWORDS

Liver cell plasticity
Fibrosis
Hepatoblastoma
Organoids
iPSC-derived liver cells

RELATED DISEASES

Chronic liver diseases
Steatotic liver disease
Hepatoblastoma

3.19

Liver cell plasticity and tissue repair

Publications

Original articles

2

Mean IF	11,60
Q1	100%
D1	50%
MA	100%
OA	100%

Others

1

Mean IF	7,50
Q1	100%
D1	0%
MA	0%
OA	100%

IF = Impact Factor

MA = Main authorship (last or corresponding author)

OA = Open Access

Others includes reviews, editorials, clinical guidelines, letters and case reports

Selected publications

Martinez-Garcia RA, Vallverdu J, Xu Z, ... , Coll M, Affo S, Sancho-Bru P. **Trajectory analysis of hepatic stellate cell differentiation reveals metabolic regulation of cell commitment and fibrosis.** *NATURE COMMUNICATIONS*. 16(1):1489. D1

Rubio-Tomás T, Martí-Aguado D, Blaya D, ... , Rautou PE, Bataller R, Sancho-Bru P. **GDF15 is associated with hepatocellular senescence and correlates with mortality in patients with alcohol-associated hepatitis.** *JHEP REPORTS*. 7(9):101478. Q1

Gratacos-Gines J, Ariño S, Sancho-Bru P, Bataller R, Pose E. **MetALD: Clinical aspects, pathophysiology and treatment.** *JHEP REPORTS*. 7(2):101250. Q1

Directed PhD theses

1

• Silvia Ariño

Selected active grants

Halt-RONIN: Discovering chronic inflammation biomarkers that define key stages in the Healthy-to-NASH transition to inform early prevention and treatment strategies.

European Commission.

CE_HE_CH_22_1s21_RIA

PI: Pau Sancho-Bru

Hblast14: Dissecting the role of the 14q32 region in hepatoblastoma.

Worldwide Cancer Research.

INT_WWCR_22

PI: Pau Sancho-Bru

Pathogenesis and treatment of autoimmunity



GROUP LEADER

Pere Santamaria (IDIBAPS)

RESEARCH INTERESTS

Our group focusses on a new class of drugs, based on nanomedicine, that can comprehensively blunt several experimental autoimmune diseases without compromising normal immunity to infections and cancer.

We investigate the underlying mechanisms, in particular the molecular changes that result in the conversion of pathogenic T-cells into disease-suppressing progeny, with a major focus on mice humanized with peripheral blood mononuclear cells or hematopoietic stem cells.

In addition, we enumerate the presence of, and clone autoantigen-specific T-cell specificities in patients with various autoimmune diseases.

KEYWORDS

Autoimmunity
Diabetes
Nanoparticle
Tolerance
T-cell development

RELATED DISEASES

Diabetes
Multiple sclerosis
Inflammatory bowel disease
Obesity
Systemic lupus erythematosus

Publications

Original articles

12

Mean IF 7,11
Q1 83%
D1 33%
MA 17%
OA 75%

Others

2

Mean IF 10,65
Q1 100%
D1 100%
MA 100%
OA 50%

IF = Impact Factor
MA = Main authorship (last or corresponding author)
OA = Open Access
Others includes reviews, editorials, clinical guidelines, letters and case reports

Selected active grants

Phoenix: Nanomedicine for organ transplantation tolerance.

European Commission.
CE_HE_CH_22_2s22_RIA
PI: Pere Santamaria

Transcriptional and epigenetic regulation of an anti-diabetogenic immunoregulatory cell Pathway.

Fundació Bancaria "La Caixa".
HealthRes25
PI: Pere Santamaria

Selected publications

Peakman M, Santamaria P. **Autoantigen-Specific Immunotherapies for the Prevention and Treatment of Type 1 Diabetes.** *COLD SPRING HARBOR PERSPECTIVES IN MEDICINE.* 15(6):a041598. D1

Garabatos N, Angelats E, Santamaria P. **Mechanistic and therapeutic advances in immune-mediated gastrointestinal disorders.** *JOURNAL OF ALLERGY AND CLINICAL IMMUNOLOGY.* 156(5):1133-1159. D1

Garnica J, Yamanouchi J, Clarke R, ..., Mondal D, Serra P, Santamaria P. **BLIMP-1-dependent differentiation of T follicular helper cells into Foxp3+ T regulatory type 1 cells.** *FRONTIERS IN IMMUNOLOGY.* 16:1519780. Q1

Garnica J, Yamanouchi J, Thiessen S, ..., Mondal D, Serra P, Santamaria P. **Contextual regulation of T follicular helper cell expansion and differentiation into T regulatory type 1 cells by multiple transcription factors.** *CELL REPORTS.* 44(10):116381. Q1



GROUP LEADER

Josep Vidal (HCB)

RESEARCH INTERESTS

Nutrition, obesity, diabetes, and cardiovascular disease: from epidemiology to mechanistic studies.

Detection of atherosclerosis: a road to personalized medicine in dyslipidemia and diabetes.

Monogenic forms of diabetes.

Impact of bariatric surgery on health.

Advanced therapies for type 1 diabetes. The artificial pancreas concept.

Hypoglycemia and its consequences in patients with diabetes.

Regenerative medicine strategies to treat beta cell deficiency in diabetes.

Advancing antigen-specific nanomedicines for the treatment of type 1 diabetes.

KEYWORDS

Diabetes
Pancreatic islet
Obesity
Hypercholesterolemia
Cardiovascular disease

RELATED DISEASES

Obesity
Type 1 diabetes mellitus
Type 2 diabetes mellitus
Familial hypercholesterolemia

3.21

Translational research in diabetes, lipids and obesity

Publications

Original articles

29

Mean IF	5,14
Q1	69%
D1	31%
MA	41%
OA	72%

Others

7

Mean IF	4,86
Q1	29%
D1	29%
MA	43%
OA	43%

IF = Impact Factor

MA = Main authorship (last or corresponding author)

OA = Open Access

Others includes reviews, editorials, clinical guidelines, letters and case reports

Selected active grants

Decoding the paracrine control of metabolic fitness by endothelial nutrient signaling.

Fundació Bancaria "La Caixa".
HealthRes21

PI: Josep Vidal

micro-RNA de vesículas extracelulares pequeñas y respuesta ponderal tras cirugía bariátrica.

Instituto de Salud Carlos III (ISCIII).
FIS_PI25/00524

PI: Josep Vidal

Selected publications

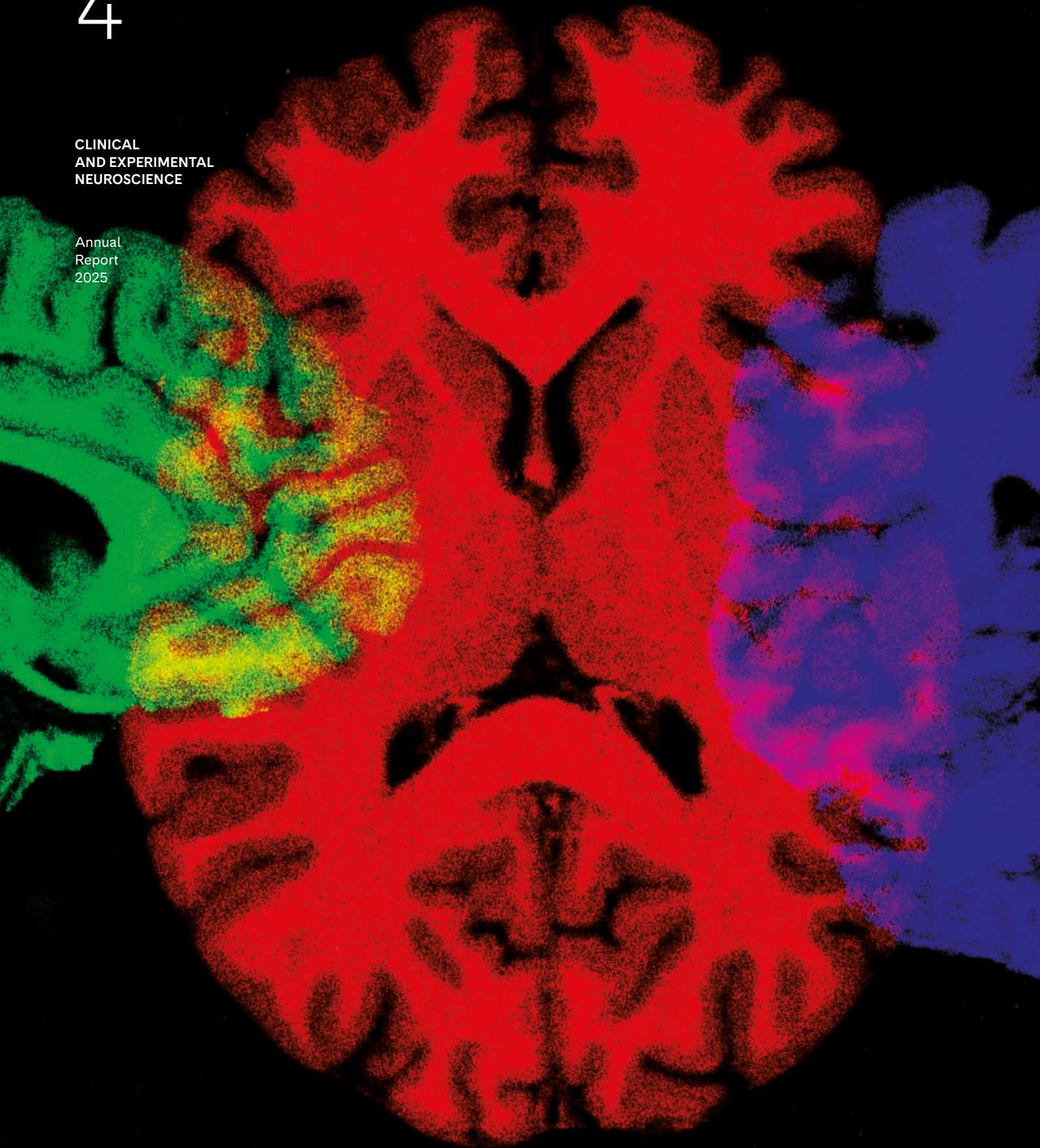
Puig-Jove C, Vinals C, Conget I, ... , Tonet G, Marga P, Perea V, Amor AJ. **Association between the GMI/HbA1c ratio and preclinical carotid atherosclerosis in type 1 diabetes: impact of the fast-glycator phenotype across age groups.** *CARDIOVASCULAR DIABETOLOGY*. 24(1):75. D1

Claro M, Vinals C, Gimenez M, ... , Es-matjes E, Conget I, Amor AJ. **Hepatic steatosis with significant fibrosis is associated with preclinical carotid atherosclerosis in patients with type 1 diabetes.** *DIABETES RESEARCH AND CLINICAL PRACTICE*. 226:112334. D1

Milad C, Vinals C, Perea V, ... , Conget I, Gimenez M, Amor AJ. **Adherence to Modified American Heart Association Cardiovascular Health Standards Is Associated With Lower Atherosclerotic Burden in Mediterranean Individuals With Type 1 Diabetes.** *DIABETES-METABOLISM RESEARCH AND REVIEWS*. 41(6):e70088. Q1

Sala-Vila A, Vinagre I, Cofan M, ... , Harris WS, Zarranz-Ventura J, Ortega E. **Blood omega-3 biomarkers, diabetic retinopathy and retinal vessel status in patients with type 1 diabetes.** *EYE*. 39(8):1526-1531. Q1

Vinals C, Conget I, Granados M, ... , Vinagre I, Gimenez M, Amor AJ. **Factors Involved in the Progression of Preclinical Atherosclerosis in People with Type 1 Diabetes.** *JOURNAL OF CLINICAL MEDICINE*. 14(17):6004-6004. Q1



AREA 4

Clinical and experimental neuroscience

- 4.1 Pathophysiology and treatment of neurodegenerative disorders**
Jordi Alberch
- 4.2 Neuropsychology**
David Bartrés-Faz
- 4.3 Systems neuropharmacology**
Analía Bortolozzi
- 4.4 Child and adolescent psychiatry and psychology**
Josefina Castro-Fornieles
- 4.5 Cerebrovascular diseases**
Ángel Chamorro
- 4.6 Theoretical neurobiology of cortical circuits**
Albert Compte
- 4.7 Pathogenesis of autoimmune neuronal disorders**
Josep Dalmau
- 4.8 Cortical circuit dynamics**
Jaime de la Rocha
- 4.9 Inherited metabolic diseases and muscular disorders**
Glòria Garrabou
- 4.10 Neurophysiology**
Xavier Gasull
- 4.11 Clinical neurophysiology**
Alejandro Irazo
- 4.12 Advanced imaging in neuroimmunological diseases (ImaginEM)**
Sara Llufríu
- 4.13 Clinical addictions**
Hugo López-Pelayo
- 4.14 Parkinson disease and other neurodegenerative movement disorders: clinical and experimental research**
M. Josep Martí
- 4.15 Schizophrenia**
Eduard Parellada
- 4.16 Imaging of mood-and anxiety-related disorders (IMARD)**
Joaquim Raduà
- 4.17 Alzheimer's disease and other cognitive disorders**
Raquel Sanchez-Valle
- 4.18 Systems neuroscience**
Mavi Sanchez-Vives
- 4.19 Multimodal neuroimaging in high risk and early psychosis**
Gisela Sugranyes
- 4.20 Neurobiology**
Ramon Trullàs
- 4.21 Bipolar and depressive disorders**
Eduard Vieta



GROUP LEADER

Jordi Alberch (UB)

RESEARCH INTERESTS

Neuronal connectivity in Huntington's disease and other basal ganglia disorders. PI: Dr. Jordi Alberch

Epitranscriptomic regulation in brain disorders. PI: Dr Veronica Brito

Stem cells and regenerative medicine. PI: Dr. Josep M Canals

In vivo reprogramming during cortex development. PI: Dr. Daniel del Toro

Glia-neuron crosstalk in Huntington's disease. PI: Dr. Silvía Ginés

Neural plasticity in neurological and neuropsychiatric disorders. PI: Dr. Albert Giral

Monitoring and modulating neuronal circuitry in brain disorders. PI: Dr. Mercè Masana

Kinases and phosphatases in neuronal function and dysfunction. PI: Dr. Esther Pérez-Navarro

Neural Stem Cells and Brain Damage. PI: Dr. Daniel Tornero

Probabilistic Machine Learning for Neuroscience In Silico Modeling. PI: Dr. Jordi Abante

Functional Genomics of Neurodegenerative Diseases. PI: Dr Eulàlia Martí

KEYWORDS

Neuronal dysfunction
Motor and cognitive alterations
Psychiatric disturbances
Neurodevelopment
Regenerative medicine

RELATED DISEASES

Huntington's disease
Alzheimer's disease
Chorea acanthocytosis
Stroke
Schizophrenia

4.01

Pathophysiology and treatment of neurodegenerative disorders

Publications

Original articles

15

Mean IF **6,89**
Q1 87%
D1 27%
MA 73%
OA 100%

Others

2

Mean IF **4,45**
Q1 100%
D1 0%
MA 100%
OA 50%

IF = Impact Factor
MA = Main authorship (last or corresponding author)
OA = Open Access
Others includes reviews, editorials, clinical guidelines, letters and case reports

Directed PhD theses

3

• Iván Ballasch
• Marcos Galán
• Sofía Zaballa

Selected active grants

GlioLight: Next Generation Glioma Treatments using Direct Light Therapy.

European Commission.

CE_HORIZON_PATHFINDEROPEN

PI: Merce Masana

Rise of the structure-encoded Unc5 interactome in aggressive behaviours of Neuro-developmental Tumours.

European Commission.

CE_ERC_Synergy Grant

PI: Daniel del Toro

Selected publications

Chicote-Gonzalez A, Solana-Balaguer J, Garcia-Segura P, ... , Giral A, Soria G, Malagelada C. **Astrocytes, via RTP801, contribute to cognitive decline by disrupting GABAergic-regulated connectivity and driving neuroinflammation in an Alzheimer's disease mouse model.** *ALZHEIMERS & DEMENTIA*. 21(4):e70051. D1

di Franco N, de Tena IB, Sanchez-Ruiz A, ... , Guzmán M, Perea G, Ginés S. **Restoration of CB1 receptor function in hippocampal GABAergic neurons rescues memory deficits in Huntington's disease models.** *TRANSLATIONAL NEURODEGENERATION*. 14(1):44. D1

Chun SH, Yoon DE, Diaz-Almeida DS, ... , del Toro D, Shi S, Klein R. **Cortex folding by combined progenitor expansion and adhesion-controlled neuronal migration.** *NATURE COMMUNICATIONS*. 16(1):8048. D1

López-Molina L, Pereda-Velarde A, di Franco N, ... , Guitart-Mampel M, Garrabou G, Gines S. **Mitochondria from huntingtons disease striatal astrocytes are hypermetabolic and compromise neuronal branching.** *CELL COMMUNICATION AND SIGNALING*. 23(1):341. Q1

Sitja-Roqueta L, Ngum NM, Zherebtsov EA, ... , Meglinski I, Parri HR, Masana M. **Photoactivated adenylyl cyclase in cortical astrocytes promotes synaptic potentiation and reveals alterations in Huntington's disease.** *SCIENCE*. 28(11):113640. Q1

Neuropsychology

Publications

Original articles	Mean IF	8,25
	Q1	88%
	D1	48%
	MA	42%
	OA	91%
Others	Mean IF	5,27
	Q1	86%
	D1	29%
	MA	14%
	OA	57%

IF = Impact Factor
MA = Main authorship (last or corresponding author)
OA = Open Access
Others includes reviews, editorials, clinical guidelines, letters and case reports

Selected active grants

AMIGO: A multi-ingredient brain function model predicting chronic pain in youth: a window into future well-being.
European Commission.
CE_HORIZON_ERC_2024-COG
PI: Marina López-Solà

Deep Tech Brain: Virtual Reality, Artificial Intelligence, Neuroimaging and Neuromodulation.
European Commission.
CE_EIT_ Tech Talent
PI: David Bartrés-Faz, Bàrbara Segura, Roser Sala-Llloch

Selected publications

Bartrés-Faz D, Demnitz-King H, Cabello-Toscano M, ... , Walker Z, Whitfield T, Wirth M. **Psychological profiles associated with mental, cognitive and brain health in middle-aged and older adults.** *NATURE MENTAL HEALTH*. 3(1):92–103. D1

Roura I, Pardo J, Martin-Barcelo C, ... , Junque C, Iranzo A, Segura B. **Clinical and brain volumetric correlates of decreased DTI-ALPS, suggestive of local glymphatic dysfunction, in iRBD.** *NPJ PARKINSONS DIS*. 11(1):87. D1

Sunol M, Pascual-Diaz S, Dudley J, ... , Kashikar-Zuck S, Coghill RC, Lopez-Sola M. **Neurophysiology of resilience in juvenile fibromyalgia.** *PAIN*. 166(9):e200-e211. D1

Ripart M, Spitzer H, Williams LZJ, ... , Iglesias JE, Adler S, Wagstyl K. **Detection of Epileptogenic Focal Cortical Dysplasia Using Graph Neural Networks: A MELD Study.** *JAMA NEUROLOGY*. 82(4):397–406. D1

Solé-Padullés C, Cattaneo G, Cabello-Toscano M, ... , Solana-Sánchez J, Pascual-Leone A, Bartrés-Faz D. **Use of Multiple Languages Provides Cognitive Reserve Amidst Age-Related White Matter Changes.** *JOURNALS OF GERONTOLOGY SERIES B-PSYCHOLOGICAL SCIENCES AND SOCIAL SCIENCES*. 80(6):gbaf064. Q1



GROUP LEADER
David Bartrés-Faz (UB)

RESEARCH INTERESTS
From a psychobiological perspective the group has a focus on identifying cognitive and mental health factors as well as the underlying brain mechanisms that provide interindividual differences in risk vs protection to main brain conditions, including major neurodegenerative diseases, epilepsy and chronic pain.

The group uses multimodal approaches combining clinical, cognitive and neuroimaging assessments as well as non-invasive brain stimulation techniques as well and artificial intelligence-based expertise, as well as a translational approach animal-human to investigate brain resilience mechanisms.

KEYWORDS
Neuroimaging
Neurodegeneration
Cognition
Brain plasticity
Chronic pain

RELATED DISEASES
Mild cognitive impairment
Alzheimer's disease
alfa synucleinopathies
Epilepsy
Chronic pain



GROUP LEADER

Analía Bortolozzi (IIBB-CSIC)

RESEARCH INTERESTS

The group studies brain circuits and synaptic processes involved in the pathophysiology and treatment of depression and Parkinson's disease.

The team employs innovative technologies ranging from molecular approaches and connectivity analysis (ephys, optogenetic, microdialysis) to neuroimaging and behavioral assessment in animal models, providing detailed insights into the functioning of neural circuits at different levels of complexity.

The group has extensive experience in the neuropharmacology of monoamine systems and is engaged to developing next-generation oligonucleotide-based therapies.

KEYWORDS

Brain circuits
Synaptic plasticity
Neuropsychopharmacology
RNA nanotherapies
Animal models

RELATED DISEASES

Major depressive disorder
Stress-related disorders
Parkinson's disease
Proteinopathies

4.03

Systems neuropharmacology

Publications

Original articles

7

Mean IF **7**
Q1 86%
D1 57%
MA 57%
OA 86%

Others

2

Mean IF **4,75**
Q1 100%
D1 50%
MA 100%
OA 100%

IF = Impact Factor

MA = Main authorship (last or corresponding author)

OA = Open Access

Others includes reviews, editorials, clinical guidelines, letters and case reports

Directed PhD theses

1

· Unai Sarriés



Selected active grants

Mapping the ventromedial prefrontal cortex-raphé nuclei network underlying mood disorders in Parkinson's disease to identify novel therapeutic circuits (MoodPD).

Agencia Estatal de Investigación.

AEI_PI22

PI: Analía Bortolozzi

Next-Generation Vaccine for Parkinson's Disease-NEUROVAX.

Fundació Bancaria "La Caixa".

HealthRes25-00560

PI: Analía Bortolozzi

Selected publications

di Franco N, de Tena IB, Sanchez-Ruiz A, ... , Guzmán M, Perea G, Ginés S. **Restoration of CB1 receptor function in hippocampal GABAergic neurons rescues memory deficits in Huntington's disease models.** *TRANSLATIONAL NEURODEGENERATION*. 14(1):44. D1

de Prisco M, Oliva V, Fico G, ... , Vieta E, Hidalgo-Mazzei D, Anmella G. **The PA-DRIS-PRESTO cohort: A comprehensive population-based study on mental health in Catalonia.** *EUROPEAN PSYCHIATRY*. 68(1):e144. D1

Miquel-Rio L, Jerico-Escolar J, Sarries-Serrano U, ... , Munoz-Moreno E, Lopez-Gil X, Bortolozzi A. **Early synaptic changes and reduced brain connectivity in PD-like mice with depressive phenotype.** *NPJ PARKINSON'S DISEASE*. 11(1):242. D1

Miquel-Rio L, Jericó-Escolar J, Yanes-Castilla C, ... , Callado LF, Meana JJ, Bortolozzi A. **A molecular convergence in the triad of parkinson's disease, depressive disorder and gut health is revealed by the inflammation-miRNA axis.** *JOURNAL OF NEUROINFLAMMATION*. 22(1):260. D1

Miquel-Rio L, Santana N, Sancho-Alonso M, Callado LF, Meana JJ, Bortolozzi A. **Impaired unfolded protein response, BDNF and synuclein markers in postmortem dorsolateral prefrontal cortex and caudate nucleus of patients with depression and Parkinson's disease.** *PROGRESS IN NEURO-PSYCHOPHARMACOLOGY & BIOLOGICAL PSYCHIATRY*. 138:111299. Q1

4.04

Child and adolescent psychiatry and psychology

Publications

Original articles	Mean IF	5,08
	Q1	86%
	D1	57%
	MA	37%
	OA	86%

35

Others

Mean IF	4,68
Q1	80%
D1	40%
MA	60%
OA	60%

5

IF = Impact Factor
MA = Main authorship (last or corresponding author)
OA = Open Access
Others includes reviews, editorials, clinical guidelines, letters and case reports

Directed PhD theses

1

• Laura Hermida

Selected active grants

ePREVENT: Digital Strategies for Prevention of Psychosis and its Consequences.

Instituto de Salud Carlos III (ISCIII).
FIS_AC24

PI: Inmaculada Baeza Pertegaz

Prospective study of biomarkers and clinical predictors of longterm outcome and response to treatment in obsessive-compulsive disorder: the Barcelona OCD COHORT.

Fundació La Marató de TV3.
SalutMental_21

PI: Luisa Lázaro

Selected publications

Flamarique I, Pineda M, Tasa-Vinyals E, ... , Plana MT, Mora M, Castro-Fornieles J. **Blood Parameters in Children and Adolescents With Underweight and Atypical Anorexia Nervosa.** *INTERNATIONAL JOURNAL OF EATING DISORDERS*. 58(1):171-180. D1

de la Serna E, Moreno D, Sugranyes G, ... , Torrent C, Garcia-Rizo C, Castro-Fornieles J. **Effects of parental characteristics on the risk of psychopathology in offspring: a 4-year follow-up study.** *EUROPEAN CHILD & ADOLESCENT PSYCHIATRY*. 34(10):3035-3045. D1

Tor J, Baeza I, Alvarez-Subiela X, ... , Ilzarbe D, Haro JM, Dolz M. **Sex differences and implications in outcome in children and adolescents at clinical high risk for psychosis.** *JOURNAL OF CHILD PSYCHOLOGY AND PSYCHIATRY*. 66(10):1461-1472. D1

Gómez-Vallejo S, Iriondo-Blanco O, Salazar de Pablo G, Calvo Escalona R, Lázaro-García L. **The role of obstetric adversities in neurodevelopmental conditions: A sibling study.** *AUTISM*. 29(12):3072-3082. D1

Camprodón-Boadas P, Greve AN, Hemminger N, ... , Sugranyes G, Nordentoft M, Veddum L. **Cognitive reserve in seven-year-old children at familial high risk of schizophrenia or bipolar disorder.** *EUROPEAN CHILD & ADOLESCENT PSYCHIATRY*. 35(4):1321-1333. D1



GROUP LEADER

Josefina Castro-Fornieles (HCB)

RESEARCH INTERESTS

Approximately between 15-25% of children and adolescents are diagnosed with a mental health or psychiatric disorder. The aim of our group is to promote clinical research and to collaborate with national and international groups specializing in genetics, neuroimaging and neurobiology, in order to advance our understanding of the most severe psychiatric disorders in children and adolescents.

Thus our main research lines are: schizophrenia and affective disorders, anorexia nervosa and other eating disorders, obsessive-compulsive disorder and Tourette syndrome and autism spectrum disorders.

KEYWORDS

Child/adolescent mental disorders

RELATED DISEASES

Psychotic and affective disorders
Obsessive-compulsive disorder
Eating disorders
Autism spectrum disorder
Tourette syndrome



GROUP LEADER

Ángel Chamorro (HCB)

RESEARCH INTERESTS

Strokes are caused by a sudden interruption of brain blood flow due to the obstruction or rupture of a brain vessel. Despite progress in reopening large arteries, major challenges remain, including improving capillary and tissue reperfusion, promoting brain recovery, and understanding how inflammation and immunity influence stroke injury, repair, and post-stroke cognitive decline.

We also seek novel treatments for brain and subarachnoid hemorrhages, cerebral small vessel disease, arteriovenous malformations, and strategies to reduce the contribution of cerebrovascular diseases to dementia. Our group brings together clinical and basic researchers to address these challenges by studying the underlying mechanisms and developing improved diagnostic and therapeutic strategies.

KEYWORDS

Stroke
Mechanical thrombectomy
Blood-brain barrier
Neuroinflammation
Uric acid

RELATED DISEASES

Ischemic stroke
Small vessel disease
Brain hemorrhage
Arteriovenous malformations
Subarachnoid hemorrhage

4.05

Cerebrovascular diseases

Publications

Original articles

41

Mean IF **6,06**
Q1 66%
D1 32%
MA 56%
OA 80%

Others

4

Mean IF **4,45**
Q1 50%
D1 5%
MA 25%
OA 100%

IF = Impact Factor
MA = Main authorship (last or corresponding author)
OA = Open Access
Others includes reviews, editorials, clinical guidelines, letters and case reports

Selected active grants

Chemical optimization of cerebral embolectomy in patients with acute ischemic stroke treated with mechanical thrombectomy (CHOICE 2 TRIAL).

Instituto de Salud Carlos III (ISCIII).
FIS_ ICI22/00064
PI: Ángel Chamorro

Lipid droplets as key players in brain microgliosis after stroke.

Fundació Bancaria "La Caixa".
HealthRes23-00560
PI: Anna M. Planas

Selected publications

Mosteiro A, Pedrosa L, Amaro S, ... , Martin A, Rodriguez-Hernandez A, Torne R. **Understanding the Importance of Blood-Brain Barrier Alterations in Brain Arteriovenous Malformations and Implications for Treatment: A Dynamic Contrast-Enhanced-MRI-Based Prospective Study.** *NEUROSURGERY*. 96(4):811-823. D1

Doncel-Moriano A, Rodriguez-Vazquez A, Salvatore-Rudilosso IR, ... , Vargas M, Urrea X, Chamorro A. **Trends in revascularization therapies for patients with acute stroke with large infarcts: a population-based study.** *JOURNAL OF NEUROINTERVENTIONAL SURGERY*. 17(10):1059-1065. D1

Llull L, Santana D, Mosteiro A, ... , Planas AM, Chamorro A, Amaro S. **Blood-Brain Barrier Disruption Predicts Poor Outcome in Subarachnoid Hemorrhage: A Dynamic Contrast-Enhanced MRI Study.** *STROKE*. 56(9):2633-2643. D1

Arbaizar-Roviroso M, Pérez RF, Peñarroya A, Gallizioli M, Fraga MF, Planas AM. **Microglial Replacement Reverses Age-Associated Epigenetic Modifications Despite Accelerating Epigenetic Age.** *AGING AND DISEASE*. D1

Rodriguez-Vazquez A, Laredo C, Reyes L, ... , Torne R, Urrea X, Chamorro A. **Computed tomography perfusion as an early predictor of malignant cerebral infarction.** *EUROPEAN STROKE JOURNAL*. 10(1):172-180. Q1

Theoretical neurobiology of cortical circuits

Publications

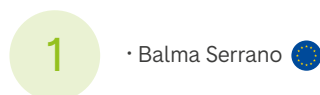
Original articles	Mean IF	9,00
1	Q1	100%
	D1	100%
	MA	0%
	OA	100%
Others	Mean IF	0
0	Q1	0%
	D1	0%
	MA	0%
	OA	0%

IF = Impact Factor
 MA = Main authorship (last or corresponding author)
 OA = Open Access
 Others includes reviews, editorials, clinical guidelines, letters and case reports

Selected publications

Forte A, Ortuño M, Masias M, ... , Dalmau J, Castro-Fornieles J, Sugranyes G.
Brain metabolite levels in the post-acute stage of anti-NMDA receptor encephalitis and schizophrenia: a longitudinal case-control study. *BIOLOGICAL PSYCHIATRY*. 100(2):189-198. D1

Directed PhD theses



• Balma Serrano

Selected active grants

Cognitive Neuroscience of Attention and Working Memory in Schizophrenia.

National Institutes of Health.

INT_NIH_R01MH065034

PI: Albert Compte

PLASTINET: Neuropsychiatric cognitive symptoms by defective synaptic plasticity in recurrent neural networks performing complex working memory tasks.

Agencia Estatal de Investigación.

AEI_PE24

PI: Albert Compte



GROUP LEADER

Albert Compte (IDIBAPS)

RESEARCH INTERESTS

Many neuropsychiatric disorders are associated with altered cognitive functions of the prefrontal cortex, such as working memory. These alterations are subtle but highly debilitating, and still lack effective treatment.

We study cognitive function in patients with autoimmune encephalitis or schizophrenia using behavioural testing, EEG and fMRI. In parallel, we analyze data recorded in the cerebral cortex of animals while they perform working memory tasks. We aim to formulate computational models that link neural activity and cognitive function, and specify the neural bases of brain diseases.

KEYWORDS

Working memory
 Prefrontal cortex
 Neural network
 NMDA receptor
 Slow-wave sleep

RELATED DISEASES

Autoimmune encephalitis
 Schizophrenia



GROUP LEADER

**Josep Dalmau (IDIBAPS-
CaixaResearch Institute)**

RESEARCH INTERESTS

The group studies autoimmune/inflammatory brain diseases. This includes identifying novel diagnostic and prognostic biologic, genetic, immunologic, and neuroimaging biomarkers. The group also aims to elucidate the underlying immunopathogenic disease mechanisms through studies that link immunological processes to abnormal neuronal function.

The research is carried out with patients in the clinic and in the laboratory with patient derived samples. Techniques include immunocytochemistry, immunoprecipitation, animal model development, advanced neuroimaging and clinical trials.

KEYWORDS

Encephalitis
Paraneoplastic
Demyelination
Autoimmunity
Biomarkers

RELATED DISEASES

Autoimmune encephalitis
Paraneoplastic disorders
Multiple sclerosis
Autoimmune sleep disorders
Side effects of immunotherapy on the nervous system

4.07

Pathogenesis of autoimmune neuronal disorders

Publications

Original articles	Mean IF	8,79
	Q1	93%
	D1	62%
	MA	34%
	OA	76%
29		
Others	Mean IF	12,90
	Q1	90%
	D1	70%
	MA	60%
	OA	80%
10		

IF = Impact Factor
MA = Main authorship (last or corresponding author)
OA = Open Access
Others includes reviews, editorials, clinical guidelines, letters and case reports

Directed PhD theses

3	• Chiara Milano
	• Claudia Papi
	• Paula Peixoto

Selected active grants

ImmunBRAIN: Unravelling the role of neuronal antibodies and innate immunity partnership in human autoimmune encephalitis.

European Commission.

CE_HE_ERC_24

PI: Marianna Spatola

Antibody-mediated NMDA receptor encephalitis: symptoms, biomarkers, and mechanisms of the prolonged recovery stage.

Fundació Bancaria "La Caixa".

HealthRes22-00221

PI: Josep Dalmau

Selected publications

Olive-Cirera G, Fonseca E, Chen LW, ... , Graus F, Dalmau J, Armangue T. **Differential diagnosis and comparison of diagnostic algorithms in children and adolescents with autoimmune encephalitis in Spain: a prospective cohort study and retrospective analysis.** *LANCET NEUROLOGY*. 24(1):54. D1

Fonseca EG, Olivé-Cirera G, Chen LW, ... , Saiz A, Dalmau J, Armangue T. **Clinical Features of Children With MOG-IgG Who Fulfill Criteria of Multiple Sclerosis and Overlapping Disorders.** *NEUROLOGY-NEUROIMMUNOLOGY & NEUROINFLAMMATION*. 12(4):e200400. D1

Munoz-Sanchez G, Guasp M, Munoz-Lopetegui A, ... , Graus F, Dalmau J, Ruiz-Garcia R. **Cytokine and Chemokine Profiles in Anti-LGI1 Encephalitis Markers of Severity and Outcome.** *NEUROLOGY-NEUROIMMUNOLOGY & NEUROINFLAMMATION*. 12(6):e200492. D1

Maudes E, Planaguma J, Marmolejo L, ... , Sabater L, Matute C, Dalmau J. **Neuroimmunobiology and treatment assessment in a mouse model of anti-NMDAR encephalitis.** *BRAIN*. 148(6):2023-2037. D1

Milano C, Saylam E, Papi C, ... , Dalmau J, Magaña S, Spatola M. **Clinical Characterization and Long-Term Outcome in Children and Adults With Anti-AMPA Receptor Encephalitis.** *NEUROLOGY-NEUROIMMUNOLOGY & NEUROINFLAMMATION*. 12(5):e200453. D1

4.08

Cortical circuit dynamics

Publications

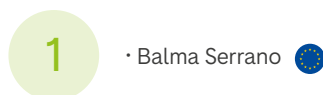
Original articles	Mean IF	48,50
	Q1	100%
	D1	100%
	MA	0%
	OA	100%
Others	Mean IF	0
	Q1	0%
	D1	0%
	MA	0%
	OA	0%

IF = Impact Factor
MA = Main authorship (last or corresponding author)
OA = Open Access
Others includes reviews, editorials, clinical guidelines, letters and case reports

Selected publications

Greenstreet F, Vergara HM, Johanson Y, ... , Margrie TW, Clopath C, Stephenson-Jones M. **Dopaminergic action prediction errors serve as a value-free teaching signal.** *NATURE*. 643(8074):1333-1342. D1

Directed PhD theses



Selected active grants

The Mouse Village: a fully automated behavioral system for continuous social and cognitive testing.

European Commission.
CE_HE_ERC_2022_POC2
PI: Jaime de la Rocha

CRCNS: Circuit mechanisms of priors and learning during decision making.

National Institutes of Health.
INT_NIH_PAR-22-002
PI: Jaime de la Rocha



GROUP LEADER

Jaime de la Rocha (IDIBAPS)

RESEARCH INTERESTS

Our goal is to understand the neural circuit mechanisms underlying a number of cognitive functions such as perception, decision making and working memory, and the alterations occurring in animal models of different brain disorders (e.g. NMDAr hypofunction).

We investigate these questions by combining finely-controlled behavioral tasks in rodents with electrophysiological recordings and optogenetic manipulation of neuronal activity. We also develop automated behavioural systems for deep behavioural phenotyping of murine models of brain disorders.

Finally, we use state-of-the-art statistical analysis and mathematical models to characterize behavior and simulate neural circuit dynamics.

KEYWORDS

Decision making
Working memory
Reinforcement learning
Neural circuit
Deep behavioural phenotyping

RELATED DISEASES

Schizophrenia
Anti-NMDAr encephalitis



GROUP LEADER

Glòria Garrabou (UB)

RESEARCH INTERESTS

To characterize the etiology of inherited metabolic diseases and muscular disorders, identify biomarkers, and assess potential therapeutic targets we combine advanced multiomics techniques (genomics, transcriptomics, proteomics, metabolomics, lipidomics) with updated functional studies (pathology, biochemistry, cell and molecular biology) and patient-derived models of disease (fibroblasts, iPSCs, CRISPR/Cas9 gene edited lines, 3D organoids and organ-on-a-chips).

We also participate in registries and clinical assays to bring new findings into the bed-side. In alcoholic cardiomyopathy, chronic fatigue syndrome or fibromyalgia (of growing prevalence after COVID) and septic shock (important cause of death in intensive care units) we assess risk factors and involved underlying mechanisms.

KEYWORDS

Muscle
Metabolism and mitochondria
Cardiomyopathy
Chronic fatigue syndrome
Intensive care

RELATED DISEASES

Myositis
Metabolic and mitochondrial disorders
Cardiomyopathies
Central sensitization syndrome
Critically ill patient

4.09

Inherited metabolic diseases and muscular disorders

Publications

Original articles

36

Mean IF 5,78
Q1 72%
D1 17%
MA 17%
OA 89%

Others

17

Mean IF 5,84
Q1 53%
D1 24%
MA 29%
OA 59%

IF = Impact Factor
MA = Main authorship (last or corresponding author)
OA = Open Access
Others includes reviews, editorials, clinical guidelines, letters and case reports

Directed PhD theses

2

• Cristina Díaz
• Esther Martínez

Selected active grants

Phenylketonuria: from childhood to adults through brain functional connectomics, cardiovascular changes, metabolomic and intestinal microbiota characteristics.

Fundació La Marató de TV3.

Minoritaries_20

PI: Josep Maria Grau, Glòria Garrabou

Molecular signature and 3D muscle modelling to unravel inclusion body myositis etiology, biomarkers and Therapeutics.

Instituto de Salud Carlos III (ISCIII).

FIS_PI24/00428

PI: Glòria Garrabou, José César Milisenda

Selected publications

Martinez E, Foncillas A, de la Mora L, Mallolas J, Miro JM, Castro P. **Advanced HIV Disease in the ICU: Experience from a Spanish Cohort.** *CLINICAL INFECTIOUS DISEASES*. ciaf556. D1

Ruffer N, Pinal-Fernandez I, Preusse C, ..., Schneider U, Milisenda JC, Stenzel W. **Vasculitic fasciitis characterizes a distinct subset of vasculitic myopathy with interferon-gamma signature.** *ACTA NEUROPATHOLOGICA*. 151(1):2. D1

Moreno-Castaño AB, Iraola G, Martínez-Cibrián N, ..., Martínez-Sánchez J, Castro P, Díaz-Ricart M. **Endothelial dysfunction and hemostatic imbalance in CAR T-cell-associated toxicities: pathophysiological insights and the role of circulating biomarkers.** *FRONTIERS IN IMMUNOLOGY*. 16:1699894. Q1

Deudero A, Lasheras E, Ventura R, ..., Moreno-Lozano PJ, García-Cazorla A, Campistol J. **Modelling the Transference of Paediatric Patients with Inborn Errors of Metabolism to Adult Hospitals: Clinical Experience.** *JOURNAL OF CLINICAL MEDICINE*. 15(1):81. Q1

Cantó-Santos J, Valls-Roca L, Tobías E, ..., Sevilla A, Milisenda JC, Garrabou G. **Human induced pluripotent stem cell-derived myotubes to model inclusion body myositis.** *ACTA NEUROPATHOLOGICA COMMUNICATIONS*. 13(1):38. Q1

Neurophysiology

Publications

Original articles

7

Mean IF	7,10
Q1	86%
D1	57%
MA	43%
OA	100%

Others

1

Mean IF	3,10
Q1	0%
D1	0%
MA	100%
OA	100%

IF = Impact Factor
 MA = Main authorship (last or corresponding author)
 OA = Open Access
 Others includes reviews, editorials, clinical guidelines, letters and case reports

Selected active grants

A new target for the treatment of acute and chronic itch.

Leo Foundation.

INT_LEO_22

PI: Xavier Gasull

Modulating microglia-neuron crosstalk in Alzheimer's disease.

Alzheimer's Association.

AARG-22-968879

PI: Mar Puigdemàlv

Selected publications

Ruiz-Álias G, Soldevila S, Altafaj X, Cor-domi A, Olivella M. **Missense variants pathogenicity annotation from homologous proteins.** *BIOINFORMATICS*. 41(5):btaf305. D1

Llimós-Aubach J, Andres-Bilbe A, Pujol-Coma A, ... , Comes N, Callejo G, Gasull X. **TRESK background potassium channel regulates MrgprA3+ pruriceptor excitability, acute and chronic itch.** *PAIN*. 166(8):1796-1810. D1

Vega-Gutierrez C, Picañol-Párraga J, Sánchez-Valls I, Ribón-Fuster VD, Soto D, Herguedas B. **GluA4 AMPA receptor gating mechanisms and modulation by auxiliary proteins.** *NATURE STRUCTURAL & MOLECULAR BIOLOGY*. 32(12):2416-2428. D1

Reig-Viader R, del Castillo-Berges D, Burgas-Pau A, ... , Roher N, Sindreu C, Bayes A. **Synaptic proteome diversity is shaped by the levels of glutamate receptors and their regulatory proteins.** *NATURE COMMUNICATIONS*. 16(1):10487. D1

García-Díaz R, Castellanos A, Miguez-Caballo F, ... , Reyes-Montano EA, Gasull X, Soto D. **EAR-20 peptide, a novel NMDA receptor positive allosteric modulator.** *FRONTIERS IN PHARMACOLOGY*. 16:1639698. Q1



GROUP LEADER

Xavier Gasull (UB)

RESEARCH INTERESTS

To understand the molecular and functional bases of neuronal excitability, neuron-glia crosstalk and communication between neurons in normal and pathological conditions.

We are interested in:

1. Neuronal excitability and mechanisms of pain and itch.
2. Targeting peripheral mechanisms of pain in arthritis.
3. Glutamatergic signaling and synaptic modulation.
4. NMDA receptor pharmacology and neurodevelopmental disorders
5. Microglia-neuron communication in neurodegeneration.
6. Synaptic function in channelopathies.

KEYWORDS

Pain
 Itch
 Ion channels
 Glutamate receptors
 Microglia

RELATED DISEASES

Chronic pain and itch
 Neurodevelopmental disorders
 Alzheimer's disease
 Ataxia
 Channelopathies



GROUP LEADER

Alejandro Iranzo (HCB)

RESEARCH INTERESTS

We evaluated the neurophysiological study of neurological diseases such as sleep disorders, epilepsy, amyotrophic lateral sclerosis, neuropathies, myopathies, pain, and dysautonomia. Patients are studied with electrophysiological techniques such as electroencephalogram, polysomnography, evoked potentials, electromyogram, and autonomic reflexes.

This has allowed us to discover anti-IgLON5 disease, to demonstrate that REM sleep disorder is a synucleinopathy, to provide surgical and pharmacological solutions in epilepsy, and to demonstrate the involvement of subcortical motor systems in movement and position.

KEYWORDS

Neurophysiology
Sleep disorders
Epilepsy
Dysautonomia
Amyotrophic lateral sclerosis

RELATED DISEASES

Anti-IgLON5 disease
REM sleep behavior disorder
Epilepsy
Neuromuscular disorders
Dysautonomia

4.11

Clinical neurophysiology

Publications

Original articles

22

Mean IF **7,02**
Q1 **68%**
D1 **41%**
MA **36%**
OA **73%**

Others

7

Mean IF **5,81**
Q1 **57%**
D1 **29%**
MA **14%**
OA **86%**

IF = Impact Factor
MA = Main authorship (last or corresponding author)
OA = Open Access
Others includes reviews, editorials, clinical guidelines, letters and case reports

Directed PhD theses

2

· Ana Isabel Merayo
· Tomás Cuñat

Selected active grants

Behaviors in REM sleep personalized automatic 3 D video analysis as novel tool to detect alpha-synucleinopathies.

Generalitat de Catalunya.
GENCAT_ERAPERMED21

PI: Alejandro Iranzo

Detección del trastorno de conducta durante el sueño REM en futbolistas profesionales retirados como marcador de una sinucleinopatía latente.

Instituto de Salud Carlos III (ISCIII).
FIS_PI23/00592

PI: Alejandro Iranzo

Selected publications

Roura I, Pardo J, Martin-Barcelo C, ... , Junque C, Iranzo A, Segura B. **Clinical and brain volumetric correlates of decreased DTI-ALPS, suggestive of local glymphatic dysfunction, in iRBD.** *NPJ PARKINSONS DISEASE*. 11(1):87. D1

Pardo J, Roura I, Montal V, ... , Iranzo A, Junque C, Segura B. **Cortical macro- and microstructural changes in isolated rapid eye movement sleep behavior disorder.** *NPJ PARKINSONS DISEASE*. 11(1):199. D1

Graus F, Sabater L, Gaig C, Gelpi E, Iranzo A, Dalmau J, Santamaria J. **Anti-IgLON5 Disease 10 Years Later.** *NEUROLOGY-NEUROIMMUNOLOGY & NEUROINFLAMMATION*. 12(1):e200353. D1

Grueter T, Gaig C, Crijnen YS, ... , Leypoldt F, Graus F, Aizenberg I. **Early Treatment With Intravenous Immunoglobulins and Outcomes of Patients With Anti-IgLON5 Disease.** *JAMA NEUROLOGY*. 82(10):1040-1047. D1

Ripart M, Spitzer H, Williams LZJ, ... , Iglesias JE, Adler S, Wagstyl K. **Detection of Epileptogenic Focal Cortical Dysplasia Using Graph Neural Networks: A MELD Study.** *JAMA NEUROLOGY*. 82(4):397-406. D1

Advanced imaging in neuroimmunological diseases (ImaginEM)

Publications

Original articles	Mean IF	6,36
	Q1	81%
	D1	48%
	MA	14%
	OA	100%
Others	Mean IF	7,67
	Q1	67%
	D1	67%
	MA	0%
	OA	100%

IF = Impact Factor
MA = Main authorship (last or corresponding author)
OA = Open Access
Others includes reviews, editorials, clinical guidelines, letters and case reports

Selected active grants

El acúmulo de la discapacidad en la esclerosis múltiple: modelos combinados de daño, reparación y reserva cerebral y medular en neuroimagen y biomarcadores sanguíneos.
Instituto de Salud Carlos III (ISCIII).
FIS_PI24/00567
PI: Sara Llufríu

Redes de Investigación Cooperativa Orientadas a Resultados en Salud 2024: Inflamación e inmunopatología de órganos y sistemas: Red de Enfermedades Inflamatorias (REI).
Instituto de Salud Carlos III (ISCIII).
RD24/0007/0034
PI: Sara Llufríu

Selected publications

Villacieros-Alvarez J, Sepulveda M, Valls-Carbo A, ... , Mariotto S, Montalban X, Comabella M. **Cerebrospinal 14-3-3 Protein Levels as a Neuroaxonal Biomarker in Aquaporin-4 Antibody-Positive Neuromyelitis Optica Spectrum Disorder.** *NEUROLOGY-NEUROIMMUNOLOGY & NEUROINFLAMMATION*. 12(5):e200432. D1

Guerra V, Cabrera-Maqueda JM, Ruiz-Garcia R, ... , Graus F, Saiz A, Martinez-Hernandez E. **Autologous Hematopoietic Stem Cell Transplantation for Paraneoplastic Cerebellar Degeneration.** *NEUROLOGY-NEUROIMMUNOLOGY & NEUROINFLAMMATION*. 12(5):e200433. D1

Calvi A, Vivó-Pascual F, Solana E, ... , Prados-Carrasco F, Martinez-Heras E, Llufríu S. **Diffusivity anisotropy signature of the slowly expanding lesions predicts progression independent of relapse activity in multiple sclerosis.** *JOURNAL OF NEUROLOGY NEUROSURGERY AND PSYCHIATRY*. 97(5):405-412. D1

Lopez-Soley E, Martinez-Heras E, Vivó-Pascual F, ... , Blanco Y, Solana E, Llufríu S. **Efficacy of cognitive rehabilitation in cognition and brain networks: A randomised clinical trial in patients with multiple sclerosis.** *NEUROIMAGE-CLINICAL*. 46:103775. Q1

Martinez-Heras E, Lopez-Soley E, Cabras C, ... , Blanco Y, Solana E, Llufríu S. **Cognitive outcomes in multiple sclerosis are shaped by divergent functional connectivity trajectories.** *BRAIN COMMUNICATIONS*. 8(1):fcaf489. Q1



GROUP LEADER
Sara Llufríu (HCB-IDIBAPS)

RESEARCH INTERESTS
ImaginEM develops and applies advanced neuroimaging and multimodal biomarkers to improve the understanding and management of multiple sclerosis and other neuroimmunological diseases.

Our research explores the mechanisms underlying physical and cognitive disability and disease progression, combining MRI, optical coherence tomography and fluid biomarkers. We also investigate innovative therapies, particularly cell-based treatments, as well as antibody-mediated neurological disorders.

KEYWORDS
Multiple sclerosis
Magnetic resonance imaging
Biomarkers
Neuroimmunology
Cognition

RELATED DISEASES
Multiple sclerosis
NMO spectrum disorder
MOG antibody disease
Autoimmune encephalitis



GROUP LEADER

Hugo López-Pelayo (HCB)

RESEARCH INTERESTS

Our research is based on a comprehensive, life-course perspective that combines clinical, psychological, social, and public health approaches. We analyze the transition from initial use to addiction, with a specific focus on individuals with high clinical and social complexity, where addictions often coexist with severe mental disorders, chronic medical conditions, and vulnerable situations.

The main lines of research include comorbidity, cannabis use, public health, digital health, and the cross-cutting integration of a sex and gender perspective.

KEYWORDS

Alcohol
Cannabis
Digital health
Motivational interviewing
Brief interventions

RELATED DISEASES

Substance use disorder
Alcohol use disorder
Cannabis use disorder
Nicotine use disorder
Alcohol related cognitive impairment

4.13

Clinical addictions

Publications

Original articles

19

Mean IF **3,96**
Q1 42%
D1 16%
MA 32%
OA 68%

Others

6

Mean IF **5,00**
Q1 33%
D1 17%
MA 33%
OA 67%

IF = Impact Factor
MA = Main authorship (last or corresponding author)
OA = Open Access
Others includes reviews, editorials, clinical guidelines, letters and case reports

Directed PhD theses

2

• Clara Oliveras
• Eugènia Campeny

Selected active grants

Biomarcadores digitales y sanguíneos basados en el marco de Evaluación Neuroclínica de Adicciones y en el metabolismo de la tiamina en pacientes afectados por Trastornos por Consumo de Alcohol con y sin Enfermedad Hepática Alcohólica.
Instituto de Salud Carlos III (ISCIII).
FIS_P123/00954
PI: Hugo López-Pelayo

Piloting European Action on Cancer Health Determinants: Integrated cancer prevention through lifestyle risk factors - Adapting and operationalising the BRIEF approach.
European Commission.
CE_TED_Chafea18_10
PI: Hugo López-Pelayo

Selected publications

Gomez-Mancilla B, Dürsteler KM, Vogel M, ... , Gasparini F, Cha JH, Dolmetsch R. **Mavoglurant reduces cocaine use in patients with cocaine use disorder in a phase 2 clinical trial.** *SCIENCE TRANSLATIONAL MEDICINE*. 17(792):eadi4505. D1

Cañizares S, Nuño L, Barrio P, ... , Jimenez A, Vidal J, Lligoña A. **Alcohol and Other Substance Screening in Bariatric Surgery Candidates: Utility of Self-Report and Toxicology Tests, Including Ethyl-Glucuronide.** *OBESITY SURGERY*. 35(4):1242-1250. Q1

Hernández-Rubio A, Bueno L, Mantellini CL, ... , Bataller R, Morales M, López-Pelayo H. **Metabolomics in the study of alcohol use disorder: a systematic review.** *PSYCHIATRY RESEARCH*. 353:116766. Q1

Pons-Cabrera MT, Caballería E, Navarro-Coréts L, ... , Balcells M, Pintor L, López-Pelayo H. **Substance use and psychiatric comorbidities among medical inpatients: associations with length of stay, health-related quality of life, and functioning, with consideration for gender.** *JOURNAL OF PSYCHIATRIC RESEARCH*. 186:322-330. Q2

Folch-Sanchez D, Blithikioti C, Nuño L, ... , Piazza F, Balcells-Oliveró M, Mi-quel L. **Disentangling eye movement desensitization and reprocessing mechanisms of action: The impact of eye movements in the eye blink conditioning task.** *PSYCHOLOGY AND PSYCHOTHERAPY-THEORY RESEARCH AND PRACTICE*. 98(4):1005-1016. Q2

Parkinson disease and other neurodegenerative movement disorders: clinical and experimental research

Publications

Original articles	Mean IF	5,35
	Q1	67%
	D1	40%
	MA	20%
	OA	87%
Others	Mean IF	2,78
	Q1	25%
	D1	0%
	MA	50%
	OA	50%

IF = Impact Factor
MA = Main authorship (last or corresponding author)
OA = Open Access
Others includes reviews, editorials, clinical guidelines, letters and case reports

Selected active grants

LRRK2 Investigative Therapeutics Exchange (LITE).

Michael J. Fox Foundation for Parkinson.
INT_MJFF_PR_25
PI: Rubén Fernández-Santiago

Translational Platform for MSA: Elucidation of Disease-mechanisms and Drug discovery: TraP-MEDD.

Instituto de Salud Carlos III (ISCIII).
FIS_AC21
PI: Yaroslav Compta

Selected publications

Wang H, Chang TS, Dombroski BA, ... , Geschwind DH, Schellenberg GD, Lee WP; PSP Genetics Study Group. **Copy Number Variation and Haplotype Analysis of 17q21.31 Reveals Increased Risk Associated with Progressive Supranuclear Palsy and Gene Expression Changes in Neuronal Cells.** *MOVEMENT DISORDERS.* 40(5):950-961. D1

Cortes A, Phung TK, de Mena L, ... , Marti MJ, Ezquerro M, Fernandez-Santiago R. **In-depth mass-spectrometry reveals phospho-RAB12 as a blood biomarker of G2019S LRRK2-driven Parkinson's disease.** *BRAIN.* 148(6):2075-2092. D1

de Mena L, Pares G, Garrido A, ... , Ezquerro M, Marti MJ, Fernandez-Santiago R. **α-Synuclein Gene Hypomethylation in LRRK2 Parkinson's Disease Patients.** *MOVEMENT DISORDERS.* 40(3):550-555. D1

Schade S, Ghosh S, Garrido A, ... , Poewe W, Satagopam VP, Mollenhauer B. **Identifying individuals at-risk of developing Parkinson's disease using a population-based recruitment strategy: The Healthy Brain Ageing Kassel Study.** *NPJ PARKINSON'S DISEASE.* 11(1):216. D1

Perez-Soriano A, Painous C, Fernandez M, ... , Zaro I, Camara A, Compta Y. **Neurofilament light chain as a diagnostic and prognostic biomarker in atypical parkinsonisms: current evidence, new data, challenges, and future directions.** *JOURNAL OF NEURAL TRANSMISSION.* 133(5):853-864. Q1



GROUP LEADER

M. Josep Martí (HCB)

RESEARCH INTERESTS

The group conducts in-depth clinical studies, develops clinical trials and engages in imaging, genetic, genomic, and biomarker studies related to Parkinson's disease and other movement disorders, such as atypical parkinsonisms, Huntington's disease and dystonia.

In addition, it conducts research on the initial stage of Parkinson's disease and in subjects at risk of developing this condition, when its motor symptoms have not yet appeared and neuroprotective therapies are still possible.

Cells models allow us to obtain information about the basic molecular processes and elucidate the genetic associations of these diseases.

KEYWORDS

Parkinson
Biomarkers
Neurodegeneration

RELATED DISEASES

Dystonia
PSP
Huntington
AMS
Ataxia



GROUP LEADER

Eduard Parellada (HCB-UB)

RESEARCH INTERESTS

In clinical research, the group develops longitudinal monitoring studies of initial psychotic episodes and identifies the factors involved and the determinants of their evolution. This work entails analysing the clinical, neurocognitive, neurobiological, pharmacogenetic, neuroimaging and environmental correlates that condition the therapeutic response and the risk of relapse.

The group also researches into new cognitive rehabilitation and neurostimulation techniques such as DBS (Deep Brain Stimulation), ECT (Electroconvulsive Therapy) and clinical trials using innovative drugs. In translational research, at the recently created Basic and Translational Research Laboratory in Schizophrenia, human biological samples (skin biopsy-derived fibroblasts, CSF and so on) and experimental models (animal or cellular) of schizophrenia are used to study the pathogenesis and biomarkers and identify new therapeutic targets.

KEYWORDS

Schizophrenia
First-episode psychosis
Translational research
Human biological samples
Experimental models

RELATED DISEASES

Psychosis

4.15

Schizophrenia

Publications

Original articles

44

Mean IF **4,99**
Q1 66%
D1 43%
MA 45%
OA 77%

Others

18

Mean IF **5,31**
Q1 78%
D1 39%
MA 67%
OA 72%

IF = Impact Factor
MA = Main authorship (last or corresponding author)
OA = Open Access
Others includes reviews, editorials, clinical guidelines, letters and case reports

Directed PhD theses

2

• Jairo Mario González 
• Vicent Llorca-Bofí 

Selected active grants

Apoptosis and its pharmacological modulation in first-episode schizophrenia: a study in primary culture and iPSCs derived neurons from patients, and in a postnatal ketamine animal model.

Instituto de Salud Carlos III (ISCIII).
FIS_PI24

PI: Patricia Gassó, Eduard Parellada

Applied Pharmacogenetics to Predict Response to Treatment of First Psychotic Episode.

Instituto de Salud Carlos III (ISCIII).
FIS_PMP21

PI: Sergi Mas

Selected publications

Llorca-Bofí V, Garriga M, Mezquida G, ..., Baeza I, Bioque M, Amoretti S. **Comparing PANSS-6 and PANSS-30 for clinical and functional outcomes in first-episode psychosis: A 2-year follow-up in a Spanish cohort.** *EUROPEAN NEUROPSYCHOPHARMACOLOGY*. 95:9-13. D1

Garcia-Rizo C, Bitanirwe BKY. **Epiphenomena in psychosis: how perinatal stressful events shape long-term outcomes.** *MOLECULAR PSYCHIATRY*. 30(10):4992-5000. D1

Martínez-Pinteño A, Olivares-Berjaga D, Rodríguez N, ..., Morén C, Parellada E, Gassó P. **Effects of JNJ-46356479 and clozapine on VGLUT1 and GAD65/67 brain levels and expression of genes related to glutamate and GABA in mice postnatally exposed to ketamine.** *BIO-MEDICINE & PHARMACOTHERAPY*. 192:118639-118639. D1

Prohens L, Rodríguez N, Segura AG, ..., Gassó P, Rivero G, Mas S. **Association of astrocyte-specific gene expression in the dorsolateral prefrontal cortex with clozapine treatment in schizophrenia.** *TRANSLATIONAL PSYCHIATRY*. 15(1):458. D1

Bioque M, Llorca-Bofí V, MacDowell KS, ..., Cano-Escalera G, Berrocoso E, Bernardo M. **Impact of Relapse in BDNF Receptors Expression in Patients With a First Episode of Schizophrenia.** *SCHIZOPHRENIA BULLETIN*. 51(5):1339-1350. Q1

Imaging of mood- and anxiety-related disorders (IMARD)

Publications

Original articles	Mean IF	6,66
	Q1	88%
	D1	52%
	MA	36%
	OA	85%

33

Others	Mean IF	10,02
	Q1	92%
	D1	75%
	MA	33%
	OA	33%

12

IF = Impact Factor
 MA = Main authorship (last or corresponding author)
 OA = Open Access
 Others includes reviews, editorials, clinical guidelines, letters and case reports

Directed PhD theses

2

• Laura Hermida
 • Lydia Fortea 

Selected active grants

Neural correlates of functional rehabilitation for older-age bipolar disorder.

Instituto de Salud Carlos III (ISCIII).

FIS_PI22/00261

PI: Joaquim Radua

INHALE: Hábitos y trastorno obsesivo-compulsivo: una perspectiva conductual y clínica.

Agencia Estatal de Investigación.

AEI_PE22

PI: Miquel Àngel Fullana

Selected publications

Radua J, Savage HS, Vilajosana E, ... , Marquand AF, Harrison BJ, Fullana MA. **Neural correlates of human fear conditioning and sources of variability in 2199 individuals.** *NATURE COMMUNICATIONS*. 16(1):7869. D1

Salazar de Pablo G, Radua J, Frearson G, ... , Fusar-Poli P, Guinart D, Correll CU. **Development and validation of a prognostic model and risk calculator for the estimation of bipolar-spectrum disorder risk in hospitalised adolescents with non-psychotic/non-bipolar mental disorders.** *MOLECULAR PSYCHIATRY*. 31(3):1333-1342. D1

Fortea L, Ortuno M, de Prisco M, ... , Fullana MA, Vieta E, Radua J. **Atlas of Gray Matter Volume Differences Across Psychiatric Conditions: A Systematic Review With a Novel Meta-Analysis That Considers Co-Occurring Disorders.** *BIOLOGICAL PSYCHIATRY*. 98(1):76-90. D1

Serra-Blasco M, Miquel-Giner N, Vincent-Gil M, ... , Cardoner N, Alonso P, Lopez-Sola C. **Clinical and Neuroimaging Effects of Mindfulness-Based Cognitive Therapy for Symptomatic Obsessive-Compulsive Disorder Patients after First-Line Treatments: A Randomised Controlled Trial.** *PSYCHOTHERAPY AND PSYCHOSOMATICS*. 95(4):318-334. D1

Fortea L, Solanes A, Pomarol-Clotet E, ... , Vieta E, Fullana MA, Radua J. **Coping behaviors to reduce anxiety and depressive symptoms: A prospective repeated assessment study.** *SPANISH JOURNAL OF PSYCHIATRY AND MENTAL HEALTH*. 18(1):42-50. Q1



GROUP LEADER

Joaquim Radua (IDIBAPS)

RESEARCH INTERESTS

Mood and anxiety-related disorders are among the leading causes of disability, yet available treatments only help about half of those affected. To contribute to better prevention and care, we aim to identify their brain mechanisms and find environmental and brain markers that may help predict the risk of developing them or the response to specific treatments.

To achieve these goals, we use neuroimaging techniques (such as brain magnetic resonance imaging), artificial intelligence techniques, and evidence synthesis methods.

KEYWORDS

Brain imaging
 Machine learning
 Mental health
 Evidence synthesis
 Precision psychiatry

RELATED DISEASES

Anxiety disorders
 Bipolar disorders
 Depression
 Obsessive-compulsive disorder
 Psychosis



GROUP LEADER

Raquel Sanchez-Valle (HCB)

RESEARCH INTERESTS

Research Lines: Genetic and rare dementias (autosomal dominant Alzheimer's disease, frontotemporal dementia, prion diseases); Sporadic Alzheimer's disease; Dementia with Lewy bodies and mixed pathologies; Microglia and neuroinflammation in neurodegeneration; Cognitive assessment across the aging-Alzheimer's continuum; Pathophysiological mechanisms of neurodegenerative dementias; Locus coeruleus dysfunction, sleep disturbances, and dementia.

Scientific Interests: Clinical characterization, epidemiology, early and accurate diagnosis, diagnostic and prognostic biomarkers, omics, functional genomics, neuroimaging, neuropsychology, disease mechanisms, therapeutic targets, and precision medicine for neurodegenerative dementias.

KEYWORDS

Alzheimer's disease
Neurodegenerative dementias
Familial dementias
Fluid biomarkers
Neuroimaging

RELATED DISEASES

Alzheimer's disease
Frontotemporal dementia
Primary progressive aphasia
Dementia with Lewy bodies
Prion diseases

4.17

Alzheimer's disease and other cognitive disorders

Publications

Original articles

41

Mean IF	9,26
Q1	93%
D1	63%
MA	20%
OA	90%

Others

7

Mean IF	9,92
Q1	83%
D1	50%
MA	50%
OA	100%

IF = Impact Factor

MA = Main authorship (last or corresponding author)

OA = Open Access

Others includes reviews, editorials, clinical guidelines, letters and case reports

Directed PhD theses

1

• Jordi Sarto

Selected active grants

PREDICTFTD: Accelerating the Validation of Predictive Liquid Biomarkers for Frontotemporal Dementia Diagnosis Subclassification.

European Commission.

CE_HE_CH_23_1s19_RIA

PI: Raquel Sanchez-Valle

Demencia frontotemporal genéticamente determinada: marcadores de progresión de neuroimagen, bioquímicos y epigenéticos y patologías concomitantes.

Instituto de Salud Carlos III (ISCIII).

FIS_PI24/00578

PI: Raquel Sanchez-Valle

Selected publications

Tort-Merino A, Perez-Millan A, Falgas N, ... , Llado A, Rami L, Sanchez-Valle R. **Decreased practice effects in cognitively unimpaired amyloid betapositive individuals: a multicenter, longitudinal, cohort study.** *ALZHEIMERS & DEMENTIA*. 21(3):e70016. D1

Esteller-Gauxax D, Perez-Millan A, Sarto J, ... , Sanchez-Valle R, Llado A, Balasa M. **α -Synuclein Seed Amplifications Assay in a Cohort With Cognitive Impairment.** *NEUROLOGY*. 105(7):e214040. D1

Perez-Millan A, Lal-Trehan UM, Falgas N, ... , Llado A, Sala-Llloch R, Sanchez-Valle R. **The Cortical Asymmetry Index for subtyping dementia patients.** *EUROPEAN RADIOLOGY*. 35(8):4713-4721. Q1

Sarto J, Esteller-Gauxax D, Guillen N, ... , Sanchez-Valle R, Llado A, Balasa M. **Accuracy and clinical applicability of plasma tau 181 and 217 for Alzheimer's disease diagnosis in a memory clinic cohort.** *JOURNAL OF NEUROLOGY*. 272(2):160. Q1

Guillen N, Esteller D, Sarto J, ... , Balasa M, Falgas N, Llado A. **Plasma p-Tau217 and GFAP predict widespread cognitive decline in Alzheimer's disease.** *JOURNAL OF NEUROLOGY*. 273(1):28. Q1

Systems neuroscience

Publications

Original articles

11

Mean IF	5,33
Q1	73%
D1	36%
MA	55%
OA	82%

Others

2

Mean IF	3,45
Q1	100%
D1	0%
MA	0%
OA	50%

IF = Impact Factor

MA = Main authorship (last or corresponding author)

OA = Open Access

Others includes reviews, editorials, clinical guidelines, letters and case reports

Directed PhD theses

1

• Pau Sobregreu

Selected active grants

NEMESIS: NEurological MEchanisms of Injury, and Sleep-like cellular Dynamics.

European Commission.

CE_HE_ERC_2022_SyG

PI: Mavi Sanchez-Vives

META-BRAIN: MagnetoElectric and Ultrasonic Technology for Advanced BRAIN modulation.

European Commission.

CE_HE_PathOPEN_23

PI: Mavi Sanchez-Vives

Selected publications

Covelo J, Cortada M, Vinci GV, Mattia M, Sanchez-Vives MV. **Network Desynchronization with Sine Waves: from Synchrony to Asynchrony by Periodic Stimulation.** *ADVANCED SCIENCE*. 12(32):e14602. D1

Marin-Llobet A, Manasanch A, Dalla-Porta L, Torao-Angosto M, Sanchez-Vives MV. **Neural models for detection and classification of brain states and transitions.** *COMMUNICATIONS BIOLOGY*. 8(1):599. D1

Sanchez-Sanchez JM, Riefolo F, Barbero-Castillo A, ... , Decker M, Gorostiza P, Sanchez-Vives MV. **Control of cortical slow oscillations and epileptiform discharges with photoswitchable type 1 muscarinic ligands.** *PNAS NEXUS*. 4(2):pgaf009. D1

Covelo J, Camassa A, Sanchez-Sanchez JM, ... , Roldan P, Defelipe J, Sanchez-Vives MV. **Spatiotemporal network dynamics and structural correlates in the human cerebral cortex in vitro.** *PROGRESS IN NEUROBIOLOGY*. 246:102719. Q1

Dalla Porta L, Barbero-Castillo A, Sanchez-Sanchez JM, Cancino N, Sanchez-Vives MV. **H-current modulation of cortical Up and Down states.** *JOURNAL OF PHYSIOLOGY-LONDON*. 603(8):2409-2424. Q1

GROUP LEADER

Mavi Sanchez-Vives
(ICREA-IDIBAPS)

RESEARCH INTERESTS

The mechanistic underpinnings of brain states and the transitions between them in healthy and disease states; network mechanisms of brain lesion and their reversal; the investigation of the basis of conscious experience and cortical neuromodulation; nanotechnology for precision brain control.

The group has also an interest in virtual reality as a tool for brain research and therapeutic applications in pain and rehabilitation.

KEYWORDS

Slow oscillations
Brain rhythms
Neurotechnology
Computational models
Virtual reality

RELATED DISEASES

Disorders of consciousness and epilepsy
Traumatic brain injury (TBI)
Stroke
Pain
Orthopedic and neurological rehabilitation





GROUP LEADER

Gisela Sugranyes (HCB-IDIBAPS)

RESEARCH INTERESTS

The main interest of our group is understanding the changes taking place in the brain before the onset of a psychotic disorder, in order to identify potential biomarkers with translational application.

To this end we longitudinally evaluate youth at high risk for the disease alongside patients with a recent onset of a disorder, in comparison with healthy participants and with human and animal models of disease. We use brain structural, functional and molecular imaging measures acquired over time, and assess their relationship with clinical and cognitive phenotype.

We also measure blood-based (genetic, epigenetic, inflammatory, hormonal) and environmental variables, in order to understand their contribution to the changes observed in the brain. We compare these findings with human and animal models of disease.

KEYWORDS

Psychosis
Neurodevelopment
Brain magnetic resonance imaging
Adolescence
NMDA receptors
Dopamine

RELATED DISEASES

Psychosis
Schizophrenia
Bipolar disorders
NMDA receptor encephalitis
Attention deficit hyperactivity disorder

4.19

Multimodal neuroimaging in high risk and early psychosis

Publications

Original articles

16

Mean IF	6,41
Q1	94%
D1	69%
MA	25%
OA	88%

Others

2

Mean IF	7,00
Q1	100%
D1	50%
MA	0%
OA	100%

IF = Impact Factor
MA = Main authorship (last or corresponding author)
OA = Open Access
Others includes reviews, editorials, clinical guidelines, letters and case reports

Selected publications

Fortea A, Ortuño M, Masias M, ... , Dalmau J, Castro-Fornieles J, Sugranyes G. **Brain metabolite levels in the post-acute stage of anti-NMDA receptor encephalitis and schizophrenia: a longitudinal case-control study.** *BIOLOGICAL PSYCHIATRY*. 100(2):189-198. D1

Aymerich C, Pedruzo B, Salazar G, ... , McGuire P, Fusar-Poli P, Catalan A. **Do biological alterations precede the onset of psychosis? A systematic review and meta-analysis of immune, cardiometabolic, prolactin and HPA axis alterations in clinical high-risk for psychosis.** *BRAIN BEHAVIOR AND IMMUNITY*. 128:219-233. D1

de la Serna E, Moreno D, Sugranyes G, ... , Torrent C, Garcia-Rizo C, Castro-Fornieles J. **Effects of parental characteristics on the risk of psychopathology in offspring: a 4-year follow-up study.** *EUROPEAN CHILD & ADOLESCENT PSYCHIATRY*. 34(10):3035-3045. D1

Camprodón-Boadas P, Greve AN, Hemminger N, ... , Sugranyes G, Nordentoft M, Veddem L. **Cognitive reserve in seven-year-old children at familial high risk of schizophrenia or bipolar disorder.** *EUROPEAN CHILD & ADOLESCENT PSYCHIATRY*. 35(4):1321-1333. D1

Ortuno M, Fortea A, Valli I, ... , Baeza I, Castro-Fornieles J, Sugranyes G. **The effect of age and sex on brain metabolites: from childhood to adulthood.** *NEUROIMAGE*. 317:121353. D1

Selected active grants

Imaging glutamatergic transmission and its brain structural and functional correlates during the neurodevelopmental pathway leading to schizophrenia: from rodents to humans.

Fundació la Marató de TV3.

SalutMental_21

PI: Gisela Sugranyes

Running in the FAMILY - Understanding and predicting the intergenerational transmission of mental illness.

European Commission.

CE_HE_CH_21_1s21_RIA

PI: Gisela Sugranyes

Neurobiology

Publications

Original articles

5

Mean IF	7,50
Q1	100%
D1	60%
MA	60%
OA	100%

Others

1

Mean IF	29
Q1	100%
D1	100%
MA	0%
OA	100%

IF = Impact Factor
 MA = Main authorship (last or corresponding author)
 OA = Open Access
 Others includes reviews, editorials, clinical guidelines, letters and case reports

Directed PhD theses

1

• Margalida Puigròs

Selected active grants

Exploring mtDNA alterations as a target for therapeutic intervention in AD.

Ministerio de Ciencia, Innovación y Universidades.
 MICINN_PID2022-143279OB-I00
 PI: Anna Colell

An International Working Group for the Evaluation of mtDNA as a PD Biomarker.

Michael J. Fox Foundation for Parkinson.
 INT_MJFF-026376
 PI: Ramon Trullàs

Selected publications

Cantero JL, Atienza M, Podlesniy P, Puigros M, Trullas R. **Salivary mitochondrial DNA is associated with biomarkers of Alzheimer's disease in cognitively normal older adults.** *TRANSLATIONAL PSYCHIATRY*. 15(1):355. D1

Zubillaga M, Abadin X, Ivars E, ... , Bellini MJ, Arnal N, Colell A. **Copper overload worsens the inflammatory response of microglia to amyloid beta (A β) by impairing phagocytosis and promoting mitochondrial DNA-mediated NLRP3 inflammasome activation.** *REDOX BIOLOGY*. 87:103872-103872. D1

Lee W, Zamudio-Ochoa A, Buchel G, ... , Trullas R, Mitalipov S, Temiakov D. **Reply to: An alternative model for maternal mtDNA inheritance.** *NATURE GENETICS*. 57(5):1105. D1



GROUP LEADER

Ramon Trullàs (IIBB-CSIC)

RESEARCH INTERESTS

Our research starts from the hypothesis that a cellular energy deficit produced by a dysfunction of mitochondrial DNA turnover is an early causal factor in various neurodegenerative diseases.

To identify the primary molecular mechanisms of neurodegeneration, we investigate the release of mitochondrial DNA as a biomarker of the early stages of neurodegeneration and the relationship between neuronal function and mitochondrial DNA dynamics in genetic models of neurodegenerative diseases.

We also investigate mitochondria-nucleus communication pathways that are involved in the clearance of dysfunctional mitochondria and misfolded proteins.

KEYWORDS

Mitochondrial DNA
 Mitophagy
 Neurodegeneration
 Neuroinflammation
 Necroptosis

RELATED DISEASES

Alzheimer's disease
 Parkinson's disease



GROUP LEADER

Eduard Vieta (HCB)

RESEARCH INTERESTS

Our team is involved in clinical trials to evaluate the efficacy and safety of several pharmacological agents and novel psychological interventions for the treatment of affective disorders. In this regard, early intervention and Precision Psychiatry are critical paradigm for improving disease outcomes.

In addition, the research team has developed new clinical scales for the screening of affective disorders and the assessment of cognitive impairment and functioning.

During the last decade, our team have pioneered the development, evaluation, and implementation in clinical practice of diverse digital technologies.

KEYWORDS

Bipolar disorder
Depression
Neurocognition
Suicide prevention

RELATED DISEASES

Bipolar disorder
Depressive disorder
Addictions
Postnatal depression
Anxiety disorders

4.21

Bipolar and depressive disorders

Publications

Original articles

93

Mean IF **6,31**
Q1 78%
D1 37%
MA 39%
OA 81%

Others

51

Mean IF **8,72**
Q1 92%
D1 71%
MA 51%
OA 69%

IF = Impact Factor
MA = Main authorship (last or corresponding author)
OA = Open Access
Others includes reviews, editorials, clinical guidelines, letters and case reports

Directed PhD theses

3

• Lydia Fortea 
• Maria Luisa
• Maria Serra

Selected active grants

Proyecto IMPROVER. Primeros episodios de manía en trastorno bipolar: reserva cognitiva y resiliencia.

Instituto de Salud Carlos III (ISCIII).

FIS_PI24/00432

PI: Anabel Martinez-Aran, Eduard Vieta

A Stratified Treatment Algorithm in Psychiatry: A program on stratified pharmacogenomics in severe mental illness.

European Commission.

CE_HE_CH_21_1s21_RIA

PI: Eduard Vieta

Selected publications

O'Connell KS, Koromina M, van der Veen T, ... , Harvey PD, Andreassen OA, Huang GD. **Genomics yields biological and phenotypic insights into bipolar disorder.** *NATURE*. 639(8056):968-975. D1

Luykx JJ, Colgan M, Vieta E, ... , Tanskanen A, Tiihonen J, Taipale H. **Transdiagnostic effectiveness and safety of clozapine in individuals with psychotic, affective, and personality disorders: nationwide and meta-analytic comparisons with other antipsychotics.** *LANCET PSYCHIATRY*. 12(12):921-931. D1

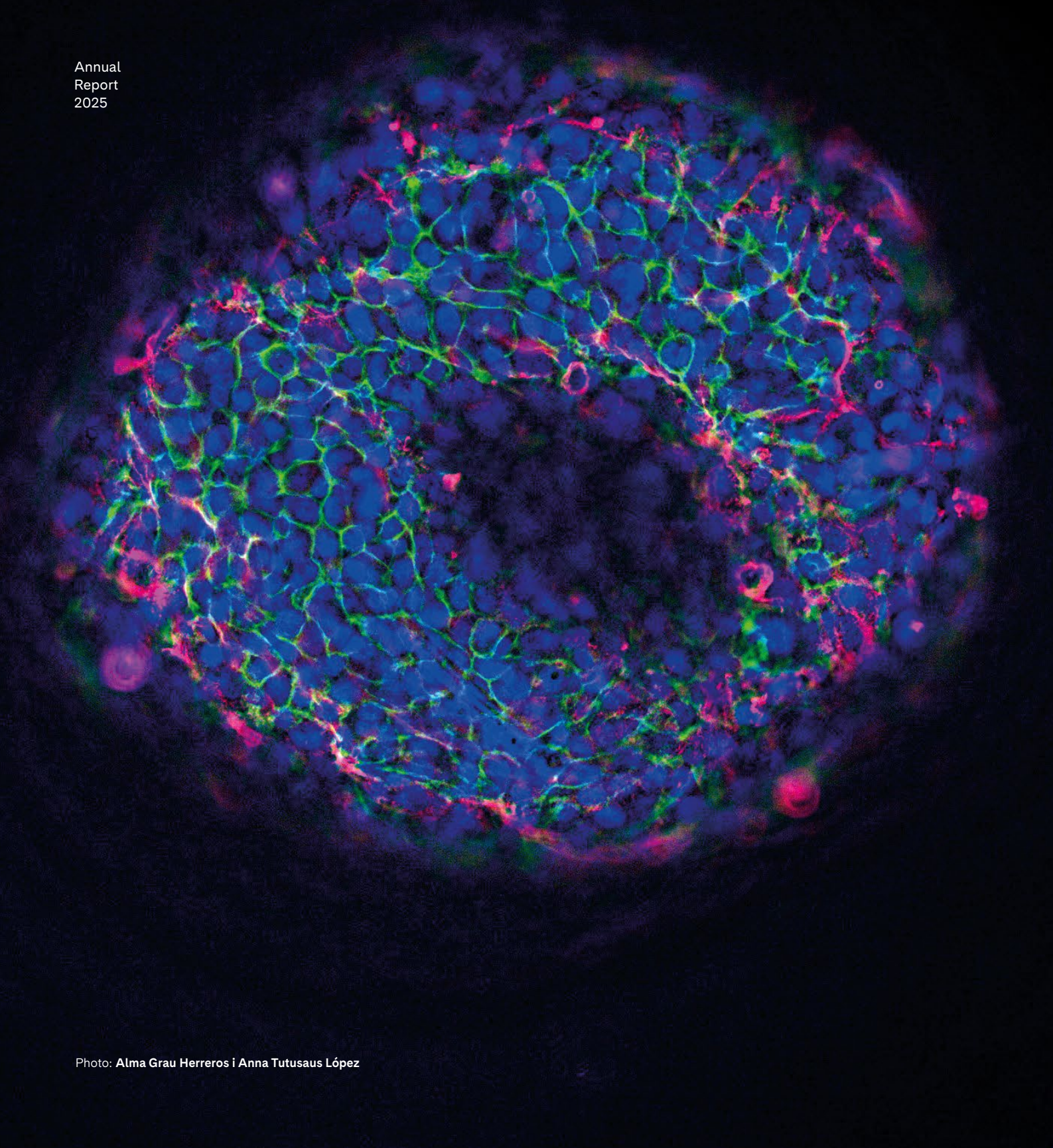
Montejo L, Sole B, Fico G, ... , Papiot S, Schulze TG, Torrent C. **Contrasting genetic burden for bipolar disorder: Early onset versus late onset in an older adult bipolar disorder sample.** *EUROPEAN NEUROPSYCHOPHARMACOLOGY*. 92:29-37. D1

Oliva V, Fico G, de Prisco M, Gonda X, Rosa AR, Vieta E. **Bipolar disorders: an update on critical aspects.** *THE LANCET REGIONAL HEALTH - EUROPE*. 48:101135. D1

Oliva V, de Prisco M, la Spina E, ... , Leucht S, Vieta E, Radua J. **Switch to mania after acute antidepressant treatment for bipolar depression: a systematic review and network meta-analysis of randomised controlled trials.** *ECLINICALMEDICINE*. 87:103413. D1

CANCER

Annual
Report
2025



AREA 5

Cancer

- 5.1 Tumor microenvironment plasticity and heterogeneity (TMHet)**
Silvia Affò
- 5.2 Signal transduction, intracellular compartments and cancer**
Neus Agell
- 5.3 Genetics and urological tumors**
Antonio Alcaraz
- 5.4 Functional characterization of oncogenic mechanisms in lymphomagenesis**
Virginia Amador
- 5.5 Molecular pathology of lymphoid neoplasms**
Elías Campo
- 5.6 Translational colorectal cancer genomics**
Jordi Camps
- 5.7 Gastrointestinal and pancreatic oncology**
Antoni Castells
- 5.8 Genetic predisposition to gastrointestinal cancer**
Sergi Castellví-Bel
- 5.9 Experimental therapies in lymphoid neoplasms**
Dolors Colomer
- 5.10 Molecular pathology of inflammatory conditions and solid tumours**
Miriám Cuatrecasas
- 5.11 Myeloid neoplasms**
Jordi Esteve
- 5.12 Myeloma, amyloidosis, macroglobulinemia and other gammopathies**
Carlos Fernández de Larrea
- 5.13 Gene therapy and cancer**
Cristina Fillat
- 5.14 Cellular immunotherapies for cancer**
Sònia Guedan
- 5.15 Translational research in hepatic oncology**
Josep M. Llovet
- 5.16 Lymphoid neoplasms**
Armando López Guillermo
- 5.17 Translational oncology in upper gastrointestinal cancers**
Teresa Macarulla
- 5.18 Biomedical epigenomics**
José Ignacio Martín-Subero
- 5.19 Hepatocellular signaling and cancer**
Albert Morales
- 5.20 Microenvironment in lymphoma pathogenesis and therapy**
Patricia Pérez-Galán
- 5.21 Gene regulation in stem cells, cell plasticity, differentiation, and cancer**
Antonio Postigo
- 5.22 Translational genomics and targeted therapies in solid tumours**
Aleix Prat
- 5.23 Melanoma: imaging, genetics and immunology**
Susana Puig
- 5.24 Hepatic oncology (BCLC)**
Maria Reig
- 5.25 Molecular genetics of paediatric lymphomas**
Itziar Salaverria
- 5.26 Hematopoietic progenitor cell transplantation**
Álvaro Urbano-Ispizua

5.01

Tumor microenvironment plasticity and heterogeneity (TMHet)



GROUP LEADER

Silvia Affò (IDIBAPS)

RESEARCH INTERESTS

Our research aims to investigate the functional role, plasticity, and heterogeneity of the tumor microenvironment (TME) in solid tumors characterized by exacerbated desmoplastic stroma, with an accumulation of cancer-associated fibroblasts (CAF).

To explore the dynamics of CAF transcriptomic and functional heterogeneity during carcinogenesis, and to evaluate their potential in combined therapies, with our research we aim to integrate single-cell and spatial transcriptomics with biocomputational analysis, in-vitro and in-vivo experimental models.

KEYWORDS

Tumor microenvironment
Cancer-associated fibroblasts
Tumor heterogeneity
Tumor plasticity
Tumor ecosystem

RELATED DISEASES

Liver tumors
Cholangiocarcinoma
Desmoplastic tumors
Liver metastases
Liver fibrosis

Publications

Original articles

3

Mean IF **28,40**
Q1 100%
D1 100%
MA 33%
OA 100%

Others

3

Mean IF **17,27**
Q1 67%
D1 33%
MA 100%
OA 0%

IF = Impact Factor

MA = Main authorship (last or corresponding author)

OA = Open Access

Others includes reviews, editorials, clinical guidelines, letters and case reports

Selected publications

Martínez García de la Torre RA, Vallverdu J, Xu Z, ... , Coll M, Affò S, Sancho-Bru P. **Trajectory analysis of hepatic stellate cell differentiation reveals metabolic regulation of cell commitment and fibrosis.** *NATURE COMMUNICATIONS*. 16(1):1489. D1

Amengual J, Gonzalez-Sanchez E, Yañez-Bartolome M, ... , Tian VT, Fabregat I, Vaquero J. **NADPH oxidase 1/4 dual inhibition impairs transforming growth factor-beta protumorigenic effects in cholangiocarcinoma cancer-associated fibroblasts.** *SIGNAL TRANSDUCTION AND TARGETED THERAPY*. 10(1):257. D1

Affò S, Sererols-Viñas L, Garcia-Vicién G, Cadamuro M, Chakraborty S, Sirica AE. **Cancer-Associated Fibroblasts in Intrahepatic Cholangiocarcinoma.** *AMERICAN JOURNAL OF PATHOLOGY*. 195(3):378-396. Q1

Sererols-Viñas L, Garcia-Vicién G, Ruiz-Blázquez P, ... , Moles A, Filliol A, Affò S. **Hepatic Stellate Cells Functional Heterogeneity in Liver Cancer.** *SEMINARS IN LIVER DISEASE*. 45(01):33-51. Q2

Tian VT, Affò S. **Stromal barriers to the abscopal effect.** *CANCER CELL*. 43(5):810-812. D1

Selected active grants

Deciphering the dynamic-plasticity and heterogeneity of cancer-associated fibroblasts.

European Commission.

CE_HE_ERC_2022_StG

PI: Silvia Affò

Deplete, delete, and deactivate strategies for cancer-associated fibroblasts manipulation to remodel the tumor immune.

Agencia Estatal de Investigación.

AEI_PE24

PI: Silvia Affò

Signal transduction, intracellular compartments and cancer



GROUP LEADER

Neus Agell (UB)

RESEARCH INTERESTS

Our primary goal is to develop new strategies to prevent the onset, growth, and spread of tumor cells. Additionally, we seek to understand endolysosomal homeostasis and interactions in both health and disease contexts. Specifically, our research focuses on understanding [1] DNA replication control mechanisms, [2] the functioning of Ras family proteins, [3] how mitotic autophagy controls genomic stability, [4] extracellular vesicle, including exosomes, contribution in the pathogenesis of cancer and other disorders, and [5] the cellular organelle interaction in lysosomal storage diseases.

KEYWORDS

RAS and RAC family of GTPases
Chromosomal instability
Cell cycle checkpoints
Exosomes
Cellular cholesterol regulation

RELATED DISEASES

Cancer
Parkinson's disease
Niemann Pick disease type C

Publications

Original articles

8

Mean IF **6,83**
Q1 63%
D1 25%
MA 50%
OA 100%

Others

2

Mean IF **4,95**
Q1 50%
D1 0%
MA 50%
OA 100%

IF = Impact Factor
MA = Main authorship (last or corresponding author)
OA = Open Access
Others includes reviews, editorials, clinical guidelines, letters and case reports

Selected publications

Alcon C, Kovatcheva M, Morales-Sánchez P, ... , Enrich C, Serrano M, Montero J. **HRK downregulation and augmented BCL-xL binding to BAK confer apoptotic protection to therapy-induced senescent melanoma cells.** *CELL DEATH AND DIFFERENTIATION*. 32(4):646-656. D1

Palma-Cobo M, Toribio V, Morales J, ... , Enrich C, Lu A, Yáñez-Mó M. **Genome-Wide CRISPR/Cas9 Screening Identifies the COMMANDER Recycling Complex as a Key Player in EV Uptake.** *JOURNAL OF EXTRACELLULAR VESICLES*. 14(9):e70166-e70166. D1

Grewal T, Gerke V, Nylandsted J, Rentero C, Enrich C. **Revisiting the role of Annexins in membrane trafficking.** *CELLULAR AND MOLECULAR LIFE SCIENCES*. 82(1):230. Q1

Alvarez-Guaita A, Bernaus-Esqué M, Blanco-Muñoz P, ... , Enrich C, Grewal T, Rentero C. **Fasting-Induced Hepatic Gluconeogenesis Is Compromised In Anxa6^{-/-} Mice.** *JOURNAL OF CELLULAR PHYSIOLOGY*. 240(8):e70084. Q1

Kulkarni S, Tebar F, Rentero C, Zhao M, Sáez P. **Competing signaling pathways controls electrotaxis.** *SCIENCE*. 28(5):112329. Q1

Directed PhD theses

1

• Marc Bernaus

Selected active grants

ABT-199 based therapies to treat neuroblastoma.

National Institutes of Health.
INT_NIH_FP00019758_SA001
PI: Joan Montero

Papel de KRAS y su fosforilación en la organización epitelial, invasión y biogénesis de exosomas de células del cáncer colorectal.

Agencia Estatal de Investigación.
AEI_PID2022-138728OB-I00
PI: Neus Agell, Albert Lu

Genetics and urological tumors



GROUP LEADER

Antonio Alcaraz (HCB)

RESEARCH INTERESTS

Current diagnostic techniques for urological cancers are invasive and/or non-sensitive enough. Moreover, existing prognostic factors for these tumors are not able to accurately determine patients who will recur after local treatments and patients who are cured.

Our research group is focused on identifying non-invasive biomarkers with high diagnostic performance and accurate prognostic biomarkers for tumor monitoring and prediction of treatment response. The establishment of such biomarkers in clinical routine would be a great step forward in uro-oncological clinical practice.

KEYWORDS

Uro-oncology
Biomarkers
Genetics and molecular biology
Liquid biopsy
Translational research

RELATED DISEASES

Bladder cancer
Prostate cancer
Renal cancer
Upper urinary tract tumors

Publications

Original articles

28

Mean IF	4,36
Q1	50%
D1	14%
MA	46%
OA	68%

Others

8

Mean IF	9,66
Q1	88%
D1	63%
MA	13%
OA	38%

IF = Impact Factor

MA = Main authorship (last or corresponding author)

OA = Open Access

Others includes reviews, editorials, clinical guidelines, letters and case reports

Selected active grants

Development of nanodevices to monitor bladder cancer progression and drug resistance through extracellular vesicles delivered cargoes and activity (DRAGON).

Instituto de Salud Carlos III (ISCIII).
FIS_AC24/00118

PI: Lourdes Mengual

Monitoring muscle-invasive bladder cancer patients with circulating tumor DNA using a tumor-agnostic assay.

Instituto de Salud Carlos III (ISCIII).
FIS_PI24/01553

PI: Lourdes Mengual, Antonio Alcaraz

Selected publications

Roldán FL, Ingelmo-Torres M, ... , Izquierdo L, Alcaraz A, Mengual L. **Bladder EpiCheck clinical utility to predict BCG response in non-muscle-invasive bladder cancer.** *BJU INTERNATIONAL*. 136(4):682-689. Q1

Vas D, Paño B, Soler-Perromat A, ... , Sebastià C, Buñesch L, Nicolau C. **Qualitative and Quantitative Analysis of Contrast-Enhanced Ultrasound in the Characterization of Kidney Cancer Subtypes.** *DIAGNOSTICS*. 15(14):1795. Q1

Padullés B, López-Aladid R, Ingelmo-Torres M, ... , Izquierdo L, Mengual L, Alcaraz A. **Machine Learning-Based Gene Expression Analysis to Identify Prognostic Biomarkers in Upper Tract Urothelial Carcinoma.** *CANCERS*. 17(16):2619. Q2

Maroto JP, Puente J, Conde Moreno A, ... , López-Menduiña M, Sarró E, Alcaraz A. **Real-world evidence in localized and locally advanced prostate cancer: applying artificial intelligence to electronic health records.** *BMC CANCER*. 25(1):1618. Q2

Mercader C, López R, Ferrer L, ... , Mengual L, Rodríguez-Carunchio L, Vilaseca A. **FGFR3 immunohistochemistry as a surrogate biomarker for FGFR3 alterations in urothelial carcinoma.** *PATHOLOGY RESEARCH AND PRACTICE*. 271:156028. Q2

Functional characterization of oncogenic mechanisms in lymphomagenesis



Publications

Original articles	Mean IF	13,65
2	Q1	100%
	D1	100%
	MA	50%
	OA	100%
Others	Mean IF	0
0	Q1	0%
	D1	0%
	MA	0%
	OA	0%

IF = Impact Factor
 MA = Main authorship (last or corresponding author)
 OA = Open Access
 Others includes reviews, editorials, clinical guidelines, letters and case reports

Selected publications

de Bolòs A, Carreras-Caballé M, Sureda-Gómez M, ... , Reverter D, Villanueva J, Amador V. **The SOX11: SMARCA4 complex is a driver of oncogenic transcriptional programs in mantle cell lymphoma.** *BLOOD CANCER JOURNAL*. 15(1):127. D1

Sánchez-Alba L, Ying L, Maletic MD, ... , Amador V, Mulder PCM, Reverter D. **Structural basis for the human SENP5's SUMO isoform discrimination.** *NATURE COMMUNICATIONS*. 16(1):4764. D1

Directed PhD theses

1 • Anna de Bolòs

Selected active grants

Unraveling the oncogenic SOX11-interactome in mantle cell lymphomas through integrative proteomic strategies for novel therapeutic targets discovery (PROTACSOX).

Agencia Estatal de Investigación.
 AEI_PE24

PI: Virginia Amador

GROUP LEADER

Virginia Amador (IDIBAPS)

RESEARCH INTERESTS

The objective of the group is to identify and characterize the functional role of new candidates and signaling pathways, in both cancerous and normal cells of the tumor microenvironment, responsible for the appearance, maintenance and aggressive behavior of lymphomas, for a better understanding of the pathogenesis and to find potential candidates for tailored therapies.

KEYWORDS

SOX11 pioneer transcription factor
 Mantle cell lymphoma
 and Burkitt lymphoma
 SMARCA4 and chromatin remodeler complex
 Tumor microenvironment-immunotherapies
 PROTAC-degraders

RELATED DISEASES

Lymphoid neoplasms
 Mantle cell lymphoma
 Burkitt lymphoma

5.05

Molecular pathology of lymphoid neoplasms



GROUP LEADER

Elías Campo (IDIBAPS-HCB-UB)

RESEARCH INTERESTS

Our research focuses on the pathological characterization of lymphoid neoplasms and the understanding of the molecular and genetic mechanisms underlying the pathogenesis of these tumors to determine their relevance in the diagnosis, prognosis and therapeutic intervention in these patients.

In recent years we have made seminal contributions in elucidating the genomic/epigenomic alterations in chronic lymphocytic leukemia, mantle cell lymphoma and other aggressive lymphomas. We have identified new disease subtypes, novel biomarkers and therapeutic targets.

KEYWORDS

Lymphoid neoplasms
Molecular pathology
Genomic alterations

RELATED DISEASES

Mantle cell lymphoma
Chronic lymphocytic leukemia
Diffuse large B cell lymphoma
Lymphoid neoplasms

Publications

Original articles

21

Mean IF

11,40

Q1

90%

D1

62%

MA

10%

OA

76%

Others

10

Mean IF

10,57

Q1

60%

D1

40%

MA

40%

OA

80%

IF = Impact Factor

MA = Main authorship (last or corresponding author)

OA = Open Access

Others includes reviews, editorials, clinical guidelines, letters and case reports

Directed PhD theses

2

• Natàlia Castrejón
• Anna de Bolòs

Selected active grants

Factores de las células tumorales y microambiente determinantes de las trayectorias evolutivas del linfoma de células del manto y de la resistencia a nuevas terapias (MCLEOLVE).

Ministerio de Ciencia e Innovación
AEI_PE24

PI: Elías Campo

Medicina de precisión genómica en neoplasias linfoides (PREGENLINF).

Instituto de Salud Carlos III (ISCIII).

FIS_PMP21/00015

PI: Elías Campo

Selected publications

Nadeu F, Shuai S, Clot G, ... , Stein LD, Puente XS, Campo E. **Disease-specific U1 spliceosomal RNA mutations in mature B-cell neoplasms.** *LEUKEMIA*. 39(9):2076-2086. D1

Gabbutt C, Duran-Ferrer M, Grant HE, ... , Shibata D, Martin-Subero JL, Graham TA. **Fluctuating DNA methylation tracks cancer evolution at clinical scale.** *NATURE*. 645(8081):764-773. D1

Chapaprieta V, Maiques-Diaz A, Nadeu F, ... , López-Guillermo A, Campo E, Martin-Subero JL. **Dual biological role and clinical impact of de novo chromatin activation in chronic lymphocytic leukemia.** *BLOOD*. 145(21):2473-2487. D1

Mateos-Jaimez J, Vidal-Crespo A, Charalampopoulou S, ... , Campo E, Maiques-Diaz A, Martin-Subero JL. **Increased LEF1 protein levels and isoform switching drive cell proliferation in chronic lymphocytic leukemia.** *BLOOD*. 146(26):3213-3227. D1

de Bolòs Anna, Carreras-Caballé M, Sureda-Gómez M, ... , Reverter D, Villanueva J, Amador V. **The SOX11:SMARCA4 complex is a driver of oncogenic transcriptional programs in mantle cell lymphoma.** *BLOOD CANCER JOURNAL*. 15(1):127. D1

Translational colorectal cancer genomics



Publications

Original articles	Mean IF	3,05
	Q1	0%
	D1	0%
	MA	50%
	OA	100%

2

Others

0

Mean IF	0
Q1	0%
D1	0%
MA	0%
OA	0%

IF = Impact Factor
 MA = Main authorship (last or corresponding author)
 OA = Open Access
 Others includes reviews, editorials, clinical guidelines, letters and case reports

Selected active grants

Distribución espacial de alteraciones genómicas en "tumor buds" y grupos de células pobremente diferenciadas en el cáncer colorrectal y su implicación en la evasión inmune y la metástasis.

Instituto de Salud Carlos III (ISCIII).
 FIS_PI20/00863

PI: Miriam Cuatrecasas, Jordi Camps

Selected publications

Liu Q, Archilla I, Lopez-Prades S, Torres F, Camps J, Cuatrecasas M. **Polymorphic Single-Nucleotide Variants in miRNA Genes and the Susceptibility to Colorectal Cancer: Combined Evaluation by Pairwise and Network Meta-Analysis, Thakkinstian's Algorithm and FPRP Criterium.** *CANCER MEDICINE*. 14(2):e70621. Q2

Araujo IK, Soy G, Ginès A, ... , López-Guerra M, Colomer D, Vaquero EC. **Single GNAS Droplet-Based Digital Polymerase Chain Reaction Analysis of Pancreatic Cyst Fluid: An Effective Up-Front Strategy for Mucinous Cyst Diagnosis by Endoscopic Ultrasound-Guided Fine-Needle Aspiration.** *CLINICAL AND TRANSLATIONAL GASTROENTEROLOGY*. 16(9):e00887. Q2

GROUP LEADER

Jordi Camps (IDIBAPS)

RESEARCH INTERESTS

Elucidating the role of genomic instability, which represents the molecular engine that fuels intratumor genetic heterogeneity in carcinomas, is critical for our understanding of the tumor initiation, progression, and treatment response.

Our group aims at (i) identifying the clinical applicability of genomic copy-number alterations and aneuploidy, (ii) assessing intratumor heterogeneity as a novel biomarker in colorectal cancer, and (iii) interrogating the mechanistic and functional consequences of whole-genome doubling and its impact on disease outcome.

KEYWORDS

Genomic instability
 Intratumor heterogeneity
 Aneuploidy
 Copy-number alterations
 Colorectal cancer

RELATED DISEASES

Colon cancer
 Rectal cancer
 Serrated polyposis
 Gastrointestinal cancer



GROUP LEADER

Antoni Castells (HCB)

RESEARCH INTERESTS

Prevention of gastrointestinal and pancreatic neoplasms considers several approaches, depending on personal and/or family-related factors. Our research group is interested in ascertaining the efficacy of diverse screening strategies, identifying biomarkers derived from tumor molecular alterations, and establishing the best approach for the detection of inherited diseases.

Moreover, we are also focused on defining the indications and outcomes of different endoscopic and surgical techniques for the diagnosis and treatment of these neoplasms.

KEYWORDS

Screening
Surveillance
Genetics
Endoscopy
Surgery

RELATED DISEASES

Colorectal cancer
Gastric cancer
Pancreatic cancer
Gastrointestinal polyposis

5.07

Gastrointestinal and pancreatic oncology

Publications

Original articles

43

Mean IF 9,25
Q1 67%
D1 30%
MA 42%
OA 74%

Others

22

Mean IF 9,11
Q1 45%
D1 23%
MA 45%
OA 59%

IF = Impact Factor
MA = Main authorship (last or corresponding author)
OA = Open Access
Others includes reviews, editorials, clinical guidelines, letters and case reports

Directed PhD theses

4

- Isis Karina Araujo
- Cristina Bayó
- Oswaldo Ortiz
- Ariadna Sanchez

Selected active grants

Randomized controlled trial of colonoscopy versus fecal immunochemical testing in colorectal cancer screening. The COLONPREV study. Asociación Española Contra el Cáncer. AECC_EstClinicos21
PI: Antoni Castells

Eficacia y seguridad de una vacuna basada en células dendríticas cargada con neopéptidos derivados de la alteración del marco de lectura en el síndrome de Lynch: ensayo clínico fase Ib.

Instituto de Salud Carlos III (ISCIII). FIS_ICI22/00063
PI: Francesc Balaguer

Selected publications

Castells A, Quintero E, Bujanda L, ... , Portillo I, Vanaclocha-Espí M, de la Vega M; COLONPREV study investigators. **Effect of invitation to colonoscopy versus faecal immunochemical test screening on colorectal cancer mortality (COLONPREV): a pragmatic, randomised, controlled, non-inferiority trial.** *LANCET*. 405(10486):1231-1239. D1

Sánchez A, Castillo-Iturra J, Roos VH, ... , Moreira L, Pellisé M, Balaguer F. **Gene-Specific Detection Rate of Adenomas and Advanced Adenomas in Lynch Syndrome.** *GASTROENTEROLOGY*. 169(4):663-675. D1

Bayó C, Castellano G, Marín F, ... , Juan M, Benitez-Ribas D, Balaguer F. **Discovery and validation of frameshift-derived neopeptides in Lynch syndrome: paving the way for novel cancer prevention strategies.** *JOURNAL FOR IMMUNOTHERAPY OF CANCER*. 13(4):e011177. D1

Serradesanferm A, Torá-Rocamora I, Pozo A, ... , Balaguer F, Castells A, Pellisé M. **Adenoma detection rate and tolerability of 2 ultra-low-volume bowel preparations in screening: a noninferiority randomized controlled trial.** *GASTROINTESTINAL ENDOSCOPY*. 101(1):158. Q1

Budzyń K, Romańczyk M, Kitla D, ... , Kalager M, Bretthauer M, Mori Y. **Endoscopist deskill risk after exposure to artificial intelligence in colonoscopy: a multicentre, observational study.** *LANCET GASTROENTEROLOGY & HEPATOLOGY*. 10(10):896-903. D1

Genetic predisposition to gastrointestinal cancer

Publications

Original articles	Mean IF	6,56
	Q1	75%
	D1	29%
	MA	11%
	OA	68%

28

Others

	Mean IF	5,46
	Q1	67%
	D1	22%
	MA	56%
	OA	67%

9

IF = Impact Factor
 MA = Main authorship (last or corresponding author)
 OA = Open Access
 Others includes reviews, editorials, clinical guidelines, letters and case reports

Directed PhD theses

1

• Ariadna Sanchez

Selected active grants

Mejora de las estrategias de prevención del cáncer gástrico mediante la caracterización clínica, epidemiológica y molecular en las poblaciones de alto riesgo (EpiGASTRIC/EDGAR 2.0).
 Instituto de Salud Carlos III (ISCIII).
 FIS_PI24/00737
 PI: Leticia Moreira

Identificación de nuevos genes hereditarios e insultos somáticos en el cáncer colorrectal familiar con una base desconocida mediante la integración de datos multiómicos.
 Instituto de Salud Carlos III (ISCIII).
 FIS_PI23/00189
 PI: Sergi Castellví Bel

Selected publications

Prat R, Llach J, Montori S, ... , Fernández-Esparrach G, Albéniz E, Moreira L; EpiGASTRIC/EDGAR Consortium. **Tackling Post-Endoscopy Gastric Cancer in a Low-Risk Area: Prevalence, Features, and Prevention Opportunities Through Better Clinical Practice.** *UNITED EUROPEAN GASTROENTEROLOGY JOURNAL*. 13(10):2057-2065. Q1

Llargués-Sistac G, Bonjoch L, Muñoz J,..., Moreira L, Fernandez G, Castellví-Bel S. **Germline structural variant as the cause of Lynch Syndrome in a family from Ecuador.** *NPJ GENOMIC MEDICINE*. 10(1):3. Q1

Domínguez-Rovira X, Arnau-Collell C, Gonfaus-Ortiz G, ... , Ruiz-Ponte C, Bonjoch L, Castellví-Bel S. **Germline pathogenic variants in HIC1 DNA binding domains are associated with familial serrated polyposis syndrome.** *INTERNATIONAL JOURNAL OF CANCER*. 157(6):1154-1167. Q1

Castillo-Iturra J, Llach J, Luzko I, ... , Fernández-Esparrach G, Balaguer F, Moreira L. **Performance of upper gastrointestinal endoscopy in CDH1 germline pathogenic variant carriers: A multicenter study.** *INTERNATIONAL JOURNAL OF CANCER*. 157(12):2550-2557. Q1

Pardo C, Luzko I, Castillo-Iturra J, Cantú-Germano E, Moreira L. **Familial Non-Hereditary Gastric Cancer: Diagnosis, Management, Molecular Characteristics and Future Perspective.** *CANCERS*. 17(19):3209. Q2



GROUP LEADER

Sergi Castellví-Bel (IDIBAPS)

RESEARCH INTERESTS

We investigate the genetic and molecular basis of colorectal, gastric and pancreatic cancer susceptibility. Our research integrates genetic association studies, whole-genome sequencing, transcriptomics, epigenomics, microbiomics, metabolomics and functional genomics using CRISPR-based gene editing, cellular models and organoids.

We identify hereditary and environmental factors involved in cancer risk and translate these discoveries into precision prevention, early detection, patient stratification and personalized clinical management.

KEYWORDS

Gastrointestinal cancer genetics
 Hereditary cancer syndromes
 Multiomic profiling
 Functional genomics
 Precision prevention

RELATED DISEASES

Gastrointestinal cancer genetics
 Hereditary cancer syndromes
 Multiomic profiling
 Functional genomics
 Precision prevention

5.09

Experimental therapies in lymphoid neoplasms



GROUP LEADER

Dolors Colomer (HCB)

RESEARCH INTERESTS

To determine the functional impact of the omic alterations described in hematological malignancies. Develop and validate models that recapitulate tumor heterogeneity and its impact on disease progression, therapy resistance, and susceptibility to new targeted therapies.

Propose and develop new therapeutic strategies in tumor cells isolated from patients, cell lines and animal models, taking into account the interaction between the tumor cell and its microenvironment and transfer this knowledge to clinical practice.

KEYWORDS

Targeted therapies
Microenvironment
PDX
3D cell culture

RELATED DISEASES

Hematological malignancies
Chronic lymphocytic leukemia
Richter transformation
Lymphoma
Acute leukemia

Publications

Original articles

18

Mean IF **12,42**
Q1 83%
D1 50%
MA 6%
OA 83%

Others

3

Mean IF **7,90**
Q1 67%
D1 33%
MA 0%
OA 100%

IF = Impact Factor

MA = Main authorship (last or corresponding author)

OA = Open Access

Others includes reviews, editorials, clinical guidelines, letters and case reports

Selected active grants

Impact of genetic variability and tumoral heterogeneity in target therapy in CLL.

Agencia Estatal de Investigación.
AEI_PE21

PI: Dolors Colomer

Development of a first-in-class biologic to treat acute myeloid leukemia.

Agencia Estatal de Investigación.
AEI_CPP21

PI: Dolors Colomer

Selected publications

Mateos-Jaimez J, Vidal-Crespo A, Charalampopoulou S, ... , Campo E, Maiques-Diaz A, Martin-Subero JI. **Increased LEF1 protein levels and isoform switching drive cell proliferation in chronic lymphocytic leukemia.** *BLOOD*. 146(26):3213-3227. D1

Llaó-Cid L, Wong Jkl, Fernandez Botana I, ... , Paggetti J, Zapatka M, Seiffert M. **Integrative multi-omics reveals a regulatory and exhausted T-cell landscape in CLL and identifies galectin-9 as an immunotherapy target.** *NATURE COMMUNICATIONS*. 16(1):7271. D1

Nadeu F, Shuai S, Clot G, ... , Stein LD, Puente XS, Campo E. **Disease-specific U1 spliceosomal RNA mutations in mature B-cell neoplasms.** *LEUKEMIA*. 39(9):2076-2086. D1

de Bolòs A, Carreras-Caballé M, Sureda-Gómez M, ... , Reverter D, Villanueva J, Amador V. **The SOX11:SMARCA4 complex is a driver of oncogenic transcriptional programs in mantle cell lymphoma.** *BLOOD CANCER JOURNAL*. 15(1):127. D1

Moreno DF, Nadeu F, Brasó-Maristany F, ... , Prat A, Colomer D, Fernández de Llerena C. **Genomic and immune profiling of prognostic risk groups in IgM gammopathy reveals novel biomarkers beyond MYD88 L265P.** *FRONTIERS IN IMMUNOLOGY*. 16:1604089. Q1

Molecular pathology of inflammatory conditions and solid tumors



GROUP LEADER

Miriam Cuatrecasas (HCB)

RESEARCH INTERESTS

The main research in solid and central nervous system tumors is the integration of both histopathology and molecular alterations in precursor lesions and malignant tumors.

The identification of the molecular pathways of carcinogenesis and of new biomarkers enables customized therapies. In the field of neurodegenerative diseases our research is focused on the process of degeneration and markers of its early detection.

KEYWORDS

Cancer
Central nervous system
Neurodegenerative

RELATED DISEASES

Carcinoma
Central nervous system tumors
Neurodegenerative

Publications

Original articles

35

Mean IF

4,61

Q1

51%

D1

20%

MA

20%

OA

83%

Others

16

Mean IF

3,71

Q1

50%

D1

13%

MA

6%

OA

75%

IF = Impact Factor

MA = Main authorship (last or corresponding author)

OA = Open Access

Others includes reviews, editorials, clinical guidelines, letters and case reports

Selected publications

Pérez-Anker J, Soglia S, Puig S, ... , del Marmol V, Alòs L, Malveyh J. **Melanocytic cleaving is associated with melanoma on LC-OCT.** *JOURNAL OF THE EUROPEAN ACADEMY OF DERMATOLOGY AND VENEREOLOGY.* 39(11):1923-1933. D1

Delgado Guillena PG, Cuatrecasas M, Montori S, ... , Fernández-Esparrach G, Moreira L, Albéniz E; EpiGASTRIC/EDGAR Consortium. **The OLGIMA system for gastric cancer risk assessment. A useful method based on the histological Sydney consensus.** *HISTOPATHOLOGY.* 88(4):911-921. Q1

Saez de Gordo K, Tasso E, Rei A, ... , Hanzu F, Vidal Pérez O, Rodrigo-Calvo MT. **Validation of the Updated Porto Proposal in Papillary Thyroid Microtumors: Analysis of Cases at a University Hospital in Catalonia, Spain.** *CANCERS.* 17(12):2021. Q2

Liu Q, Lopez-Prades S, Saez de Gordo K, ... , Camps J, Archilla I, Cuatrecasas M. **Performance and Prognostic Relevance of Lymph Node Assessment by One-Step Nucleic Acid Amplification Assay in Rectal Cancer: A Multicenter Study.** *CANCERS.* 17(13):2141. Q2

Saco A, Carbonell S, Rakislova N, ... , Torne A, Ordi J, del Pino M. **Human Papilloma-virus Infection and Cytological Atypia in Female Allogeneic Hematopoietic Stem Cell Transplantation Recipients.** *TRANSPLANTATION.* 109(7):e371. D1

Directed PhD theses

1

• Sandra López

Selected active grants

Mapping the progression to chronic kidney disease in glomerulopathies.

Instituto de Salud Carlos III (ISCIII).

FIS_PI23/00569

PI: Adriana García-Herrera,

Luis Fernando Quintana

Distribución espacial de alteraciones genómicas en "tumor buds" y grupos de células pobremente diferenciadas en el cáncer colorrectal y su implicación en la evasión inmune y la metástasis.

Instituto de Salud Carlos III (ISCIII).

FIS_PI20/00863

PI: Miriam Cuatrecasas, Jordi Camps



GROUP LEADER

Jordi Esteve (HCB)

RESEARCH INTERESTS

Our group is devoted to clinical and traslational research of acute leukemias and myeloid neoplasms (AML, ALL, MDS, and MPNs).

Our research field comprises the study of their natural history and mechanisms of leukemogenesis, prognostic factors, and treatment outcome, including the design and evaluation of genetically oriented treatment protocols and early exploration of novel agents in clinical trials.

Current hot topics are the characterization of genomic landscape and mechanisms of clonal evolution, clinical impact of measurable residual disease assessment, and development of targeted therapy and CAR-T cell therapy in AML.

KEYWORDS

Prognostic factors
Genomic landscape
Measurable residual disease
Therapy
Allogeneic hematopoietic cell transplantation

RELATED DISEASES

Acute myeloid leukemia (AML)
Myelodysplastic syndrome (MDS)
Myeloproliferative neoplasms (MPN)
Chronic myeloid leukemia (CML)
Acute lymphoblastic leukemia (ALL)

5.11

Myeloid neoplasms

Publications

Original articles

24

Mean IF	10,95
Q1	83%
D1	33%
MA	21%
OA	79%

Others

13

Mean IF	13,71
Q1	85%
D1	46%
MA	23%
OA	100%

IF = Impact Factor
MA = Main authorship (last or corresponding author)
OA = Open Access
Others includes reviews, editorials, clinical guidelines, letters and case reports

Directed PhD theses

3

- Sandra Castaño
- Francisca Guijarro
- Carlos Jiménez

Selected active grants

Análisis de la enfermedad residual medible (MRD), los mecanismos de progresión y dianas terapéuticas en la leucemia mieloide aguda tratada con nuevos regímenes de baja intensidad.
Instituto de Salud Carlos III (ISCIII).
FIS_PI22/01660
PI: Jordi Esteve, Marina Diaz Beya

Carecterización molecular de los pacientes con trombocitemia esencial que desarrollan resistencia a la hidroxiurea. Correlación clínica y repercusión pronóstica.
Instituto de Salud Carlos III (ISCIII).
FIS_PI21/00231
PI: Alberto Álvarez Larran

Selected publications

Esteve J, Nagler A, Labopin M, ..., Kröger N, Mohty M, Ciceri F. **Allogeneic Hematopoietic Cell Transplantation in Patients With Acute Myeloid Leukemia With Myelodysplasia-Related Genetic Features: Relevance of the Genetic Underlying Category. A Retrospective Analysis on Behalf of the Acute Leukemia Working Party of the EBMT.** *AMERICAN JOURNAL OF HEMATOLOGY*. 100(6):954-962. Q1

Jimenez-Vicente C, Cardus A, Castaño-Diez S, ..., Guijarro F, Díaz-Beyá M, Esteve J; Spanish CETLAM Group. **Prognostic value of measurable residual disease (MRD) for venetoclax in combination with hypomethylating agents in patients diagnosed with acute myeloid leukemia: validation of the ELN-2021 MRD recommendations.** *BLOOD CANCER JOURNAL*. 15(1):94. D1

Jiménez-Vicente C, Esteve J, Baile-González M, ..., Balsalobre P, Pascual Cascón MJ, Salas MQ. **Allo-HCT refined ELN 2022 risk classification: validation of the Adverse-Plus risk group in AML patients undergoing allogeneic hematopoietic cell transplantation within the Spanish Group for Hematopoietic Cell Transplantation (GETH-TC).** *BLOOD CANCER JOURNAL*. 15(1):42. D1

Sanz J, Bug G, Ciceri F, ..., Srour M, Yakoub-Agha I, Buccisano F. **Measurable residual disease-guided interventions in patients with acute myeloid leukaemia undergoing allogeneic haematopoietic cell transplantation: best practice recommendations from the European Society for Blood and Marrow Transplantation Practice Harmonisation and Guidelines Committee.** *LANCET ONCOLOGY*. 26(11):e586-e596. D1

Rampal RK, Grosicki S, Chranik D, ..., Jegg AM, Harrison CN, Mascarenhas J. **Pelabresib plus ruxolitinib for JAK inhibitor-naïve myelofibrosis: a randomized phase 3 trial.** *NATURE MEDICINE*. 31(5):1531-1538. D1

Myeloma, amyloidosis, macroglobulinemia and other gammopathies

Publications

Original articles	Mean IF	11,10
	Q1	75%
	D1	50%
	MA	34%
	OA	72%

32

Others	Mean IF	15,03
	Q1	83%
	D1	50%
	MA	17%
	OA	58%

12

IF = Impact Factor
 MA = Main authorship (last or corresponding author)
 OA = Open Access
 Others includes reviews, editorials, clinical guidelines, letters and case reports

Directed PhD theses

1

• Oriol Cardús

Selected active grants

GEM-PLASMACAR: Phase II, multicenter, open-label, prospective, non-randomized study to evaluate the safety and efficacy of ARI0002h, a CAR-T cell against BCMA, for the initial treatment of patients with primary plasma cell leukemia.

Instituto de Salud Carlos III (ISCIII). FIS_ICI23/00012

PI: Carlos Fernández de Larrea

Strategies to overcome antigen escape relapses and improve CAR T-cell persistence in multiple myeloma.

Asociación Española Contra el Cáncer. AECC_Lab21

PI: Carlos Fernández de Larrea

Selected publications

Batram AM, Mañé-Pujol J, Moreno DF, ..., Rodríguez-Lobato LG, Urbano-Ispizua A, Fernández de Larrea C. **Genetic disruption of Blimp-1 drastically augments the antitumor efficacy of BCMA-targeting CAR T cells.** *BLOOD ADVANCES*. 9(3):627-641. Q1

Rodríguez-Lobato LG, de Daniel A, Pereira A, ..., Muñárriz D, Bladé J, Rosiñol L. **Attrition rates and treatment outcomes in multiple myeloma: real-world data over a 40-year period.** *BLOOD CANCER JOURNAL*. 15(1):103. D1

Oliver-Caldes A, Mañé-Pujol J, Batram AM, ..., Juan M, Martín-Antonio B, Fernández de Larrea C. **TIGIT blockade in the context of BCMA-CART cell therapy does not augment efficacy in a multiple myeloma mouse model.** *ONCOIMMUNOLOGY*. 14(1):2529632. Q1

Rodríguez-Lobato LG, Cardús O, Mañé-Pujol J, ..., Urbano-Ispizua A, Engel P, Fernández de Larrea C. **Bicistronic CAR T Cell against BCMA and CD229 Effectively Controls Myeloma Even When BCMA Expression Is Limited.** *CANCER IMMUNOLOGY RESEARCH*. 13(9):1374-1390. D1

Lahuerta JJ, San-Miguel J, Jiménez-Ubieto A, ..., Mateos MV, Rosiñol L, Bladé J. **High-dose busulfan-melphalan vs melphalan and reinforced VRD for newly diagnosed multiple myeloma: a phase 3 GEM trial.** *BLOOD*. 146(15):1747-1758. D1

GROUP LEADER

Carlos Fernández de Larrea
(IDIBAPS-HCB)

RESEARCH INTERESTS

Multiple myeloma is a malignant disease of the plasma cells, responsible for generating antibodies. This tumor grows in the bone marrow and causes fractures, anaemia, renal insufficiency and elevation of calcium.

Despite the wide range of therapies that exist to treat it, myeloma is still an incurable pathology. The main line of work consists of identifying innovative treatment options related to the patient immune system and the tumour micro-environment, including the development of genetically modified immune cells, known as CAR T cells, which are engineered to specifically recognize and eliminate malignant plasma cells.

KEYWORDS

Multiple myeloma
 CAR T-cells
 Immunotherapy
 Molecular biology
 Monoclonal gammopathies

RELATED DISEASES

Myeloma multiple
 Macroglobulinemia
 Amyloidosis
 Monoclonal gammopathy
 Plasma cell leukemia





GROUP LEADER

Cristina Fillat (IDIBAPS)

RESEARCH INTERESTS

Our group is interested in the comprehension of the physiopathology of pancreatic cancer focusing on the cross-talk between cancer and stromal cells from the tumor microenvironment. We investigate the role of DYRK1A kinase and explore nanoparticles and oncolytic adenovirus therapies against pancreatic cancer.

We develop patient-derived organoids and generate mouse models to evaluate therapies. Members of the group conduct pancreatobiliary surgical innovation, integrating artificial intelligence. Moreover, we explore gene-therapy based strategies for the treatment of glutaric aciduria type I.

KEYWORDS

Pancreatic cancer
Tumor organoids
Tumor microenvironment
Oncolytic virus
Gene therapy

RELATED DISEASES

Pancreatic cancer
Glutaric aciduria type I

5.13

Gene therapy and cancer

Publications

Original articles

10	Mean IF	5,61
	Q1	80%
	D1	40%
	MA	60%
	OA	100%

Others

2	Mean IF	4
	Q1	100%
	D1	0%
	MA	100%
	OA	50%

IF = Impact Factor
MA = Main authorship (last or corresponding author)
OA = Open Access
Others includes reviews, editorials, clinical guidelines, letters and case reports

Directed PhD theses

1	• Carolina González
---	---------------------

Selected active grants

Fostering immunity against pancreatic tumors with oncolytic adenoviruses engineered to trigger immunogenic surrender and block immunosuppression.

Agencia Estatal de Investigación.
AEI_PID2023-146637OB-C22
PI: Cristina Fillat

Development of a computational tool for measuring arterial flows from CT: non invasive blood flow assessment (NOVELLA).

Generalitat de Catalunya.
AGAUR_INNOVADORS24
PI: Fabio Ausania

Selected publications

Segur-Bailach E, Mateu-Bosch A, Bo-fill-De Ros X, ... , van Karnebeek CDM, García-Villoria J, Fillat C. **Therapeutic AASS inhibition by AAV-miRNA rescues glutaric aciduria I severe in mice.** *MOLECULAR THERAPY*. 33(10):4820-4833. D1

Otero-Mateo M, Estrany Jr F, Arcas-Márquez S, ... , Castany M, Alemany R, Fillat C. **KPC pancreatic cancer cells are a novel immunocompetent murine model supporting human adenovirus replication and tumor oncolysis.** *MOLECULAR THERAPY ONCOLOGY*. 33(1):200928. Q1

González-Abós C, Martínez Escalante E, Salgado Muñoz F, ... , Martínez-Mifsud B, Baiges A, Ausania F. **Pancreaticoduodenectomy in a patient with severe portal hypertension: the role of preoperative TIPS.** *REVISTA ESPAÑOLA DE ENFERMEDADES DIGESTIVAS*. 117(6):353-355. Q1

González-Abós C, Molina R, Almirante S, Vázquez M, Ausania F. **Computational fluid dynamics for vascular assessment in hepatobiliopancreatic surgery: a pilot study and future perspectives.** *SURGICAL ENDOSCOPY AND OTHER INTERVENTIONAL TECHNIQUES*. 39(5):3127-3136. Q1

Bachiller M, Barceló-Genestar N, Rodríguez-García A, ... , Pérez-Galán P, Urbano-Ispizua A, Guedan S. **ARI0003: Co-transduced CD19/BCMA dual-targeting CAR-T cells for the treatment of non-Hodgkin lymphoma.** *MOLECULAR THERAPY*. 33(1):317-335. D1

Cellular immunotherapies for cancer



GROUP LEADER

Sònia Guedan (IDIBAPS)

RESEARCH INTERESTS

Our research focuses on engineering next-generation CAR-T cell therapies for hematological and solid cancers. We investigate the mechanisms limiting CAR-T efficacy, including T-cell dysfunction and tumor immune escape, and develop genetic engineering strategies to enhance persistence, safety and antitumor activity.

Our work aims to translate innovative CAR-T designs into clinically applicable therapies through close collaboration with multidisciplinary clinical teams.

KEYWORDS

Cancer immunotherapy
Translational research
Exhaustion of CAR-T cells
Armored CAR-T cells
In vivo CAR-T cells

RELATED DISEASES

Breast cancer
Non-hodgkin lymphoma
T cell leukemia and lymphoma
Follicular lymphoma
Other solid tumors

Publications

Original articles	Mean IF	9,50
	Q1	100%
	D1	33%
	MA	33%
	OA	100%

3

Others

Mean IF	15,70
Q1	100%
D1	100%
MA	0%
OA	100%

1

IF = Impact Factor
MA = Main authorship (last or corresponding author)
OA = Open Access
Others includes reviews, editorials, clinical guidelines, letters and case reports

Selected active grants

Fine-tuning T cell networks of exhaustion by synthetic sensors (T-FITNESS).
European Commission.
CE_HE_PathCh_21_Eme
PI: Sònia Guedan

Engineering a technology for site-specific transgene delivery in tumors using tumor-specific T cells.
Fundación Bancaria "la Caixa".
CaixaImpul25
PI: Alba Rodríguez-García

Selected publications

Bachiller M, Barceló-Genestar N, Rodríguez-García A, ..., Pérez-Galán P, Urbano-Ispizua A, Guedan S. **ARI0003: Co-transduced CD19/BCMA dual-targeting CAR-T cells for the treatment of non-Hodgkin lymphoma.** *MOLECULAR THERAPY*. 33(1):317-335. D1

Albarrán-Fernández V, Angelats L, Delgado J, ..., Urbano-Ispizua A, Guedan S, Prat A. **Unlocking the potential of engineered immune cell therapy for solid tumors.** *NATURE COMMUNICATIONS*. 16(1):1144. D1

Angelats L, Paré L, Rubio-Perez C, ..., Perou C M, Prat A, Brasó-Maristany F. **Linking tumor immune infiltration to enhanced longevity in recurrence-free breast cancer.** *ESMO OPEN*. 10(1):104109. Q1

Castellote-Borrell M, Domingo M, Merlina F, ..., Guedan S, Faraudo J, Guasch J. **Lymph-Node Inspired Hydrogels Enhance CAR Expression and Proliferation of CAR T Cells.** *ACS APPLIED MATERIALS & INTERFACES*. 17(11):16548-16560. Q1



GROUP LEADER

Josep M. Llovet (ICREA-IDIBAPS)

RESEARCH INTERESTS

The group is focused on the study of the pathogenesis and treatment of liver cancer, including hepatocellular carcinoma (HCC), hepatoblastoma and cholangiocarcinoma. We have defined the molecular and immunological characterization of HCC and discovered new therapeutic targets.

Current scientific interests include defining biomarkers and AI-based markers of response and resistance to immunological therapies by using cutting edge technologies (scRNA-seq, spatial transcriptoma), understanding the pathogenesis of HCC in patients with metabolic dysfunction-associated steatotic liver disease (MASLD-HCC) and determining the role of microbiome in HCC development.

KEYWORDS

Liver cancer
Precision oncology
Molecular and genomic studies
Immunotherapy
Predictive biomarkers

RELATED DISEASES

Hepatocellular carcinoma
MASLD-HCC
Cholangiocarcinoma
Hepatoblastoma

5.15

Translational research in hepatic oncology

Publications

Original articles

10

Mean IF	23,07
Q1	100%
D1	60%
MA	60%
OA	90%

Others

8

Mean IF	45,33
Q1	100%
D1	63%
MA	63%
OA	38%

IF = Impact Factor
MA = Main authorship (last or corresponding author)
OA = Open Access
Others includes reviews, editorials, clinical guidelines, letters and case reports

Directed PhD theses

1

• Marta Piqué

Selected active grants

Tumor-host interactions in liver cancer of childhood and adults (THRIVE).

European Commission.
CE_HE_CANCER23_RIA
PI: Josep M. Llovet

Neoadjuvant-adjuvant immunotherapy to improve survival in hepatocellular carcinoma (ASPIRE).

Asociación Española Contra el Cáncer.
AECC_Reto70%_24
PI: Josep M. Llovet

Selected publications

Kudo M, Ren Z, Guo Y, ... , Siegel AB, Finn RS, Llovet JM; LEAP-012 investigators. **Transarterial chemoembolisation combined with lenvatinib plus pembrolizumab versus dual placebo for unresectable, non-metastatic hepatocellular carcinoma (LEAP-012): a multicentre, randomised, double-blind, phase 3 study.** *LANCET*. 405(10474):203-215. D1

Cappuyns S, Piqué-Gili M, Esteban-Fabro R, ... , Villanueva A, Dekervel J, Llovet JM. **Single-cell RNA sequencing-derived signatures define response patterns to atezolizumab plus bevacizumab in advanced hepatocellular carcinoma.** *JOURNAL OF HEPATOLOGY*. 82(6):1036-1049. D1

Chan SL, Sun HC, Xu Y, ... , Kudo M, Fan J, Zhou J. **The Lancet Commission on addressing the global hepatocellular carcinoma burden: comprehensive strategies from prevention to treatment.** *LANCET*. 406(10504):731-778. D1

Vogel A, Chan S L, Dawson L A, ... , Vilgrain V, Zucman-Rossi J, Ducreux M; ESMO Guidelines Committee. **Hepatocellular carcinoma: ESMO Clinical Practice Guideline for diagnosis, treatment and follow-up.** *ANNALS OF ONCOLOGY*. 36(5):491-506. D1

Muller M, May S, Hall H, ... , Sansom OJ, Miller CJ, Bird TG. **Human-correlated genetic models identify precision therapy for liver cancer.** *NATURE*. 639(8055):754-764. D1

Lymphoid neoplasms

Publications

Original articles	Mean IF	11,40
	Q1	88%
	D1	48%
	MA	4%
	OA	84%

25

Others

11

Mean IF	15,48
Q1	82%
D1	45%
MA	27%
OA	64%

IF = Impact Factor

MA = Main authorship (last or corresponding author)

OA = Open Access

Others includes reviews, editorials, clinical guidelines, letters and case reports

Selected active grants

Heterogeneidad molecular en el linfoma de células del manto: cfDNA, proliferación tumoral y volumen metabólico tumoral. Estudio de su significado clínico.

Instituto de Salud Carlos III (ISCIII).

FIS_PI22/00203

PI: Eva Giné

CARTD-BG-01: Ensayo fase I, piloto, abierto, multicéntrico, no aleatorizado para evaluar la seguridad y eficacia de las células ARI-0003 (CART19/ 269) en pacientes con linfoma B agresivo recaído/refractario.

Instituto de Salud Carlos III (ISCIII).

FIS_ICI22/00049

PI: Julio Delgado

Selected publications

Munarriz D, López-Godino O, Martínez-Cibrian N, ... , Juan M, Delgado J, Ortiz-Maldonado V. **Combining CAR T-Cell Therapy and Nivolumab to Overcome Immune Resistance in THRLBCL: A Case Report.** *INTERNATIONAL JOURNAL OF MOLECULAR SCIENCES*. 26(19):9265. Q1

Martínez-Cibrián N, Ortiz-Maldonado V, Español-Rego M, ... , González-Navarro EA, Juan M, Delgado J. **Efficacy and safety of the academic anti-CD19 chimeric antigen receptor T-cell product varnimcabtagene autoleucel for the treatment of relapsed/refractory follicular lymphoma.** *HEMASPHERE*. 9(9):e70166. D1

Giné E, Perez-Valencia AI. **Optimising treatment strategies in older patients with mantle cell lymphoma.** *LANCET*. 406(10514):1924-1925. D1

Thieblemont C, Gomes da Silva M, Leppä S, ... , Vitolo U, Tilly H, Kersten MJ. **Large B-cell lymphoma (LBCL): EHA Clinical Practice Guidelines for diagnosis, treatment, and follow-up.** *HEMASPHERE*. 9(9):e70207. D1

Mozas P, Ould Ammar R, Chartier L, ... , Johnson NA, López-Guillermo A, Morschhauser F. **A low lymphocyte-to-monocyte ratio is independently associated with early relapse (POD24) in high tumour burden follicular lymphoma: A RELEVANCE subanalysis.** *BRITISH JOURNAL OF HAEMATOLOGY*. 206(5):1380-1389. Q1



GROUP LEADER

Armando López Guillermo (HCB)

RESEARCH INTERESTS

Lymphoproliferative neoplasms (LN) are malignant diseases originated at different stages of maturation of lymphoid cells. Their classification is highly complex, currently recognizing more than 50 entities.

Although nowadays many cases could be cured or may survive for a long time with immunochemotherapy, LN still lead to the death of a large number of patients. The study of clinic-biological features of the disease, particularly genetic and molecular alterations and the development of new therapies including cellular therapies, are essential to improve the outcome of these patients.

KEYWORDS

Lymphoma
Chronic lymphocytic leukemia
Prognosis
Mutational profile, CNA
Immunotherapy and cellular therapies, including CAR-T

RELATED DISEASES

Hodgkin lymphoma
Non-hodgkin lymphoma
Chronic lymphocytic leukemia
Lymphoproliferative disorders



GROUP LEADER

Teresa Macarulla (HCB)

RESEARCH INTERESTS

Our group integrates clinical and translational research to improve outcomes in gastric, pancreatic and biliary tract cancers. We combine molecular profiling, patient-derived models, liquid-biopsy analyses and early-phase clinical trials to identify biomarkers of response and resistance, validate therapeutic targets and develop biomarker-driven precision treatments.

Our goal is to translate tumor biology into more effective therapies, real-time disease monitoring and better survival and quality of life for patients with upper gastrointestinal cancers.

KEYWORDS

Upper gastrointestinal cancers
Precision oncology
Liquid biopsy
Patient-derived models
Therapeutic strategies

RELATED DISEASES

Pancreatic cancer
Biliary tract cancer
Esophageal and gastric cancer

5.17

Translational oncology in upper gastrointestinal cancers

Publications

Original articles

5

Mean IF **12,74**
Q1 60%
D1 20%
MA 20%
OA 80%

Others

2

Mean IF **6,50**
Q1 50%
D1 50%
MA 100%
OA 100%

IF = Impact Factor
MA = Main authorship (last or corresponding author)
OA = Open Access
Others includes reviews, editorials, clinical guidelines, letters and case reports

Selected active grants

COMBinATorial Personalized Approaches for Subtyping and Targeting Functional Heterogeneity in Pancreatic Ductal Adenocarcinoma (COMBATPDAC).

Instituto de Salud Carlos III (ISCIII).
FIS_ AC24/00045
PI: Teresa Macarulla

Selected publications

Zhao X, Hao Q, Alsina M, ... , Shen Z, Tian VT, Macarulla T. **Evolving treatment strategies for resectable gastric cancer: Bridging Asia-West disparities toward personalized and integrated therapy.** *CANCER TREATMENT REVIEWS*. 141:103041. D1

Hammel P, Metges JP, Macarulla T, ... , Youssoufian H, El-Hariry I, Hidalgo M. **TRYBECA-1: A Randomized Phase III Study of Eryaspase Combined With Chemotherapy Versus Chemotherapy as Second-Line Treatment in Patients With Advanced Pancreatic Adenocarcinoma.** *JOURNAL OF CLINICAL ONCOLOGY*. 43(35):3714. D1

Pesántez D, Brasó-Maristany F, Pascual T, ... , Macias I, Prat A, Sauri T. **HER2DX ERBB2 score in advanced HER2-positive gastric cancer treated with trastuzumab and chemotherapy.** *ESMO OPEN*. 10(9):105563. Q1

Macarulla T, Adeva J, Cano Osuna MT, ... , Pazo Cid RA, Sauri T, Gallego Plazas J. **SEOM-GEMCAD-TTD clinical guidelines for biliary tract cancer (2025).** *CLINICAL & TRANSLATIONAL ONCOLOGY*. 27(8):3293-3306. Q3

Garcia-Corbacho J, Indacochea A, Victoria I, ... , Juan M, Prat A, Schettini F. **Blood-based prognostic scores and early dynamics under immunotherapy to select patients with metastatic solid tumors for continuing immune check-point inhibition: a prospective longitudinal study.** *CANCER IMMUNOLOGY IMMUNOTHERAPY*. 74(3):85. Q1

5.18

Biomedical epigenomics

Publications

Original articles	Mean IF	16,34
	Q1	100%
	D1	67%
	MA	44%
	OA	78%

9

Others

Mean IF	14,20
Q1	100%
D1	67%
MA	0%
OA	100%

3

IF = Impact Factor
MA = Main authorship (last or corresponding author)
OA = Open Access
Others includes reviews, editorials, clinical guidelines, letters and case reports

Directed PhD theses

1

• Vicente Chapaprieta

Selected active grants

Exploring the biological and clinical impact of de novo chromatin activation in chronic lymphocytic leukemia.

Asociación Española Contra el Cáncer.

AECC_Proyectos23

PI: José Ignacio Martín-Subero

Impacto biológico y clínico de la memoria epigenética y la dinámica evolutiva en los linfomas de las células del manto.

Agencia Estatal de Investigación.

AEI_PE23

PI: José Ignacio Martín-Subero

Selected publications

Gabbutt C, Duran-Ferrer M, Grant HE, ..., Shibata D, Martin-Subero JI, Graham TA. **Fluctuating DNA methylation tracks cancer evolution at clinical scale.** *NATURE*. 645(8081):764-773. D1

Chapaprieta V, Maiques-Diaz A, Nadeu F, ..., López-Guillermo A, Campo E, Martin-Subero JI. **Dual biological role and clinical impact of de novo chromatin activation in chronic lymphocytic leukemia.** *BLOOD*. 145(21):2473-2487. D1

Mateos-Jaimez J, Vidal-Crespo A, Charalampopoulou S, ..., Colomer D, Maiques-Diaz A, Martin-Subero JI. **Increased LEF1 protein levels and isoform switching drive cell proliferation in chronic lymphocytic leukemia.** *BLOOD*. 146(26):3213-3227. D1

Pérez RF, Lecumberri-Arteta J, Kulis M, ..., Ferrer E, Rodas G, Martin-Subero JI. **Epigenetic signatures, age acceleration, and injury risk in elite female and male soccer players.** *SCIENTIFIC REPORTS*. 15(1):41826. Q1

Nadeu F, Shuai S, Clot G, ..., Stein LD, Puente XS, Campo E. **Disease-specific U1 spliceosomal RNA mutations in mature B-cell neoplasms.** *LEUKEMIA*. 39(9):2076-2086. D1



GROUP LEADER

José Ignacio Martín-Subero
(ICREA-IDIBAPS)

RESEARCH INTERESTS

Lymphoid neoplasms comprise a broad spectrum of diseases with heterogeneous clinico-biological features. The Biomedical Epigenomics group uses innovative wet-lab and computational tools to study the causes and consequences of epigenetic alterations in leukemias and lymphomas.

The research activities of the group are leading to new insights into the cellular origin, development, evolution and clinical behavior of various mature B cell neoplasms, enabling to better estimate the clinical outcome of patients and identify new therapeutic targets.

KEYWORDS

Epigenomics
Chromatin
Bioinformatics
Epigenetic biomarkers
Single cell omics

RELATED DISEASES

Chronic lymphocytic leukemia
Mantle cell lymphoma
Multiple myeloma
Diffuse large B cell lymphoma



GROUP LEADER

Albert Morales (IIBB-CSIC)

RESEARCH INTERESTS

The study of the cellular mechanisms triggered during chronic liver diseases, to design therapies and to prevent the development of liver cancer, is the main objective of our group's research. Identifying biomarkers, particularly in serum, that anticipate the efficacy of treatment in patients with liver tumors, and proposing therapies directed at the tumor microenvironment, are other topics of our interest.

Furthermore, uncovering potential gender differences in prevalent chronic liver diseases and liver cancer progression will provide biomedical targets for future clinical treatments.

KEYWORDS

Cancer therapy
Liver microenvironment
Mitochondria
Neutrophil Extracellular Traps (NETs)
Gender perspective

RELATED DISEASES

Metabolic dysfunction-associated steatotic liver disease (MASLD)
Hepatocellular carcinoma (HCC)
Liver metastases
Sepsis

5.19

Hepatocellular signaling and cancer

Publications

Original articles

1

Mean IF **5,90**
Q1 100%
D1 0%
MA 100%
OA 100%

Others

0

Mean IF **0**
Q1 0%
D1 0%
MA 0%
OA 0%

IF = Impact Factor
MA = Main authorship (last or corresponding author)
OA = Open Access
Others includes reviews, editorials, clinical guidelines, letters and case reports

Selected publications

Fuster-Anglada C, Corominas J, Marsal A, ... , Boix L, Marí M, Díaz A. **Lymphocyte exhaustion in hepatocellular carcinoma: a dynamic evolution across disease stages.** *FRONTIERS IN IMMUNOLOGY*. 16:1611365. Q1

Selected active grants

EuroPean training netwoRks to tArget DAMPs and NETs: novel apprOaches in pRecision sepsIs pAtieNt care (PRAE-TORIAN).

European Comission.
CE_HE_MSCA_22_DN
IP: Montserrat Marí

Bioplataforma basada en la firma sérica del secretoma hepático como herramienta pronóstica para el tratamiento del carcinoma hepatocelular.

Agencia Estatal de Investigación.
AEI_PDC2023-145806-I00
PI: Albert Morales

Microenvironment in lymphoma pathogenesis and therapy

Publications

Original articles	Mean IF	7,97
	Q1	67%
	D1	33%
	MA	0%
	OA	100%
Others	Mean IF	3
	Q1	0%
	D1	0%
	MA	100%
	OA	100%

IF = Impact Factor
MA = Main authorship (last or corresponding author)
OA = Open Access
Others includes reviews, editorials, clinical guidelines, letters and case reports

Selected active grants

Red transpirenaica de terapias avanzadas en linfoma no Hodgkin. (THERAVLINFO).
European Comission. CE_POCTEFA_23
PI: Patricia Pérez-Galán

Tackling Immunosuppression for Advanced Immunotherapies in non-Hodgkin lymphoma (TACKIM-NHL).
Agencia Estatal de Investigación.
AEI_PID2024-161982OB-I00
PI: Patricia Pérez-Galán

Selected publications

Faria C, Dobaño-López C, Perez-Galan P, Bezombes C. **Goodbye flat lymphoma biology.** *FEBS LETTERS*. 599(20):2954-2972. Q2

Perez-Galan P, Seiffert M. **Integrative perspectives on signaling, mechanics, and immune interactions in B-cell malignancies.** *FEBS Letters*. 599(20):2831-2833. Q2

Bachiller M, Barceló-Genestar N, Rodríguez-García A, ... , Pérez-Galán P, Urbano-Ispizua A, Guedan S. **ARI0003: Co-transduced CD19/BCMA dual-targeting CAR-T cells for the treatment of non-Hodgkin lymphoma.** *MOLECULAR THERAPY*. 33(1):317-335. D1



GROUP LEADER
Patricia Pérez Galan (IDIBAPS)

RESEARCH INTERESTS
The focus of the group is the characterization of the crosstalk between lymphoma cells and its immune microenvironment, to identify high-risk patients and manipulate these interactions to design novel-targeted and personalized immunotherapies.

To this purpose, we have established patient - derived models from B-cell Non-Hodgkin Lymphoma that recapitulate patient heterogeneity, microenviromental cues and in vivo therapy responses. These models are used to screen/validate novel therapeutic approaches including advanced cell therapies (ie CAR-T) and immunotherapies (ie T-cell engagers, immune regulators).

KEYWORDS
Non-Hodgkin lymphoma
Microenvironment
Immunotherapy
Patient-derived models
Cell therapy

RELATED DISEASES
Follicular lymphoma
Mantle cell lymphoma
Diffuse large B cell lymphoma
Marginal zone lymphoma
Chronic lymphocytic leukemia



GROUP LEADER

Antonio Postigo (ICREA-IDIBAPS)

RESEARCH INTERESTS

Our group studies the molecular mechanisms that regulate cell plasticity in health and disease. Ongoing projects investigate gene regulation in inflammation, cancer initiation and progression, stem cell determination and differentiation, and tissue regeneration.

We use a wide range of technical approaches that include unique conditional transgenic mice, in vivo cancer models, and bulk and single-cell high-throughput techniques (e.g., RNAseq, single-cell RNAseq, single-cell metabolomics, proteomics). As molecular models, we use the EMT plasticity factors ZEB1 and ZEB2.

KEYWORDS

Cancer
Inflammation
Cellular plasticity and differentiation
Immunometabolism
Stem cells and tissue regeneration

RELATED DISEASES

Ovarian cancer
Colorectal cancer
Multiple myeloma
Autoimmune chronic inflammation
Muscular dystrophies and atrophy

5.21

Gene regulation in stem cells, cell plasticity, differentiation, and cancer

Publications

Original articles

1

Mean IF **7,70**
Q1 100%
D1 0%
MA 0%
OA 100%

Others

1

Mean IF **15,70**
Q1 100%
D1 100%
MA 100%
OA 0%

IF = Impact Factor
MA = Main authorship (last or corresponding author)
OA = Open Access
Others includes reviews, editorials, clinical guidelines, letters and case reports

Selected publications

Martinez-Campanario MC, Cortés M, Han L, ... , Maurel J, Andrés V, Postigo A. **Lipid-laden macrophages in atherosclerosis and cancer.** *SEMINARS IN CANCER BIOLOGY*. 117:38-56. D1

Chamorro-Jorganes A, Profitós-Pelejà N, Recasens-Zorzo C, ... , Pérez-Galán P, Lima Ribeiro M, Roué G. **YPEL2 regulates the efficacy of BRD4-EZH2 dual targeting in EZH2Y641mut germinal center-derived lymphoma.** *NEOPLASIA*. 61:101131. Q1

Selected active grants

Macrophage-cancer cell relationship in tumor progression: Pathogenic role and mechanism in the mutational landscape, immune evasion, and therapeutic response.

Agencia Estatal de Investigación.
AEI_PE23

PI: Antonio Postigo

Psoriasis, a metabolic dysregulation of the innate immune system? Targeting ZEB1 in macrophages as a new therapeutic approach to psoriasis.

LEO Foundation. INT_LEO_19

PI: Antonio Postigo

Translational genomics and targeted therapies in solid tumors

Publications

Original articles	Mean IF	11,66
	Q1	70%
	D1	29%
	MA	29%
	OA	80%
Others	Mean IF	13,66
	Q1	61%
	D1	50%
	MA	42%
	OA	69%

IF = Impact Factor
MA = Main authorship (last or corresponding author)
OA = Open Access
Others includes reviews, editorials, clinical guidelines, letters and case reports

Directed PhD theses

3

- Carla Cases
- Javier García
- Natàlia Lorman

Selected active grants

Diagnostic HER2DX- guided treatment for patients with early-stage HER2-positive breast cancer (DEFINITIVE).

European Commission.
CE_HE_CANCER23_RIA

PI: Aleix Prat

Dissecting and overcoming mechanisms of resistance to CDK4/6 inhibition in advanced hormone receptor-positive/Her2-Negative Her-2- Enriched breast cancer.

Fundación CRIS contra el cáncer.
CRIS_Excelencia21

PI: Aleix Prat

Selected publications

Martin M, Stecklein SR, Gluz O, ... , Prat A, Sharma P, Harbeck N. **TNBC-DX genomic test in early-stage triple-negative breast cancer treated with neoadjuvant taxane-based therapy.** *ANNALS OF ONCOLOGY*. 36(2):158-171. D1

Villacampa G, Pascual T, Tarantino P, ... , Villagrasa P, Prat A, Tolane SM. **HER2-DX and survival outcomes in early-stage HER2-positive breast cancer: an individual patient-level meta-analysis.** *LANCET Oncology*. 26(8):1100-1112. D1

Nozawa K, Sawaki M, Uemura Y, ... , Villagrasa P, Prat A, Iwata H. **HER2DX in older patients with HER2-positive early breast cancer: extended follow-up from the RESPECT trial of trastuzumab ± chemotherapy.** *NATURE COMMUNICATIONS*. 16(1):9585. D1

Angelats L, Pare L, Rubio-Perez C, ... , Perou C M, Prat A, Brasó-Maristany F. **Linking tumor immune infiltration to enhanced longevity in recurrence-free breast cancer.** *ESMO OPEN*. 10(1):104109. Q1

Seguí E, Brasó-Maristany F, Pascual T, ... , Cervantes A, Prat A, Tabernero J. **Efficacy of anti-PD1 therapy in PD1-high mRNA tumors across multiple cancer types: results from cohort 1 and cohort 2 of the phase II SOLT1-1904 ACROPOLI trial.** *ESMO OPEN*. 10(10):105838. Q1



GROUP LEADER

Aleix Prat (HCB)

RESEARCH INTERESTS

The Translational Genomics and Targeted Therapies in Solid Tumors Group advances cancer care by refining subtype classification and validating tumor and immune biomarkers and therapeutic targets. Our portfolio includes diagnostics HER2DX, DNADX; therapeutics ONA-255; and flagship trials PAMELA and CORALLEEN.

We perform genomics on tumor and blood samples from annotated cohorts to drive biomarker discovery and patient stratification. We also develop biologics, leverage preclinical models to study response and resistance, and collaborate globally to translate our findings into the clinic.

KEYWORDS

Solid tumors
Genomics
Biomarkers
Targeted therapies
Immunotherapy

RELATED DISEASES

Breast cancer
Lung cancer
Urological cancer
Gastrointestinal cancer
Other solid tumors



GROUP LEADER

Susana Puig (HCB)

RESEARCH INTERESTS

Our research group specializes in dermoscopy, digital dermoscopy, confocal microscopy, new technologies, and artificial intelligence for skin lesion diagnosis and management. We prioritize innovative treatment strategies for melanoma and other tumors, including immuno and targeted therapies.

Our investigations encompass evaluating immune responses, studying genetic epidemiology, identifying biomarkers, and analyzing prognostic profiles in melanoma.

We also explore the mechanisms of carcinogenesis and photocarcinogenesis in skin cancer, as well as the study of congenital nevi.

KEYWORDS

Melanoma
Genetics
Dermoscopy
Confocal microscopy
Susceptibility

RELATED DISEASES

Melanoma
Giant congenital melanocytic nevi (GCMN)
Squamous cell carcinoma (SCC)
Basal cell carcinoma (BCC)
Xeroderma pigmentosum (XP)

5.23

Melanoma: imaging, genetics and immunology

Publications

Original articles

44

Mean IF **7,30**
Q1 70%
D1 39%
MA 43%
OA 82%

Others

23

Mean IF **8,47**
Q1 61%
D1 26%
MA 30%
OA 65%

IF = Impact Factor
MA = Main authorship (last or corresponding author)
OA = Open Access
Others includes reviews, editorials, clinical guidelines, letters and case reports

Directed PhD theses

2

• Albert Brugués
• Manuel Molina

Selected active grants

Novel health care strategies for melanoma in children, adolescents and young adults (MELCAYA).

European Commission.
CE_HE_CANCER21_RIA
PI: **Susana Puig**

Intelligent Total Body Scanner for Early Detection of Melanoma (iToBoS).

European Commission.
CE_H2020-SC1_20_2s04
PI: **Josep Malvehy**

Selected publications

Rosés-Gibert Pau, Heras C, Ricart N, ..., Ferrera N, Puig S, Malvehy J. **Standard Dermatoscope Images vs an Autonomous Total Body Photography and Dermoscopic Imaging Device.** *JAMA DERMATOLOGY*. 161(6):615-621. D1

Pérez-Anker J, Soglia S, Puig S, ..., del Marmol V, Alòs L, Malvehy J. **Melanocytic clefing is associated with melanoma on LC-OCT.** *JOURNAL OF THE EUROPEAN ACADEMY OF DERMATOLOGY AND VENEREOLOGY*. 39(11):1923-1933. D1

Molina-Garcia M, Rojas-Lechuga MJ, Langdon C, ..., Alobid I, da Silva-Júnior RMP, Puig S. **Molecular Profiling and Tumor Microenvironment in Sinonasal Mucosal Melanoma as Biomarkers for Enhanced Prognostic Stratification.** *INTERNATIONAL FORUM OF ALLERGY & RHINOLOGY*. 15(10):1082-1093. D1

Serra-García L, Rezzé G, Rivas AC, ..., Podlipnik S, Puig S, Malvehy J. **Clinical outcomes of 3D-total body photography and digital dermoscopy for surveillance of high-risk melanoma patients. A prospective longitudinal observational study.** *EUROPEAN JOURNAL OF CANCER*. 231:116053. Q1

Tasdogan A, Sullivan RJ, Katalinic A, ..., van de Poll-Franse LV, Massi D, Schaden-dorf D. **Cutaneous melanoma.** *Nature REVIEWS DISEASE PRIMERS*. 11(1):23. D1

Hepatic oncology (BCLC)



Publications

Original articles	Mean IF	11,06
	Q1	78%
	D1	30%
	MA	37%
	OA	78%

27

Others	Mean IF	13,43
	Q1	72%
	D1	61%
	MA	28%
	OA	50%

18

IF = Impact Factor
 MA = Main authorship (last or corresponding author)
 OA = Open Access
 Others includes reviews, editorials, clinical guidelines, letters and case reports

Directed PhD theses

1

• Sandra López

Selected active grants

Rational to modulate the Microbiome-induced Endoplasmic Reticulum stress as tool to avoid the immune evasion in Hepatocellular Carcinoma (RETO).

Asociación Española Contra el Cáncer.
 AECC_GruposCoord23

PI: Maria Reig

A European Cancer Image Platform Linked to Biological and Health Data for Next-Generation Artificial Intelligence and Precision Medicine in Oncology EuCanImage.

European Commission.

CE_H2020_SC1_20_1s13

PI: Jordi Rimola, Aleix Prat

Selected publications

Fortuny M, García-Calonge M, Arrabal O, ... , Torres F, Varela M, Reig M. **Cardiological adverse events in hepatocellular carcinoma patients receiving immunotherapy: Influence of comorbidities and clinical outcomes.** *EUROPEAN JOURNAL OF CANCER*. 221:115404. Q1

Fuster-Anglada C, Corominas J, Marsal A, ... , Boix L, Marí M, Díaz A. **Lymphocyte exhaustion in hepatocellular carcinoma: a dynamic evolution across disease stages.** *FRONTIERS IN IMMUNOLOGY*. 16:1611365. Q1

Saborido B, Darnell A, Forner A, ... , Bruix J, Reig M, Rimola J. **Diagnostic performance of contrast-enhanced US in small liver nodules not conclusively characterized after MRI in cirrhotic patients.** *EUROPEAN RADIOLOGY*. 35(9):5771-5780. Q1

Melero I, de Miguel Luken M, de Velasco G, ... , Auer M, Klar K, Leo E. **Neutralizing GDF-15 can overcome anti-PD-1 and anti-PD-L1 resistance in solid tumours.** *NATURE*. 637(8048):1218-1227. D1

Rimassa L, Stephen LC, Sangro B, ... , Kurland JF, Negro A, Abou-Alfa GK. **Five-year overall survival update from the HIMALAYA study of tremelimumab plus durvalumab in unresectable HCC.** *JOURNAL OF HEPATOLOGY*. 83(4):899-908. D1

GROUP LEADER

Maria Reig (HCB)

RESEARCH INTERESTS

Research to improve liver cancer outcomes via: (1) precision screening, staging and patient education for risk stratification, early detection and adherence (Directed by M. Reig); (2) non-invasive radiological biomarkers for personalized prognosis (Directed by J. Rimola); (3) predictive factors for treatments via computational biology, molecular/genetic markers, microbiota-immune interactions and vaccines.

AI in radiology and pathology optimizes diagnosis, prognosis and clinical decisions. These converge in BCLC.AI, integrating biological, clinical and imaging data to personalize care globally.

KEYWORDS

Primary liver cancer
 Predictors of response
 Animal models
 Plasticity
 Patients experience

RELATED DISEASES

Liver diseases
 Hepatocellular carcinoma
 Biliary tract cancer
 Rare liver cancer
 Primary liver cancer



GROUP LEADER

Itziar Salaverria (IDIBAPS)

RESEARCH INTERESTS

Our current research interest is the study of the genetic and molecular profiles of the different Non-Hodgkin Lymphoma subtypes in the pediatric and young adult population by applying high-resolution techniques to identify genetic alterations and genes/pathways that may be useful biomarkers in the diagnosis and management of these patients.

KEYWORDS

Non-Hodgkin lymphoma
Pediatric cancer
Biomarkers
Genetics

RELATED DISEASES

Non-Hodgkin lymphoma
Pediatric Non-Hodgkin lymphoma

5.25

Molecular genetics of paediatric lymphomas

Publications

Original articles

1

Mean IF	3,90
Q1	100%
D1	0%
MA	100%
OA	100%

Others

2

Mean IF	2,85
Q1	0%
D1	0%
MA	0%
OA	0%

IF = Impact Factor

MA = Main authorship (last or corresponding author)

OA = Open Access

Others includes reviews, editorials, clinical guidelines, letters and case reports

Selected publications

Mato S, Carità L, Colmenero A, ... , Campo E, Salaverria I, Verdú-Amorós J. **Comprehensive analysis of relapsed-refractory mature B-cell non-Hodgkin lymphoma in children and adolescents.** *BRITISH JOURNAL OF HAEMATOLOGY*. 206(5):1390-1396. Q1

Directed PhD theses

1

• Natàlia Castrejón de Anta

Selected active grants

New Genetic Signatures to advance in Pediatric B-cell Non-Hodgkin Lymphoma Precision Medicine (GenSigPedNHL).

Asociación Española Contra el Cáncer.

AECC_Proyectos21

PI: Itziar Salaverria

Identificación de los mecanismos moleculares implicados en el desarrollo de nuevas entidades de linfomas B-maduros en niños y adultos jóvenes (DECIP11qIRF4).

Instituto de Salud Carlos III.

FIS_PI24/00276

PI: Itziar Salaverria

Hematopoietic progenitor cell transplantation

Publications

Original articles	Mean IF	6,83
	Q1	78%
	D1	35%
	MA	39%
	OA	74%
Others	Mean IF	10,95
	Q1	100%
	D1	50%
	MA	25%
	OA	50%

IF = Impact Factor
 MA = Main authorship (last or corresponding author)
 OA = Open Access
 Others includes reviews, editorials, clinical guidelines, letters and case reports

Selected publications

Bachiller M, Barceló-Genestar N, Rodríguez-García A, ... , Pérez-Galán P, Urbano-Ispizua A, Guedan S. **ARI0003: Co-transduced CD19/BCMA dual-targeting CAR-T cells for the treatment of non-Hodgkin lymphoma.** *MOLECULAR THERAPY*. 33(1):317-335. D1

Olesti E, Bachiller M, Oliver-Caldés A, Urbano-Ispizua A; ARI program, Hospital Clinic Barcelona. **Establishing a sustainable academic point-of-care network for CART-cell therapy.** *LANCET HAEMATOLOGY*. 12(10):e774-e776. D1

Batram AM, Mañé-Pujol J, Moreno DF, ... , Rodríguez-Lobato LG, Urbano-Ispizua A, Fernández de Larrea C. **Genetic disruption of Blimp-1 drastically augments the antitumor efficacy of BCMA-targeting CAR T cells.** *BLOOD ADVANCES*. 9(3):627-641. Q1

Salas MQ, Solano MT, Baile González M, ... , Cedillo Á, Bento L, Sureda A. **Frailty assessment in adults undergoing allogeneic hematopoietic cell transplantation: insights from a multicenter GETH-TC study to optimize outcomes and care.** *FRONTIERS IN IMMUNOLOGY*. 15:1512154. Q1

Martínez C, Khvedelidze I, Fekom M, ... , Glass B, Bazarbachi A, Sureda A. **Outcomes of patients with Hodgkin lymphoma receiving Brentuximab Vedotin (BV) as maintenance therapy after ASCT according to previous exposure to BV. A retrospective analysis of the EBMT Lymphoma Working Party in collaboration with GELTAMO, FIL, LYSA, and Turkish Lymphoma Group.** *BONE MARROW TRANSPLANTATION*. 60(6):879-887. Q1



GROUP LEADER

Álvaro Urbano-Ispizua (HCB)

RESEARCH INTERESTS

The group is a pioneer center in Europe conducting clinical trials with academic CAR-T cells. (ARI-001, a CD19-CAR-T and ARI-002, a BCMA-CAR-T). We are now initiating a clinical trial with ARI-007, a CART targeting CD7 antigen, for T-ALL and AML CD7+.

The group is currently focused on: (a) understanding the obstacles that lead to CAR therapy failure in solid tumors and hematologic malignancies and (b) developing next-generation CAR-T cell therapies with enhanced therapeutic potential.

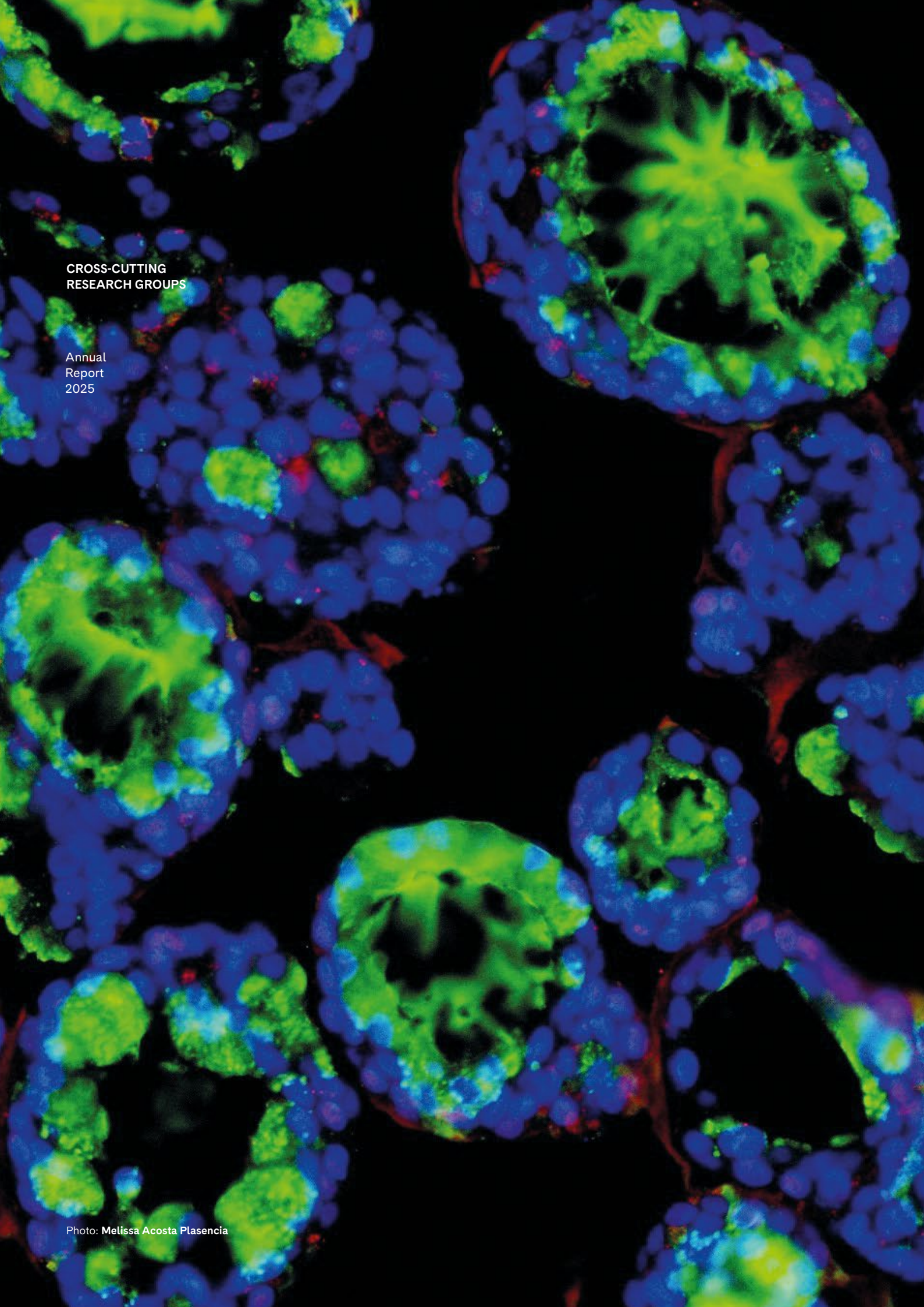
We have also a high interest in hemopoietic stem cell transplantation, especially in the role of endothelium damage in the manifestations of several complications associated to this procedure.

KEYWORDS

Allogeneic transplantation
 Immunotherapy
 Adoptive T cell transfer
 Chimeric antigen receptor
 Veno-occlusive disease

RELATED DISEASES

Hematology malignancies



CROSS-CUTTING
RESEARCH GROUPS

Annual
Report
2025

Photo: Melissa Acosta Plasencia

Cross-cutting research groups

- 01 **Clinical pharmacology**
Gonzalo Calvo-Rojas
- 02 **Multimodal imaging biomarkers**
David Fuster
- 03 **Primary healthcare transversal research group**
Antoni Sisó-Almirall
- 04 **Research in nursing**
Adelaida Zabalegui

Clinical pharmacology



GROUP LEADER

Gonzalo Calvo-Rojas (HCB)

RESEARCH INTERESTS

Clinical research methodology, including clinical trial design, monitoring, data management and project management

Ethics and regulatory affairs in clinical research

Pharmacovigilance, pharmacoepidemiology and observational data analysis

Advanced therapies and pharmacogenetics

Artificial intelligence, computational modelling and statistical methods in clinical research

Clinical investigations with medical devices

KEYWORDS

Clinical trials, methodology & regulation

Ethics in clinical research

Pharmacovigilance, pharmacoepidemiology & real-world data

Advanced therapies, personalized medicine & pharmacogenetics

Medical statistics, AI & computational modelling

Publications

Original articles

18

Mean IF	10,06
Q1	17%
D1	11%
MA	0%
OA	89%

Others

3

Mean IF	11,60
Q1	100%
D1	100%
MA	67%
OA	67%

IF = Impact Factor

MA = Main authorship (last or corresponding author)

OA = Open Access

Others includes reviews, editorials, clinical guidelines, letters and case reports

Directed PhD theses

1

• Joaquín Sáez

Selected active grants

Plataforma ISCIII de soporte a la investigación clínica.

Instituto de Salud Carlos III (ISCIII).

FIS_PT23/00156

PI: Joan Albert Arnaiz

Seguimiento a largo plazo, Colaborativo y en Red, de productos de Terapia avanzada de desarrollo académico.

Estudio multicéntrico (proyecto Safety CAR-T).

Instituto de Salud Carlos III (ISCIII).

FIS_PI22/00959

PI: Gonzalo Calvo-Rojas

Selected publications

Leguizamo-Martínez LM, Ballarín ME, Hurtado I, Sanfélix-Gimeno G, Sánchez-Sáez F, Sabaté M. **Real-world adherence trajectories to direct oral anticoagulants in naive patients with atrial fibrillation in Spain.** *FRONTIERS IN PHARMACOLOGY*. 16:1562620. Q1

Murias-Closas A, Prats C, Calvo G, López-Codina D, Olesti E. **Computational modelling of CAR T-cell therapy: from cellular kinetics to patient-level predictions.** *EBIOMEDICINE*. 113:105597. D1

Olesti E, Bachiller M, Oliver-Caldés A, Urbano-Ispizua Á; ARI program, Hospital Clinic Barcelona. **Establishing a sustainable academic point-of-care network for CAR T-cell therapy.** *LANCET HAEMATOLOGY*. 12(10):e774-e776. D1

Bachiller M, Barceló-Genestar N, Rodríguez-García A, ... , Pérez-Galán P, Urbano-Ispizua Á, Guedan S. **ARI0003: Co-transduced CD19/BCMA dual-targeting CAR-T cells for the treatment of non-Hodgkin lymphoma.** *MOLECULAR THERAPY*. 33(1):317-335. D1

Multimodal imaging biomarkers



Publications

Original articles	Mean IF	4,62
	Q1	48%
	D1	23%
	MA	39%
	OA	81%
Others	Mean IF	2,28
	Q1	20%
	D1	0%
	MA	50%
	OA	50%

IF = Impact Factor
MA = Main authorship (last or corresponding author)
OA = Open Access
Others includes reviews, editorials, clinical guidelines, letters and case reports

Directed PhD theses

2

- Antonio Herreros
- Faegheh Nooriankafshgari

Selected active grants

PET/TC asistido por IA en la caracterización de la inflamación sistémica en el síndrome de Sjögren primario. Integración de datos clínicos, inmunológicos, metabólicos y transcriptómicos.
Instituto de Salud Carlos III.
FIS23_PI23/01598
PI: David Fuster

VISOR: Virtual support model Implementation with SPECT/CT imaging Optimizing radioguided surgery Real-time fusion.
Generalitat de Catalunya.
SLT041/25/000050
PI: Aida Niñerola

Selected publications

Zugasti I, Tormo-Ratera M, Oliver-Caldés A1, ... , Tomás X, Setoain X, Fernández de Larrea C. **Clinical impact of [18F]FDG-PET/CT in ARI0002h treatment, a CAR-T against BCMA for relapsed/refractory multiple myeloma.** *BLOOD ADVANCES*. 9(3):571-582. Q1

Glickman A, Gil-Ibáñez B, Niñerola-Baizán A, ... , Díaz-Feijóo B, Torné A, Paredes P. **PET/CT Volumetric Parameters as Predictors of the Peritoneal Cancer Index in Advanced Ovarian Cancer Patients.** *DIAGNOSTICS*. 15(14):1818. Q1

Frid S, Bassegoda O, Camacho-Mahamud MA, ... , Renú-Jornet A, Bracons-Cucó G, Borrat-Frigola X. **Bridging generative AI and healthcare practice: insights from the GenAI Health Hackathon at Hospital Clínic de Barcelona.** *BMJ HEALTH AND CARE INFORMATICS*. 32(1):e101640. Q1

Amseian G, Aya F, Pineda C, ... , Arance A, Bargalló N, Oleaga L. **Assessing brain metastasis response to immunotherapy: a pictorial review of atypical responses and intracranial adverse events.** *INSIGHTS INTO IMAGING*. 16(1):258. Q1

Puig J, Remollo S, Rodríguez-Caamaño I, ... , Flores A, Llibre JC, Brinjikji W; ROSSETTI Group. **Aspiration Catheter Design Impacts Combined Approach Mechanical Thrombectomy in Anterior Circulation Large Vessel Stroke.** *JOURNAL OF NEUROIMAGING*. 35(3):e70046. Q2

GROUP LEADER

David Fuster (HCB)

RESEARCH INTERESTS

Medical imaging is linked to innovation and new technologies. The aim of this interdisciplinary research group is to explore in depth the strategy of incorporating artificial intelligence in imaging techniques trying to identify, validate and implement imaging biomarkers, radiomics or hybrid imaging for supporting decision-making. The committed multidisciplinary vision of the group has made an impact on various areas, such as the generation of multimodal imaging data and records, theragnosis and virtual models of image fusion.

KEYWORDS

Artificial intelligence
Diagnostic imaging
Biomarkers
Radiomics
Technology

RELATED DISEASES

Oncology
Theragnosis
Mechanical thrombectomy
Interventional radiology
Radioguided surgery



GROUP LEADER

Antoni Sisó-Almirall (CAPSBE)

RESEARCH INTERESTS

Healthcare continuity and management of chronic diseases

Management and use of healthcare services

Elderly: frailty - geriatrics - dependency - homecare

Use of medicines

Primary care and autoimmunity

Atherogenesis prevention, risk factors and cardiovascular diseases

Chronic pain

Mental health, smoking and other addictions

Respiratory diseases

Digestive and liver diseases

HIV infection - AIDS and other infectious diseases

Digital health and Generative Artificial Intelligence

Health community

COVID-19

KEYWORDS

Primary healthcare
Family physician
General practitioner
Health care innovation
Chronic diseases

Primary healthcare transversal research group

Publications

Original articles

20

Mean IF	2,95
Q1	40%
D1	20%
MA	80%
OA	80%

Others

1

Mean IF	32,70
Q1	100%
D1	100%
MA	0%
OA	100%

IF = Impact Factor

MA = Main authorship (last or corresponding author)

OA = Open Access

Others includes reviews, editorials, clinical guidelines, letters and case reports

Selected active grants

Prevention of brain decline: generic and individual factors influencing benefit from nutrition, physical and mental activity and lifestyle interventions.

Instituto de Salud Carlos III (ISCIII). FIS_AC24/00091

PI: Antoni Sisó-Almirall

Apropa't: Estudi per a l'avaluació del Programa d'Apropament i Activació de Cuidadors Informals de persones incloses en el programa d'atenció domiciliària.

Col·legi Oficial d'Infermeres i Infermers de Barcelona_PR-800/2025

PI: Carmen Herranz

Selected publications

Fontana-Rosa NS, González-de Paz L, Codina-Rodríguez AC, Pérez-Riart M, Carrió-Llach MM. **Perspectives of medicine, human biology, and nursing undergraduates on transversal skills learning: a mixed-methods study.** *BMC MEDICAL EDUCATION*. 25(1):162. Q1

Santesmases-Masana R, Hernández-Martínez-Esparza E, Campillo-Zaragoza B, ... , Checa C, Garcia-Puig, E, González-De Paz L. **Translation and psychometric evaluation of the Spanish version of the Heart Failure-Specific Health Literacy.** *PATIENT EDUCATION AND COUNSELING*. 135:108732. D1

Vila M, Sisó-Almirall A, Ocaña A, ... , Fanner R, Borrás-Santos A, González-de Paz L. **Prevalence, diagnostic accuracy, and healthcare utilization patterns in patients with COPD in primary healthcare: a population-based study.** *NPJ PRIMARY CARE RESPIRATORY MEDICINE*. 35(1):17. Q1

Ramos-Casals M, Baer AN, Brito-Ze-rón MP, ... , Vivino F, Wahren-Herlenius M, Moutsopoulos HM; International Task Force on Nomenclature of Sjögren Disease. **2023 International Rome consensus for the nomenclature of Sjögren disease.** *NATURE REVIEWS RHEUMATOLOGY*. 21(7):426-437. D1

González-de Paz L, Alcaraz-Rodríguez A, Galvez-Hernandez P, de la Torre A, Conejo C, Herranz C. **Barriers and facilitators of leaders' initiation of community self-help groups for well-being: A mixed methods study.** *AMERICAN JOURNAL OF COMMUNITY PSYCHOLOGY*. 77(1-2):248-260. D1

Research in nursing

Publications

Original articles	Mean IF	2,83
	Q1	50%
	D1	38%
	MA	50%
	OA	88%
Others	Mean IF	3,00
	Q1	100%
	D1	0%
	MA	100%
	OA	100%

IF = Impact Factor
MA = Main authorship (last or corresponding author)
OA = Open Access
Others includes reviews, editorials, clinical guidelines, letters and case reports

Selected active grants

SoftEnable: towards soft fixture-based manipulation primitives enabling safe robotic manipulation in Hazardous Healthcare and Food Handling applications.

European Commission.
CE_HE_C4_21_1s21_IA
PI: Adelaida Zabalegui

Selected publications

Dana F, González-Colom R, Tena B, ... , Sebio-García R, Zabalegui A, Martínez-Palli G; Hospital Clinic de Barcelona Prehabilitation Group. **Impact of prehabilitation on patient-perceived quality of recovery after surgery: prospective cohort study.** *BJS OPEN*. 10(1):zraf156. D1

Alite-Cerezuela P, Zabalegui A, Velasco-Leon J, Vizcaya-Moreno F. **Political Influence, Facilitators and Barriers in the Decision-Making Processes of Executive Nurse Leaders During the COVID-19 Pandemic in Spain: An Ethnographic Study.** *JOURNAL OF NURSING MANAGEMENT*. 4761787. D1

Pérez-Perdomo A, Fabrellas N, Zabalegui A. **Nurse Clinical Reasoning Scale: Spanish Translation and Psychometric Properties.** *NURSE CLINICAL REASONING SCALE*. 12(3):e70196. Q1

Frias CE, Samarasinghe N, Cuzco C, ... , Al-Homaidi MSST, Fendt-Newlin M, Campbell J. **Strategies to support the mental health and well-being of health and care workforce: a rapid review of reviews.** *FRONTIERS IN MEDICINE*. 12:1530287. Q1

Juvé-Udina ME, Adamuz J, González-Samartino M, ... , Polushkina-Merchanskaya O, Zabalegui A, López-Jiménez MM. **Association Between Nurse Staffing Coverage and Patient Outcomes in a Context of Prepandemic Structural Understaffing: A Patient-Unit-Level Analysis.** *JOURNAL OF NURSING MANAGEMENT*. 2025:8003569. D1



GROUP LEADER

Adelaida Zabalegui (HCB)

RESEARCH INTERESTS

Research in nursing is essential for responding to the healing demands of the current healthcare system. Its complexity in the hospital setting is derived from the associated increase in patient severity upon admission, the reduction in hospital stay, the incorporation of new technologies, the aging of the population, patient requests for information, social change, and the global crisis.

KEYWORDS

Older people
Chronic care/Long-term care
Dementia
Best nursing practice
Advance nursing practice

RELATED DISEASES

Empowerment
Chronic & aging care
Innovation
Professional competencies
Advance nursing practice

Group leaders index

Annual scientific report 2025

A

Adán, Alfred - 46
Affò, Silvia - 126
Agell, Neus - 127
Agustí, Àlvar - 60
Alberch, Jordi - 102
Alcaraz, Antonio - 128
Almendros, Isaac - 61
Amador, Virginia - 129

B

Barberà, Joan Albert - 62
Bartrés-Faz, David - 103
Bataller, Ramon - 78
Blanco, Isabel - 63
Bortolozzi, Analía - 104
Brugada, Josep - 64

C

Calvo-Rojas, Gonzalo - 154
Campo, Elías - 130
Camps, Jordi - 131
Castells, Antoni - 132
Castellví-Bel, Sergi - 133
Castro-Fornieles, Josefina - 105
Cervera, Ricard - 47
Chamorro, Ángel - 106
Cid, Maria Cinta - 48
Claret, Marc - 79
Clària, Joan - 80
Closa, Daniel - 49
Colomer, Dolors - 134
Compte, Albert - 107
Cuatrecasas, Miriam - 135

D

Dalmau, Josep - 108
De la Rocha, Jaime - 109
Díaz Ricart, Maribel - 50
Diekmann, Fritz - 65

E

Egea, Gustavo - 66
Esteve, Jordi - 136
Estruch, Ramon - 67

F

Fernández-Checa, José Carlos - 81
Fernández de Larrea, Carlos - 137
Fernández-Lobato, Mercedes - 82
Fillat, Cristina - 138
Forns, Xavier - 83
Fuster, David - 155

G

García-Álvarez, Ana - 68
García-Pagán, Juan Carlos - 84
Garrabou, Glòria - 110
Gasull, Xavier - 111
Ginès, Pere - 85
Gracia-Sancho, Jordi - 86
Gratacós, Eduard - 87
Guasch, Eduard - 69
Guedan, Sònia - 139

H

Hanzu, Felicia Alexandra - 88

I

Iranzo, Alejandro - 112

J

Juan, Manel - 51

LL

Llovet, Josep M. - 140
Llufriu, Sara - 113

L

López Guillermo, Armando - 141
López-Pelayo, Hugo - 114
Lozano, Francisco - 52

M

Macarulla, Teresa - 142
Mallolas, Josep - 53
Martí, M. Josep - 115
Martín-Subero, José Ignacio - 143
Martínez-Zamora, M. Àngels - 89
Miró, Josep M. - 55
Miró, Òscar - 54
Mont, Lluís - 70
Morales, Albert - 144
Morales-Ruíz, Manuel - 90
Mullol, Joaquim - 71

N

Novials, Anna - 91

O

Oliva, Rafael - 92

P

Parellada, Eduard - 116
Peralta, Carmen - 93
Pérez-Galán, Patricia - 145
Pol, Albert - 94
Postigo, Antonio - 146
Prat, Aleix - 147
Puig, Susana - 148

R

Raduà, Joaquim - 117
Reig, Maria - 149

S

Sabaté, Manel - 72
Salas, Azucena - 95
Salaverria, Itziar - 150
Sanchez-Valle, Raquel - 118
Sanchez-Vives, Mavi - 119
Sancho-Bru, Pau - 96
Sanmartí, Raimon - 56
Santamaria, Pere - 97
Sisó-Almirall, Antoni - 156
Sitges, Marta - 73
Soriano, Alex - 57
Sugranyes, Gisela - 120

T

Torres, Antoni - 74
Trullàs, Ramon - 121

U

Urbano-Ispizua, Álvaro - 151

V

Vidal, Josep - 98
Vieta, Eduard - 122

Z

Zabalegui, Adelaida - 157

Notes

Notes



rosselló, 149-153
barcelona, 08036
clinicbarcelona.org/idibaps

